

Ethiopian Roadmap

Education
&
Training



TEXTE LEGAL

Contents

FOREWORD	6
FOREWORD	7
FOREWORD	8
FOREWORD	9
Chapter 1. On the Road to Transformation	12
Country and Education and Training System Context	13
Country Background	13
Education and Training in Ethiopia.....	13
Key challenges	16
Equity.....	16
Limited Access to TVET and IFAE	17
Quality	17
Relevance	19
Governance	21
National Unity in Diversity	21
Perspectives for the Future.....	22
Ethiopian Development Goals	22
Role of the Education and Training Sector	22
Realizing Education and Training’s Contribution to the Transformation of Ethiopia: The Roadmap	24
Roadmap Purpose	24
Roadmap Methodology	24
Chapter 2. Philosophy, Vision and Values of Ethiopian Education and Training	28
Philosophy	29
Values.....	29
Vision	29

Chapter 3. Goals and Objectives of the Roadmap.....	32
An overview of major changes	35
Ethiopian Education and Training Roadmap until 2030	39
Chapter 4. The Transformation of the Education and Training System: Major Shifts	44
Chapter 5. Turning the Roadmap into reality	122
Building on strengths and opportunities	123
Developing administrative and institutional capacity.....	124
Estimating the cost of the Roadmap, and the implications for funding	125
Key Assumptions and Targets	126
Simulation Results.....	127



FOREWORD

Ethiopia's education system has come a long way. We can be proud that our education has achieved universal primary education, that we have reduced the gender gaps, introduced mother-tongue as a medium of instruction in learner-centered classrooms at primary level. At secondary level, we have improved quality and relevance. The accomplishments were largely the result of the 1994 Education and Training Policy – a plan conceived to address and reform our pre-1991 system education. However, we can no longer rest on our accomplishments. We can and must do more!

My Ministry is acutely aware of the heavy responsibility it has for identifying our continued challenges, developing solutions and implementing reforms that will make our system even better. This is not business as usual. The Education Road Map is the culmination of a lengthy and broad-based research and consultative process that will help us enhance and sustain an education system of quality, equity, access and efficiency. A system in which our children are not just going to school, but where they are all learning. We must have an education system that produces graduates that have acquired the knowledge and skills that they require for further study or ready them for employment after 12 years. It was imperative that we conduct this extensive study to understand where we are today so as to make our system more relevant.

The comprehensive studies were conducted using diverse approaches by the very best of Ethiopia's education professionals. Moreover, the study engaged a diversity of education stakeholders to shed light on what should be crafted to revitalize the system and make it a potent weapon for achieving our ambitious goals. A good education is power. A good, quality education will ultimately help Ethiopia to join the ranks of a lower middle-income country. I deeply appreciate the effort of all who were involved in this process beginning from the Ministry of Education to the parents, teachers and community members whose contributions are visible in the document. The Education Roadmap presents our vision, I urge all Ethiopians to stand in unison and work diligently and relentlessly until we realize the vision described in our Education Roadmap.

It is my strong belief that our entire society is responsible and should spare no effort to see the materialization of this Roadmap. We must change the system of education and training in the ways envisaged here! Finally, I commend and thank all of those that took part in developing this important policy guide. The journey we should follow is outlined in the pages of this Roadmap. It is now that we must begin our travel. God bless Ethiopia and its people!!!

Tilaye Gete Ambaye(PhD)
Minister, Ministry of the Federal Democratic Republic of Ethiopia
Addis Ababa, Ethiopia

FOREWORD

Ethiopia has gone great length in educational expansion which enables it to create access to large number of young people, though still the rate of enrolment is below the Sub-Saharan countries. The goal of such expansion is to fill out human resource demand of the labor market and economic development. Much has been invested on the physical facilities as well as infrastructures of higher education. Yet, over the past several years plethora of research literature as well as employers, parents and the society at large claimed that graduates of TVET and Universities were characteristically poor in their vocational competence, capability, morality, and immature social skills. To overcome such gaps and other educational pitfalls, the Ethiopian government took an initiative to develop an Educational and training Roadmap.

It has been long recognized that the greatest asset of any country is its human resources. An educated population is crucial in leading the overall development of a country. A well-developed human capital transforms the economy and the society to higher level which contributes to a reduction in poverty. Higher education is the level at which people get ready for their future career and advance their professions. Creativity, innovation, logical and critical thinking, and identification of viable solutions to the problem of the society take place mostly in higher education institutions. With this understanding, MoSHE and MoE organized the Roadmap to unleash educational problems that deter the nation from achieving its scientific and technological aspirations.

The Roadmap addressed thirteen critical areas that require attention in the education system of the country. Ministry of Science and Higher Education is committed to take every possible step in bringing quality education that produces graduates who are socially, vocationally, psychologically, intellectually, and physically competent to meet the labor market needs of the world economy. Ethiopia aspires to reach a middle-income country in the coming few years. Such aspiration can only be materialized if and only if the education system is capable of producing able, competitive and competent citizens.

The Roadmap is a generic document that guides the whole educational systems over the next fifteen years. It recognizes the importance of holistic approach to education which makes out the inter-linkages and interdependencies between the various stages of child development, beginning with early childhood education, running through formal basic and high school provision, encompassing skills training, university and other tertiary institutions, and extending to adult basic education as well as lifelong education.

It lays the foundations for better education that tackles the needs of special population such as physically disabled, gifted and talented, girls and women, pastoralists, and developing regions of the country. Teacher education and professionalism, leadership, educational structure and other relevant issues have been dealt within it.

A wide range of stakeholders representing various social segments participated in its development process making it a document that includes the voices of the majority, if not all. It is, therefore, hoped that an increased level of commitment by various national and international organizations and government will be matched by sufficient budget allocation, as usual, and moral support from the society to ensure successful implementation of the Roadmap. It is my sincere expectation that all stakeholders will stand hand in hand to the fruition of the Roadmap. Finally, I would like to take this opportunity to acknowledge those individuals and organizations, who one way or another, contributed from its inception to completion.

Hirut Woldemariam (Professor),
Minister, Ministry of Science and Higher Education

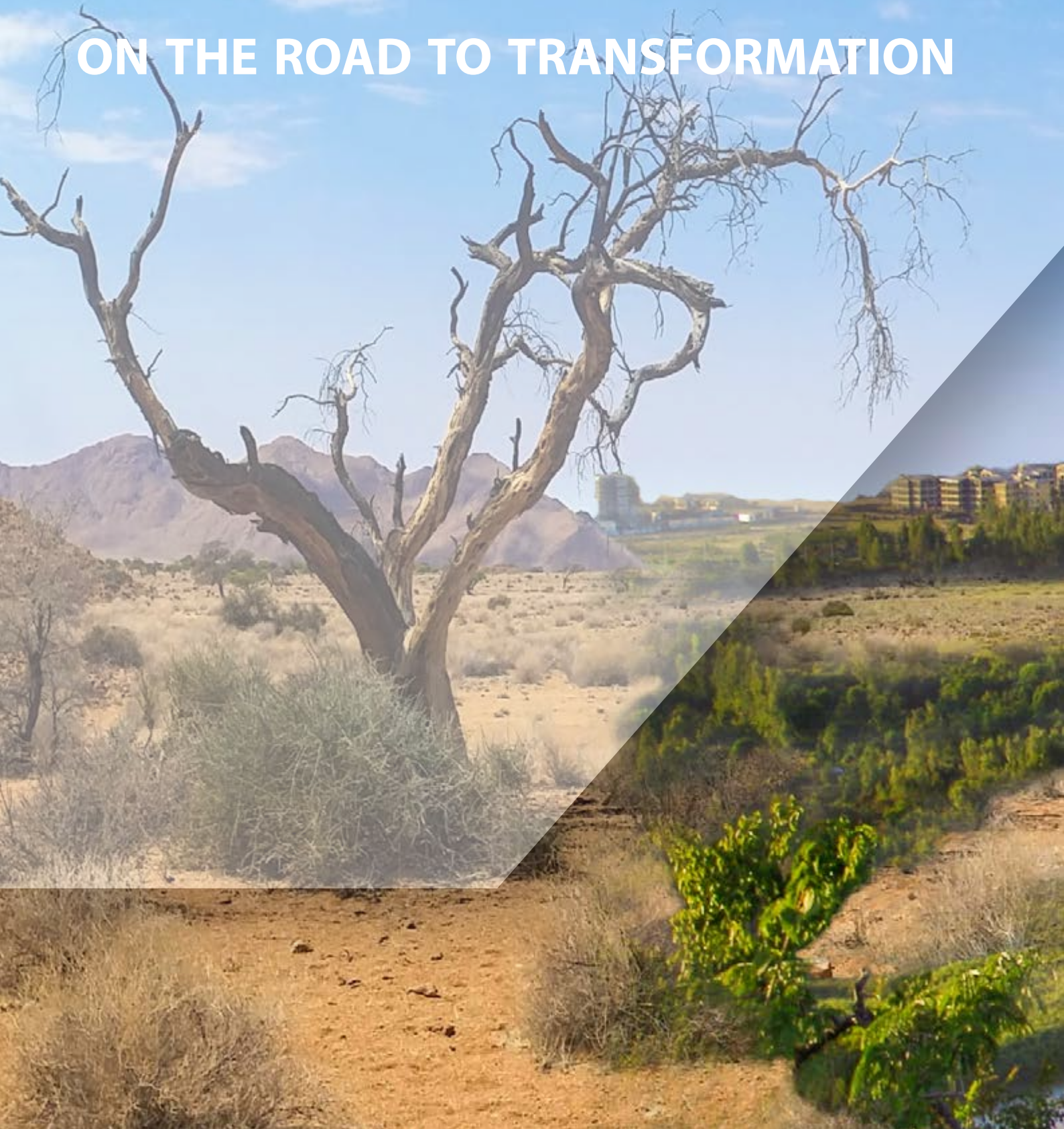
FOREWORD

FOREWORD

CHAPTER 1

ETHIOPIA:

ON THE ROAD TO TRANSFORMATION







Chapter 1

Ethiopia: On the Road to Transformation

This first chapter offers an overview of the present context of Ethiopia, its development vision and the expectations this puts on the education and training system. It summarizes the key challenges that the system will have to overcome to participate fully in the country's transformation. Finally, the chapter explains the purpose of the Roadmap and how it was designed.

Country and Education and Training System Context

Country Background

Located in the heart of the Horn of Africa, Ethiopia is one of Africa's largest countries. Sharing borders with several countries including Somalia, Sudan, Djibouti, Kenya, South Sudan and Eritrea, it occupies a strategic position in this sub-region. Much of the country consists of relatively fertile highlands, benefitting from a temperate climate. By contrast, the eastern lowlands are hot and arid.

Ethiopia's history is unique, going back thousands of years. It has a rich cultural heritage, witness of that long history, and a diverse population with over 80 indigenous languages spoken. The Ethiopian system of government is a federal system, which recognizes diversity while creating significant regional autonomy.

Over the last fifteen years, Ethiopia's economy has been one of the fastest growing in Africa, with growth in Gross National Product (GNP) near double-digit levels since 2003. This economic expansion has led to extensive changes in the country. Particularly, agricultural growth has contributed to the continuous decrease in the poverty rate: according to World Bank figures, poverty in Ethiopia fell from 44% in 2000 to 30% in 2011 and to about 25% in 2015. However, the average per capita GNP of USD 790 (2018) remains low by international standards, and, notwithstanding important expansions in the offer of education and health services, change has been slow for the majority of Ethiopians who are small farmers.

Education and Training in Ethiopia

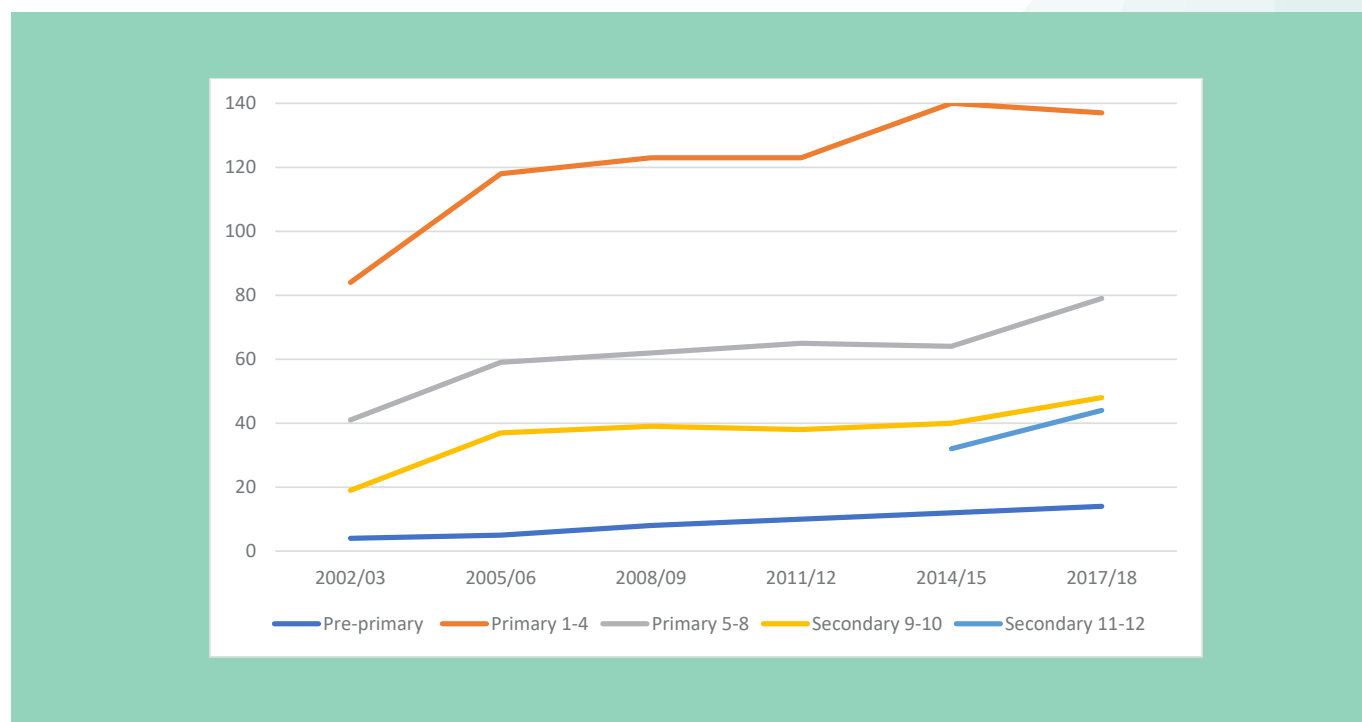
Modern education was introduced to Ethiopia more than a century ago. However, the education and training offered during these long years had limited positive impact on the lives of the people and on national development. The education offered has not enabled the country to solve the problems of farmers, pastoralist, neither to change the lives of the overwhelming majority of the people. During many decades, the primary objective of education was to produce trained human resources that could run the emergent government bureaucracy, and the ambition of the student population was largely to secure government employment. Vocational education was introduced very slowly both at high school and college levels during the 1950s and 1960s, but the education system did little to change trainees' outlook or help them break the cycle of dependency. Reforms between the 1970s and the 1990s, under the final years of the imperial regime and under the Derg, failed to transform the system, and throughout the Derg regime, civil war, severe drought and famine had a negative effect on education.

By 1991, when the Derg was overthrown infrastructure had been destroyed, there was little access to education and extreme poverty was widespread. Since then, education has been conceived as an instrument for the country's development agenda. Accordingly, in 1994, the Ethiopian government issued an education and training policy with the aspiration of achieving five institutional outcomes: access, quality, relevance, equity, and efficiency (TGE, 1994).

In 1994, the Ethiopian government issued an education and training policy with the aspiration of achieving five institutional outcomes: access, quality, relevance, equity, and efficiency

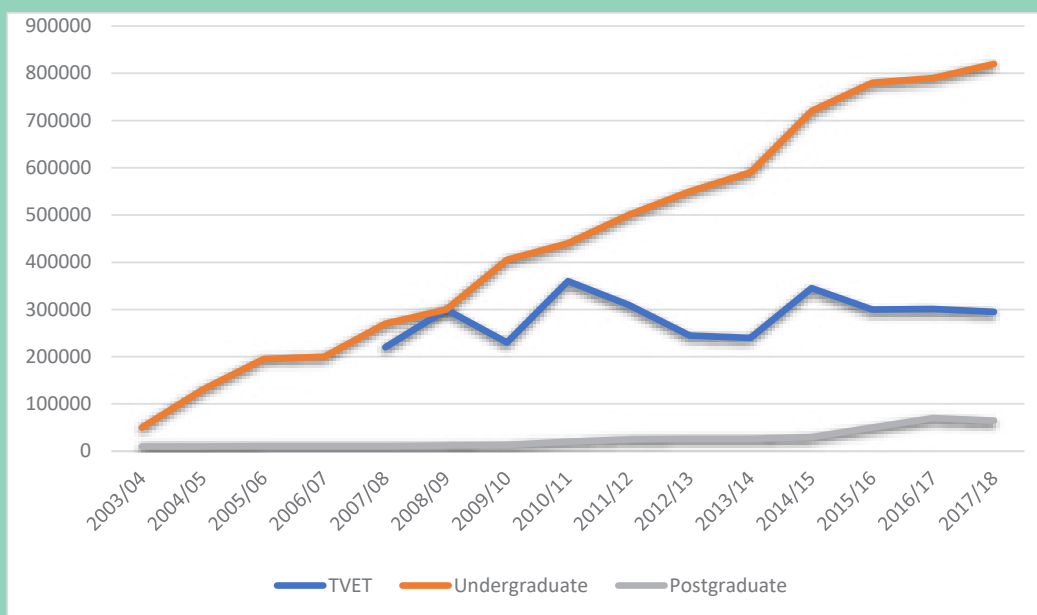
Progress on some of these outcomes, in particular access, has been impressive. Indeed, education in Ethiopia is partly a success story, with school enrolment rising for all levels of education, as is visible in the evolution of gross enrolment ratios (Figure 1). Thousands of schools have been constructed in rural areas extending general education access to most rural populations. As a result of this massive expansion, gross enrolment ratio in primary education (Grades 1 to 8) is approaching 100 % in most regional states and city administrations (Afar region being the main exception, with a GER of about 60% in 2017/18). According to official figures, the net enrolment rate in primary education (1-8) increased from 22% in 1996 to 54% in 2003 to 94% in 2015 and is now close to 100%. Expansion at post-primary levels has started from a much lower base, and, as a result, net enrolment rates remain low: at 24% for Grades 9-10 and 7.4% for Grades 11-12 in 2017/18.

Figure 1. Evolution of Gross Enrolment Ratios, 2002/03 to 2017/18



A comprehensive system of Technical and Vocational Education and Training (TVET) was introduced and expanded to promote skill development and enhance employability of graduates. To date, the number of TVET institutions which were sixteen and only confined to big cities, before 24 years, has increased to 1,546. TVET enrolment rose from 116,457 in 2005 E.C. to 302,083 in 2009 E.C. More than 800 Occupational Standards have also been developed as a basis for TVET curricula. Higher education expanded drastically raising the number of universities from three (in 1991) to 50 in 2011 E.C. The number of undergraduate students grew from 56,000 in 2003/04 to 825,003 in 2017/18 (Figure 2). Following the education policy, the private sector emerged as a critical partner in education as part of efforts to design a more efficient system and to respond to the changing skills needs in the society and economy. The private universities and colleges (178 in total) contribute, for instance, for about 17% to undergraduate enrolment in higher education in 2017/18.

Figure 2. Evolution of enrolment, Higher Education and TVET, 2003/04 to 2017/18



Yet, in spite of such growth, there still is a long way to go, in particular in terms of quality, equity, relevance, and governance. Rapid expansion in school enrolments came along without ensuring quality of education: low learning achievements, low completion, high repetition and dropout rates. Moreover, disparities among regions, and differences in learning outcomes among various socio-economic backgrounds are still major policy concerns. The education offered to date has not led to change in the lives of the majority of the people, especially farmers and pastoralists.



Key challenges

The purpose of the Roadmap is to transform the education and training system by overcoming the current major challenges. The following section, therefore, summarizes these challenges, focussing on those that impede the system from contributing to the economic and social development of the Ethiopian nation. These are presented in six sections: *equity, access, quality, relevance, governance, and unity in diversity*.

This summary of challenges is based, in part, on available reviews and data, but also very much on the many consultations that accompanied the preparation of the Roadmap. As such, they reflect the opinions and points of view of a wide range of stakeholders.

Equity

There has been encouraging progress in reducing disparities in access to education and increasing participation among diverse marginalized groups, but there are still equity gaps:

- In terms of **gender**: while there has been significant progress in gender parity in access to pre-primary and primary levels, the higher one goes up the educational ladder, the less girls participate: they constitute for instance 47% of lower secondary enrolment, 37% of undergraduates, and 18% among postgraduates. Girls constitute 51% of TVET students, but these include many short-term courses.
- In **regional** terms: there are significant differences in enrolment across regions, mainly because of the challenges in reaching the majority of the population living in rural areas and dispersed communities. Education and training are not adapted to fit the lifestyle of pastoral and semi-pastoral peoples.
- Access to education and training for children and youth with **special needs** remains limited. The most recent statistical report estimates GERs for students with disabilities at 9.8% for primary education and 2.8% for secondary education. Even this number decreases at higher learning institutions. Yet those who are in school do not get adequate support, resulting in low school performance and completion rate. On top of that, the education and training system did not address the needs of gifted and talented children and youth who need critical attention.
- These various disparities become more visible at higher **levels of education**, and are particularly preoccupying in upper secondary, TVET and higher education. For instance, out of 1027 Woredas in the country, only 367 Woredas have access to TVET.

There has been encouraging progress in reducing disparities in access to education and increasing participation among diverse marginalized groups, but there are still equity gaps

Internal efficiency indicators highlight an additional equity issue, namely the impact of poverty on participation. Although completion rates in primary school have improved over time, drop-out rates remain high. The average drop-out rate in primary education has remained between 10 and 11% over the last three years; it is highest in Grade 1, at close to 20%. The completion rate to Grade 5, which stood at 76% in 2009/10, decreased to 61% in 2014/15, to reach 88% in 2017/18. Completion to Grade 8 over the same period moved from 48% to 51% to 58%. These indicators demonstrate that universal basic education has not yet been achieved, and that the challenge of out-of-school children deserved continued focus. While there are different causes for drop-out, including poor

teaching- learning methods (see next section), families' poverty and the consequent inability to pay for the costs of education and the need for students to work is an important cause.

Limited Access to TVET and IFAE

While in most sub-sectors access has known continued growth in recent decades, the expansion in enrolment in two sub-sectors whose main purpose is to provide competencies and skills, has recently slowed down. TVET enrolment, which increased until 2014/15 reaching 352 thousand, has since decreased to 292 thousand in 2017/18 (Figure 2). Accessibility has been challenged by factors such as lack of adequate financial allocation, affecting availability of facility, and skilled trainers whereas multiple ministries and private entities (chamber of commerce and industries) provide training in line with the occupational standards set by the Federal TVET Agency. Enrolment in IFAE (Integrated Functional Adult Education), which increased from just over 2 million in 2011/12 to nearly 7 million in 2015/16, declined to less than 5 million in 2017/18.

Quality

As in many other countries, concerns about a decrease in quality, as measured, among other things, in learning outcomes have accompanied the rapid expansion of the system. This is true for early grades as well as final grades. Early Grade Reading Assessment (EGRA) results have remained low, as have those for National Learning Assessments (NLA) in early grades. NLA results of Grade 10 and Grade 12 have also consistently suggested fairly low learning outcomes, which are not improving. In 2015/16, 74 % of Grade 10 students scored ≥ 2.0 , but this decreased to 65% in 2017/18. Results for Grade 12 students changed little: 49.5% scored above 350 in 2015/16, which increased slightly to 53% in 2017/18. These data confirm what stakeholders expressed during the preparation of the Roadmap, namely that students are viewed as lacking the necessary proficiencies and competencies to join the world of work upon completion of Grade 10 and 12.

The low level of quality is related to different factors: The teaching and training force (general education teachers; literacy facilitators; TVET trainers; higher education academic staff) weak cooperative training, and inadequate tools and machineries for TVET, stands at the heart of quality improvement: weaknesses in **teacher management** and the practices in **curriculum** development and implementation help explain problems in **classroom interaction**. **Student support** is another area of major concern, as is system and school **leadership and governance**. Finally, improvements in the availability of **information and communication technology** have not yet been translated into better learning. The following paragraphs comment briefly on these six factors.

Students are viewed as lacking the necessary proficiencies and competencies to join the world of work upon completion of Grade 10 and 12

Management of the Teaching and Training Force

Improving the management of the teaching force has been and continues to be at the heart of education policy. There have been positive results including for instance the decentralization to the regional and Woreda levels in the Teacher Development Program (TDP); the increase in qualifications of teaching and university staff, due in part to the introduction of the Post Graduate Diploma in Teaching; a focus on incentives such as a better career structure, and an improved salary scale; the system of licensing; and the priority given to Continuous Professional

Development (CPD). It is worth noting that the Federal TVET Institute provides continuing professional development for TVET teachers, trainers and leaders.

Nevertheless, the Roadmap consultations highlighted gaps in teacher and trainer management related to five broad areas:

1. A need for further reflection on policies and strategies, to facilitate implementation, including through involvement of the teachers' association in their definition;
2. Professional development of the teaching force: this includes pre-service education (issues of the medium of instruction and of the qualification of leaders of teacher education colleges were highlighted) and continuous professional development. Weak TVET Industry linkage led to lack of industry experience of TVET teachers.
3. Management of the career, which includes recruitment, training, deployment, promotion, transfer, and retention. The aim should be to design an attractive and effective career pathway for the teaching force at all levels of the education and training system.
4. Improving the status of the teaching profession. This refers to incentives, such as salary and benefits, and activities that can strengthen the recognition of teaching as a profession in the society.
5. Supervision, evaluation and support, including licensing and re-licensing.

Curriculum

The curriculum is at times not adapted to the characteristics of the learners. The curriculum in secondary and preparatory levels was found to be too difficult, while pre-primary education faces a specific issue: one of the three pre-primary models, the one-year O-class model, is meant to serve children of age six, studies show that children from 3-6 years old are also attending, so the current curricula does not accommodate their developmental needs. Language learning poses specific problems including reading, writing and comprehension of the subject matter and the inability to achieve minimum level of learning proficiency. TVET curriculum, which emanates from the occupational standards, and being designed at a level of individual institutions lacks uniformity across the country. There is also poor arithmetic level of competency.

At all levels, even in higher education, teaching is mostly frontal, leaving the student a passive recipient with no reflection or intuitive learning

Classroom Interaction and Assessment

The teacher management weaknesses, which lead to poor teacher preparation and pedagogy, are reflected in the characteristics of classroom interaction. At all levels, even in higher education, teaching is mostly frontal, leaving the student a passive recipient with no reflection or intuitive learning. The teaching and learning process is theoretical and not sufficiently supported by practical activities, such as laboratory experiments and field works. This is in part because laboratories and workshops are ill-equipped, but also because teachers do not use time effectively and lack the skills and competence in these areas. Assessments further promote the emphasis on a theoretical over a practice-oriented approach.

Student Engagement and Support System

The teacher-centered pedagogy and the lack of awareness of the needs of individual students unavoidably leads to passive attitudes among students. The system has failed to get students to play a motivated, active and

sustainable role in learning and quality assurance at all levels. Neither are students sufficiently involved in extra- or co-curricular activities or out of school activities in the community. In addition, no system exists to identify and provide support to learners with special needs, including the gifted and talented. Vocational guidance and counseling services for those aspiring to become trained professionals are nonexistent.

Leadership

The complex education governance system makes it challenging to implement programmes. In such a context, leadership is crucial, but leadership capacity is weak, at central, regional, zonal, Woreda, and institutional levels. TVET and higher education institutes deplore the lack of autonomy and academic freedom. The absence of objective criteria and transparency, and the lack of a competitive and merit-based selection eroded the professionalization and democratization in the education and training system and has contributed to the weak sense of accountability.

Information and Communication Technology

While Ethiopia has made a large capital investment in information and communication technology to improve education and training quality, especially at secondary, TVET and higher levels, ICT infrastructure still has not been established in many schools and TVET institutions, and where it does exist, it is often not used for teaching and learning.

Relevance

The contribution of the education and training system to economic and social development stands central to the success to Ethiopia's further transformation. Higher education and TVET proclamations set out their visions and missions to respond to the demands of the labor market and development. However, the continued existence of graduate unemployment demonstrates the incomplete relationship between education, training and the world of work. At the same time, there is still some dissatisfaction, especially among employers, with the quality of graduates. For instance, employers of university and TVET graduates at times complain of their employees' deficiencies in communication skills, report writing skills, operational skills, reflective skills, critical skills, and business management skills. Some employers pointed out that they have to re-train the graduates they recruit from universities and TVET institutions – and even prefer to recruit unskilled labor that they can train themselves. Furthermore, the contents and learning experiences of general education tend to miss important skills and basic academic, social, psychological, vocational and spiritual developments.

The continued existence of graduate unemployment demonstrates the incomplete relationship between education, training and the world of work

Enhance the image of Technical Occupations through Outcome-based Training

Technical occupations and the sub-sectors and streams, which prepare for them, continue to suffer from a poor image. As a result, high performing students tend not to join TVET programmes. The absence of adequate facilities and resources further deteriorates the quality and relevance of TVET and thus its image. The attractiveness of TVET is also limited because the TVET programme does not allow competent TVET graduates to join higher

learning institutions and also because of limited study and vocational career and guidance provided throughout the education and training system, including in TVET institutions.

Relationship between the Curriculum and the Social and Economic Environment

The curricula in primary, secondary and preparatory schools are predominantly theoretical and knowledge based, and they fail to prepare students with the necessary life and vocational skills for the world of work

The curricula in primary, secondary and preparatory schools are predominantly theoretical and knowledge based, and they fail to prepare students with the necessary life and vocational skills for the world of work. These curricula do not adequately address language, science and mathematics education and exclude soft skills subjects such as aesthetics, art, music and moral education. The curriculum and the teaching-learning process are not closely related to the life and the surroundings of the learners. The fact for instance that the English language is fixed as medium of instruction for formal TVET starting from level one while significant numbers of trainers and most students have poor communication skills in English, is an illustration of this. Although a dual-style cooperative training (the combination of 30% institution-based training and 70% training on workplace) has been formulated, the target of 70% in-company training has not been yet achieved in many TVET institutions. No attempt is made to identify useful indigenous knowledge to enrich the curriculum. There is limited attempt to align Integrated Functional Adult Education (IFAE) programme with the life situation of adult learners. In the same vein, the curricula of higher education need to be revisited to meet the demands of the country.

Lack of Learning Pathways between TVET and Higher-Level Institutions

Higher-level qualifications are now a common expectation among young people, reflecting increased ambitions, labor market demand for higher-level skills, and a need to up skill and re-skill throughout life. At the same time, the perception of academic school education as the natural route to university underlines the importance of demonstrating that TVET can also open a pathway to lifelong learning, including higher education. However, this is still not the case in Ethiopia. Learning pathways from TVET to higher-level of education and training are not ensured. There are limited opportunities for lifelong learning.

Lack of Engagement of the Economic Community (employers, industries, investors) in TVET and Higher Education

Technical, vocational and higher education institutions and centers, which provide skills training, have little contact with the private sector, which will employ their graduates although “Integrating enterprises into TVET provision” is defined as one of the strategic goals of TVET Proclamation No. 954/2016. One of key policy objectives on TVET in Ethiopia is to implement a training regime that is based on the ‘dual’ system of vocational training; however, this model of cooperative education and training is still in its infancy, the major challenge being the difficulty in getting full industry involvement and collaboration. There are insufficient linkages or exchanges and there is little information available to either party on the offer and on the demand for training. Higher Education institutions are not systematically engaged in technology transfer or community service.

Governance

Complex Structures, without Full Decentralization

Governance of education and training in Ethiopia is shared among many actors, at federal, regional, and Woreda levels, without forgetting the schools, centers, and universities. The policy of decentralization is being implemented since many years and has allowed for greater autonomy at sub-central level. However, at school and institutional level, where decentralization can make a difference, autonomy has not yet fully materialized.

Insufficient Accountability

Outcomes of the Roadmap study identified that there was mismanagement of resources for which accountability was absent. For instance, they highlighted the problem of academic dishonesty and corruption observed in TVET occupational assessment, certification and higher learning institutions. Moreover, schools are not planning and implementing based on specific gaps observed in their locality and in their own performance but rather base themselves on the directions given by the respective zone and Woreda education offices.

Absence of accountability exists across all sub-sectors. There are several reasons for this: unclear responsibilities; and weakness in the system to rigorously carryout accountability functions.

Production and Use of Data

The data on the education and training system is not systematically organized and it is difficult to obtain valid and dependable data as required. One reason is that the data collection, management and utilization are not supported by appropriate technologies. In several sub-sectors, especially in TVET and in adult and non-formal education, the diverse nature of the learning centers (many are private or non-formal) poses a challenge. While there has been much improvement in this area, data quality remains a concern, and this helps explain the insufficient use of data for planning and management. In the area of TVET, there is no system that provides information on labor market demand. In Higher Education, a strong database of students, including for instance parents' economic status and level of education, and students' inhabitant status (rural/urban) needs to be developed.

National Unity in Diversity

While the Ethiopian constitution and official policy documents, such as the education and training policy are inspired by a focus on national unity in diversity, the practice on the ground does not fully reflect this. In particular, the curriculum framework lacks essential elements of multiculturalism. Neither is there enough attention to this theme within the training of teaching and administrative personnel. Although higher education students are expected to live and work in harmony and unity, in most of these institutions ethnic and religious diversity is a common scenario, which demands for stringent preparation of children and youth for living together in unity, and which requires the creation of a positive environment in this regard.

The policy of decentralization is being implemented since many years and has allowed for greater autonomy at sub-central level. However, at school and institutional level, where decentralization can make a difference, autonomy has not yet fully materialized

Perspectives for the Future

Ethiopian Development Goals

Ethiopia is now on course to its renaissance targeting at achieving peace, unity with diversity, broad and rapid development, establishment of democratic systems and good governance. It aims to reach a lower middle-income economy status by 2025, where good governance and social justice prevail through the participation and free will of its people. However, the country's progress toward becoming a lower middle-income country will require the transformation of an economy that has a large subsistence agriculture sector which is dominated by low productivity. To achieve middle-income economy, one needs to transform the agrarian production system into an industrial one.

To realize the country's vision of becoming a lower middle income by 2025, Ethiopia has started implementing the 2nd Growth and Transformation Plan (GTP II) and adopted the Sustainable Development Goals (SDGs). GTP II aims towards rapid industrialization and structural transformation, through increasing the productive capacity and efficiency of the economy. The goals are to improve quality, productivity, and competitiveness of agriculture and manufacturing industries, and accelerate social and human capital development and technological capacity building.

According to GTP II greater shares of economic production will come from industry and manufacturing with consequent demands for middle- and higher-level skilled human resources. Achieving this vision requires further expansion of access to quality education, producing capable university and TVET graduates who meet the demands of the labour market, and social development of the country. It also requires expanding TVET and private higher education and improving the overall literacy and numeracy level of the population.

Role of the Education and Training Sector

The Education and Training Sector is the key driving force to bring about structural transformation in the economy and achieve the country's vision of reaching middle income status in 2025. Apart from its contribution to economic development, education plays a fundamental role in nation building and promoting unity within diversity, providing the opportunity for citizens to interact with individuals from diverse socio-economic and cultural backgrounds, and learning to understand, accept and accommodate differences.

Understanding this crucial role, the education sector has passed through a series of successive Education Sector Development Programs (ESDP I-V). Since GTP I, education has been given special attention in the transformation of the economy from agriculture led to industry led development. The government is now implementing the fifth education sector development programme (ESDP V) which extends to 2020. ESDP V, inspired by the national vision, is aligned with the priorities established in the second Growth and Transformation Plan.

The Education and Training Sector is the key driving force to bring about structural transformation in the economy and achieve the country's vision of reaching middle income status in 2025

Ethiopia's commitment to Sustainable Development Goals (SDGs) means that delivery of quality education has to reach the poorest and the disadvantaged segments of the population in order not to leave any one behind. As a result, GTP II has emphasized, among others,

- the provision of equal opportunities to ensure participation for all, with special attention to disadvantaged groups and the delivery of quality education that meets the diverse learning needs of all children, youth and adults;
- the development of competent citizens who are capable of contributing to social, economic, political and cultural development through creation and transfer of knowledge and technology;
- assisting children, youth and adults to share common values and experiences and to embrace diversity;
- the establishment of both public and private TVET institutes in all Woredas and the strengthening of tertiary education institutions and providing lifelong learning opportunities so that all can contribute and benefit from rapid growth and economic change; and
- the promotion of effective leadership, management and governance at all levels in order to achieve educational goals by mobilising and using resources effectively and efficiently.

In order to achieve the intended goals of education and training, the government of Ethiopia decided to develop a new Roadmap for the education sector.



Realizing Education and Training's Contribution to the Transformation of Ethiopia: The Roadmap

Roadmap Purpose

In light of the Ethiopian aspiration to become an industrialized country and achieve middle-income status in the future, the government has felt the need for the preparation of a comprehensive roadmap for developing the capacity of the education and training system to produce competent and capable citizens. This Roadmap needs to build on existing strengths, to envision transformation, and to identify strategies to overcome shortcomings.

The purpose is to transform the Ethiopian education and training system by first understanding the performance of the system and then charting out a roadmap with major reform strategies until 2030. Two critical foci of the roadmap are (1) achieve system-aspirations such as quality, relevance, equity, and better governance; and (2) achieve learner-aspirations such as critical thinking, creativity, self-reliance, collaboration, communication, and moral values. Moreover, the demand for thinking globally and acting locally requires competence in vocational skills and indigenous knowledge. Hence, the roadmap as a reform initiative shall be based on a thorough examination of the performance and challenges of the present education and training system and chart out a transformation journey to ensure social and human capital through producing competent citizens who can compete nationally and globally.

Roadmap Methodology

Four data collection methods were used to develop the roadmap. These are desk review, field study, benchmarking international visit, and national consultations. In the desk review, national and international relevant documents were reviewed. A systematic content analysis method was used to identify the major themes and patterns of education and training.

The fieldwork employed both quantitative and qualitative approaches and covered all relevant state actors and non-state actors including the federal government, nine regional states, the two city administrations, civil societies and the general public. In this exercise, opinions and views were captured from top political leaders such as parliamentarians, ministers, regional presidents, and bureau heads. On the other hand, professionals (university presidents, deans,

Four data collection methods were used to develop the roadmap. These are desk review, field study, benchmarking international visit, and national consultations

directors and experts), professional association leaders, school principals, teachers, students as well as parents have participated in the study. During this extensive data gathering fieldwork, in addition to the 36 education roadmap development research teams, over 73 research associates from different universities, and 11 focal persons from the regional and city administration, education bureaus were mobilized and deployed across the project sites in the country.

Following the desk review and the fieldwork, educational visit for benchmarking was conducted on October 11-13, 2017, and October 16-20, 2017 in Vietnam and Malaysia respectively. Then, six concurrent validation workshops were carried out on the findings by expert panels focusing on the intervention areas envisioned to happen in the coming 15 years. The experts were drawn from governmental and non-governmental actors who among others include the Federal Ministry of Education, Addis Ababa University, Addis Ababa Science and Technology University, Oromia Education Bureau, DFID, and GIZ.

While the focus of the need assessment (desk review and field study) was to understand the performance and challenges of the Ethiopian educational system, the focus of the benchmarking visit was to learn from well-functioning educational systems in Asia. The main question here was to explore how the educational systems of the two countries succeeded and why they attained internationally competitive learning outcomes. The Ethiopian delegation to these two countries observed, sensed and understood how the entire system of accountability-coherence in governance operates; how they structured their curriculum; and why the learning outcomes of the two countries are high.

National consultations were carried out with most government sectors, regional states and city administrations over an extended time (September-February 2019). Feedback from a wide variety of education stakeholders enriched the final report of these consultations and the draft roadmap design.

In a final stage, the UNESCO team, in close consultation with the leadership of the education and training sector and with the researchers who had led the Roadmap preparation, and with support from the Roadmap secretariat, transformed the Roadmap report into this visionary and strategic long-term planning document.

National consultations were carried out with most government sectors, regional states and city administrations over an extended time

CHAPTER 2

PHILOSOPHY, VISION, AND VALUES OF ETHIOPIAN EDUCATION AND TRAINING







Chapter 2

Philosophy, Vision and Values of Ethiopian Education and Training

Education and training play a major and leading role in the development of the future nation and society. The core elements of the envisioned education are centered on human development. This calls for a holistic view of the educational process and a fundamental qualitative transformation of education and training in terms of its contents, methods and outcomes. Crucial in the qualitative transformation process are: learning-centered approach, creativity, and values. Both the education and training system and the process should serve to realize a learning society.

In view of this, the Ethiopian education and training system is inspired and driven by the nation's long term development goals of enhancing the well-being of its citizens; becoming a self-reliant, economically prosperous, sustainable and harmonious society; and reaching a lower middle income economy status by 2025, where good governance and social justice prevail through the participation and free will of its people.

Philosophy

In Ethiopia, education is conceived as a life to be lived and a way of preparing the youth for future living. It is an instrument of cultivating the individual holistically, including one's moral, cognitive, social, spiritual, physical, psychological and vocational attributes. It is also understood as a public good based on indigenous and global knowledge, which serves as a means of social harmony and development. Education is perceived by the society as an entity that depends on excellence, competitiveness and collaboration. Moreover, it is recognized as an instrument of expanding the horizons of knowledge and advancing science and technology, to transform the country into a respectable member of the world.

Vision

Transform the society through harnessing the full potentials of the learners to become productive citizens.

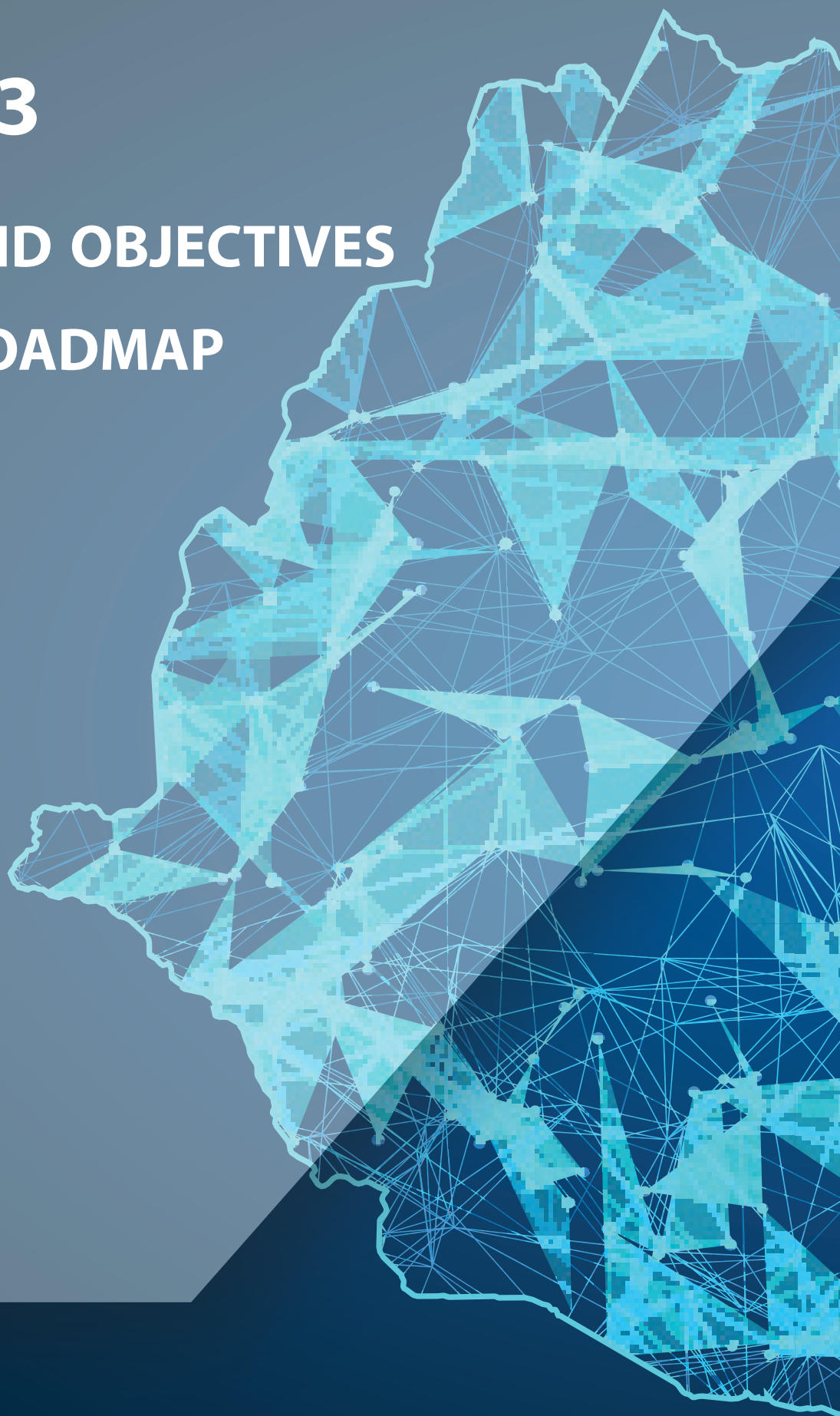
Values

The values of the education and training system (policies, instructions, plans) are:

- (i) *Good governance*, expressed in terms of accountability and shared responsibility, reliance on standards, and other measures of quality and productivity, including committed leadership, participatory processes and serving customers.
- (ii) *Equity*: Fairness in sharing the resources available for education and training, and
- (iii) *Excellence*: High quality, results (outcome) oriented, acquisition of competencies necessary for self-reliance, not only high achievement-test scores but also the intellectual abilities to reason, interpret information and solve problems.

CHAPTER 3

GOALS AND OBJECTIVES OF THE ROADMAP







Chapter 3

Goals and Objectives of the Roadmap

In order to realize the above-mentioned vision of education and training, Ethiopia aspires to achieve the below goals at the system level as well as at the individual learner level through the implementation of the Roadmap.

SYSTEM GOALS

EQUITY

A Improving equitable access to and participation in quality education and training at all levels is needed. All children and youth have equal access to quality education and training that will enable them to achieve their full potential. Attaining universal access and full enrolment of all children from preschool through to middle school education; increasing enrolment in secondary education among 15-18 years old to 70% and enrolment in post-secondary education among 19-23 years olds to 17% by 2030. Regardless of geography, gender, socio-economic background, disability, gift and talent, equity will be maintained for every child and youth from preschool through secondary school, TVET and higher education level.

QUALITY

B Strengthening the quality of education and training at all levels to improve learning outcomes is expected. All students will have the opportunity to achieve high levels of learning outcomes that are comparable to high performing international systems. Maintaining and strengthening the National Learning Assessments for improvements is necessary. Occupational competency assessments and exit examinations will be strengthened. Thus, the aspiration is to be among high performing countries from the region in terms of student performance in international assessments such as TIMSS and PISA as well as world skill competitions, in 10 years. System wide accreditations will continue to be maintained and strengthened at all levels to be in line with the international, regional and national standards.

RELEVANCE

C Ensuring the relevance of education and training to the world of work as well as social participation is critically important. Curricula, pedagogy, teaching and learning materials and assessments shall be aligned to the demands of the labor market.

GOOD GOVERNANCE

D Enhancing and empowering, leadership and management to ensure good governance that improves efficiency and effectiveness throughout the sector/system. The education and training system has to develop a mechanism that enforces accountability, transparency and ownership.

NATIONAL UNITY IN DIVERSITY

E Schools, TVET institutions, universities and other learning centers play important roles in shaping and enabling students from different backgrounds, religious, and ethnic backgrounds to interact, understand, accept, and embrace differences to foster unity. This creates a shared set of experiences and aspirations to build national unity.

LEARNING GOALS

The Ethiopian education and training system is expected to develop the below specific skills, competencies, and attributes that each learner needs to achieve to be a full-fledged, productive, nationally and globally competitive citizen, who can adapt to the changing economy, society and technological development.

KNOWLEDGE AND SKILLS

- A** Every learner will be literate and numerate, master core subjects of sciences, mathematics, social sciences, arts, vocational and occupational skills.

CREATIVITY AND THINKING SKILLS

- B** Every learner will be encouraged and guided to possess a spirit of inquiry and will be competent to continue acquiring knowledge throughout his/her life, master a range of important cognitive skills such as critical thinking, reasoning, creative thinking, and innovation.

LEADERSHIP SKILLS

- C** Through formal and informal opportunities, every learner reaches his or her full potential to work in teams and to take leadership roles, and to exercise entrepreneurship, resilience, emotional intelligence, and strong communication skills.

MULTILINGUAL PROFICIENCY

- D** Every learner will be proficient in the mother tongue, the national communication official language(s), interregional language(s), and English as an international language of communication.

NATIONAL UNITY IN DIVERSITY

- E** Learners across the system of education and training will develop ethical, civic and moral values which prepare them to live in harmony and work for the unity of the country, through the appreciation of diversity, inter-culturalism and inclusiveness.

LIFELONG LEARNING

- F** Every learner will receive the opportunity to cultivate sustained learning habits and educational efforts as a personal commitment, which includes CPD and IFAE.

PHYSICAL WELL-BEING AND HEALTH

- G** Every learner will have the opportunity to access quality physical and health education to develop physical competence, fitness, self-esteem and self-concept.

An overview of major changes

The following table presents an overview of the major changes that will be introduced in the education and training system during the period of implementation of the Roadmap.

<i>Components</i>	<i>Major changes</i>
Pre-primary Education	Providing two-year government and privately funded pre-primary education within primary school premises and making it a part of the general education system.
Age of entry in Grade 1	Considering the maturity level of children, location of schools and level of parental support that could be provided, 7 years is the entry age in Grade 1. Admission is given to those who have already celebrated their 7th year before the beginning of the school year or are left with 3 months for attaining 7 year of age.
Age of completing General Education	Extending the age of completing general education from 16 years (attained upon completing Grade 10) to 18 years (attained upon completing Grade 12).
Education Structure	Reorganizing the structure into 6+2+4: six years of primary education (Grades 1-6), 2 years of middle school education (Grades 7 and 8) and 4 years of secondary education (Grades 9-12).
Self-contained system of teaching and learning	Replacing self-contained system of teaching with departmentalized system due primarily to difficulties of effective implementation.
Secondary Education Organization	Organizing secondary education in three categories: General Education, Foundation TVET and Special school for the talented.
Free and Compulsory Education	Providing free and compulsory education from pre-primary to Grade 8 and making secondary education free.
Moral Education	Providing a one-period moral education in a week for Grades 1-6 students in order to develop morals, virtue, and related values and integrating it with civic and ethical education after Grade 6.
Teacher Placement	Assigning <ul style="list-style-type: none"> • Diploma (12+3) holders to teach in pre-primary grades. • Bachelor's degree holders to teach in Grades 1 to 8. • Master's degree holders to teach in Grades 9-12.
Teacher career structure	Linking career structure of teachers with licensing and relicensing of teachers.
University of Education	Establishing a separate university for teachers and educational leaders.
Assessment and Examination	Administering regional examination at the end of Grade 6 by concerned regional authorities through Woreda/clusters Administering national examination at the end of Grade 8 by concerned regional authorities for which table of specification and related standards will be prepared by the MoE Administering national examination at the end of Grade 12.
School Feeding	Implementing school feeding programme step by step, starting from pre-primary to Grade 8 level.

Components

Major changes

Vocationalization

Vocationalizing education by integrating learning with practice, life, production etc. starting from pre-primary through to higher education levels.

TVET levels

Raising structure of TVET from the current 1 to 5 to 1 to 8 (Doctor of Philosophy) levels.

Pathway to TVET

Creating pathway for TVET graduates to continue their education and training up to the PhD level.

Foundation TVET

Providing foundation TVET in secondary schools from Grades 9-12 in schools selected for the purpose and organized in limited dedicated schools , to provide options to join the world of work upon completion of secondary education.

TVET Teacher qualification

- Bachelor's degree for Levels 1-2.
- Master's degree for Level 3 and above.
- Getting certified in area of occupational teaching and training.



Components

Major changes

University Education	Extending duration of undergraduate programme minimum from 3 to 4.
Freshman programme	Introducing courses helpful to: <ul style="list-style-type: none">• Develop 21st century skills,• Decide on future area of education (career orientation),• Get prepared to work and live as a responsible national and a global citizen.
Courses on Professional ethics	Providing courses on ethics relevant to one's profession.
University differentiation	Differentiating universities in line with criteria set as: <ul style="list-style-type: none">• Research universities,• Teaching/applied universities,• Technical universities, and make them centers of excellence.
Higher Education Teacher qualification	<ul style="list-style-type: none">• Master's degree and above to teach in undergraduate programmes,• PhD for teaching in graduate programmes,• Getting certified in the pedagogy of higher education teaching and learning.
Budget for Research	Legalizing the allocation of a minimum of 5% of the budget for research
Instructor workload	Legalizing and allocating: <ul style="list-style-type: none">• 60% of the workload for teaching,• 25% of the workload for research,• 15% of the workload for community service.
Internship/Field Practice	Allocating 20% of time of stay in higher education for engagement in industry/ practical activities related to field of study.



Components

Major changes

Education and Training Language	Using mother tongue as a medium of instruction in pre-primary levels, Using mother tongue as a medium of instruction and as a subject starting from Grades 1 to 8 and working to make it a medium up to higher education level, Teaching a federal/official language/s as a subject from Grade 3 or 5, Teaching English as a subject starting from Grade 1 and using it as a medium of instruction and subject starting from Grade 9, Teaching one additional language chosen by regions to promote inter-regional relations starting from Grade 3, Encouraging students to learn other foreign languages as an extra-curricular subject, Providing level one and two TVET in local languages chosen by regions.
Formal TVET	Providing formal TVET after completion of Grade 12, Providing TVET opportunity for those who have completed any type and level of educational programme after Grade 12.
Pastoralist Education	Designing special strategy and providing education and training using suitable and flexible curriculum to pastoralists and semi-pastoralists.
National qualification framework	Developing a national qualification framework in harmony with the recommendations of the Roadmap.
Special needs and gifted students	Developing scientific mechanisms of identifying gifted and special needs students and education and training in all areas of study.
Adult Education and Training	Undertaking independent Adult and non-formal education and training programme by designing special nationwide strategy.
Quality Assurance	Establishing a strong quality and relevance assurance institutions in the three sub sectors.
Education Institutions	Ensuring education institutions meet national education standards at the end of the period of implementation of the Roadmap.
Educational Leadership	Ensuring deployment of qualified leaders, managerial and supervisory personnel from the federal to institutional level.
Cost sharing	Raising cost sharing from the current 15% to 30% at the end of the period of implementation of the roadmap.
Voluntarism and National Service	Establishing a legal framework for voluntarism and national service.
Education Policy and Education Act	Ratifying and implementing the reformed education and training policy, Enacting an education law for enforcing duties and responsibilities.
International Assessment system	Joining international education assessment/PISA, TIMSS, Skill competition, etc. to strengthen education and training system.

Ethiopian Education and Training Roadmap until 2030

NATIONAL VISION

Enhance the well-being of its citizens;
Become a self-reliant, economically prosperous, sustainable and harmonious society
Reach lower middle-income economy status by 2025, where good governance and social justice prevail

PHILOSOPHY

- Education and training are viewed as:
1. an instrument of cultivating the individual holistically, including one's moral, cognitive, social, spiritual, physical, psychological and vocational attributes
 2. a public good based on indigenous and global knowledge, which serves as a means of social harmony and development
 3. an instrument of expanding the horizons of knowledge and advancing science and technology, to transform the country into a respectable member of the world

VISION & VALUES

The vision is for the education and training system to transform the society through harnessing the full potentials of the learners to become productive citizens
Three key guiding values: Good governance, Equity, and Excellence

LEARNER & SYSTEM GOALS

All learners acquire:
Knowledge and Skills, Creativity and Thinking skills, Self-reliance, Leadership skills
Multilingual Proficiency, National unity in Diversity, Lifelong learning
Physical well-being and health

NATIONAL
UNITY IN
DIVERSITY

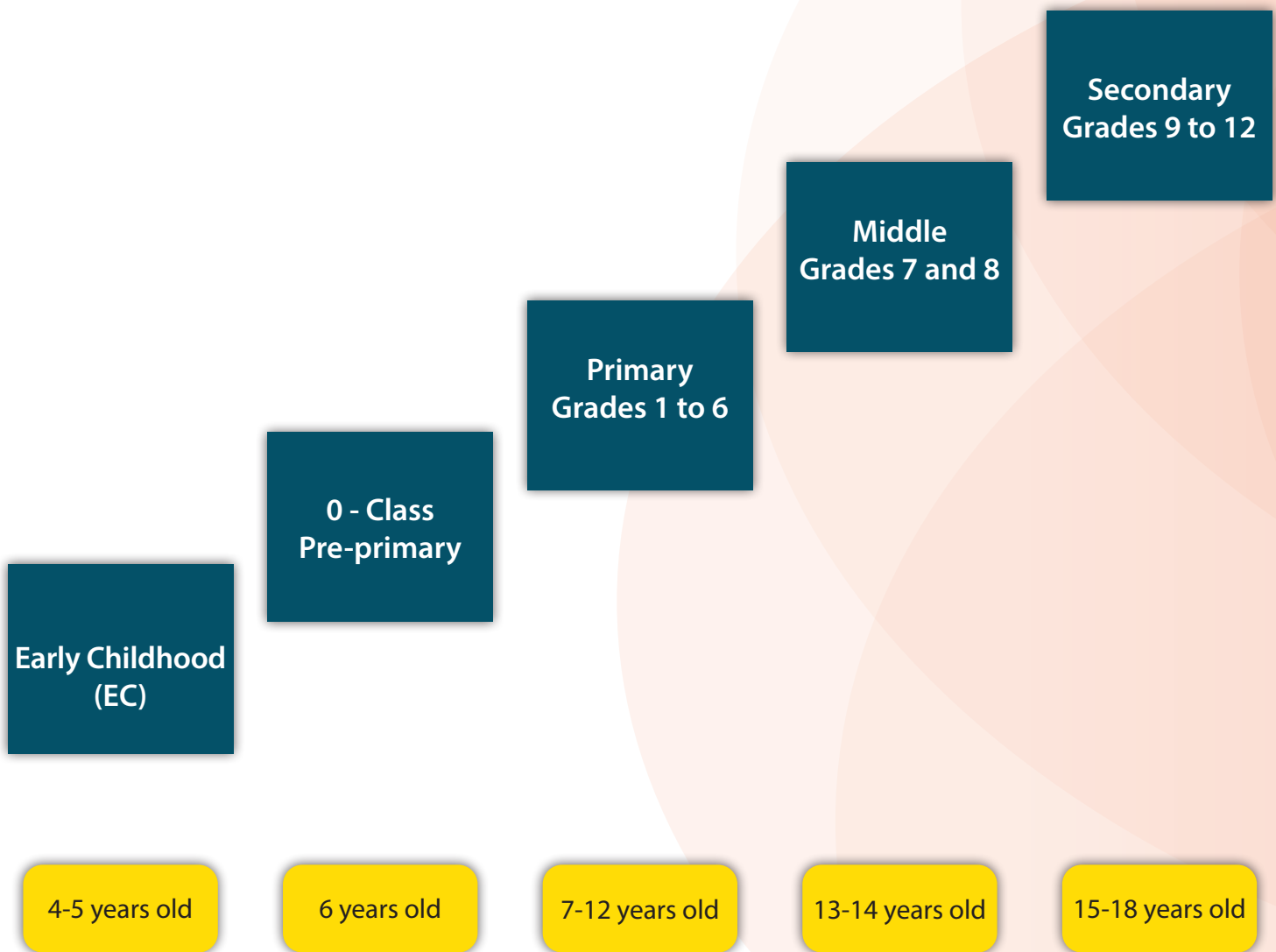
EQUITY

QUALITY

RELEVANCE

GOOD
GOVERNANCE

Structure of the



Ethiopian Education System

Ethiopian General Secondary Education Certificate Examination

Higher Education (HE)

Bachelor Degree (BA)

Master's degree

PhD

Technical and Vocational Education training (TVET)

Levels 1 to 8

Teacher Training College (TTC)

18 years and over

CHAPTER 4

THE TRANSFORMATION OF THE EDUCATION AND TRAINING SYSTEM: MAJOR SHIFTS

+

~

-

#

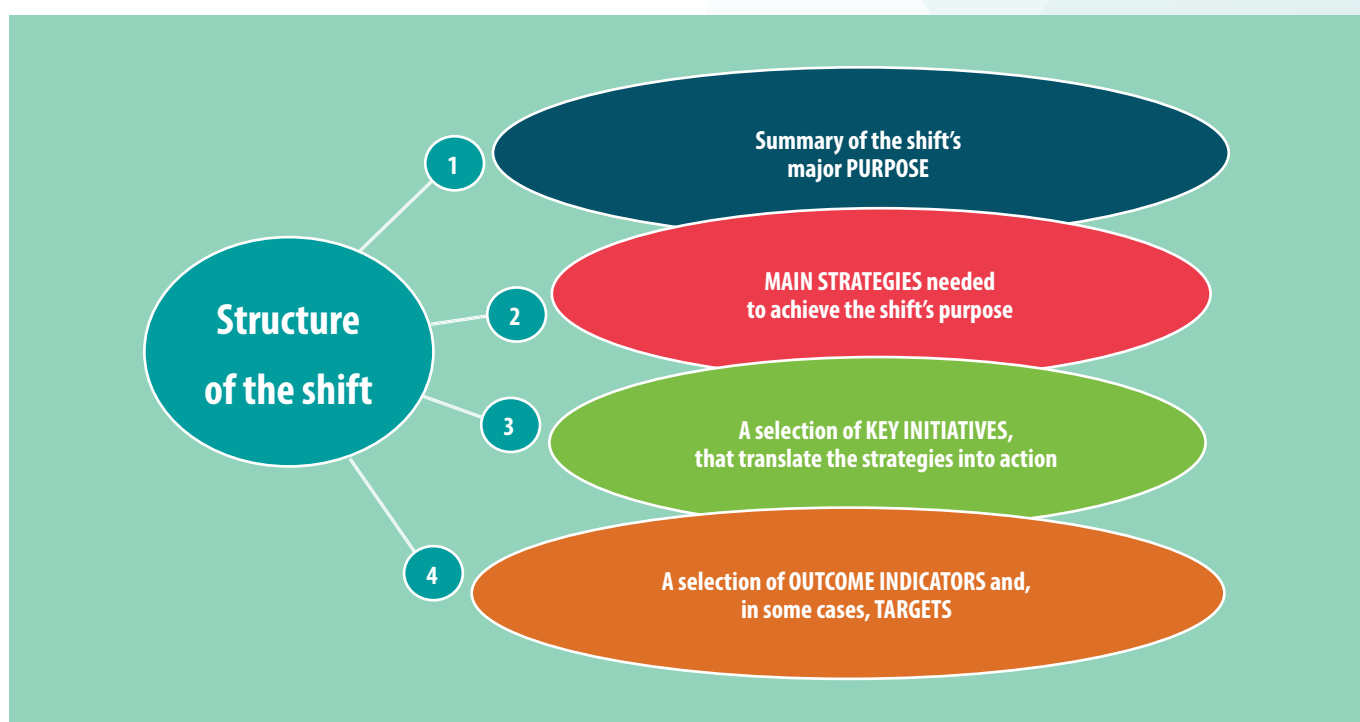




Chapter 4

The Transformation of the Education and Training System: Major Shifts

In order to achieve the goals and objectives of the Roadmap, thirteen shifts are introduced in the education and training system. Some of these shifts present significant changes in the overall direction of the education and training policy: others are in line with existing trends but demand a greater emphasis on this trend or propose a change in the speed with which this transformation will be achieved.

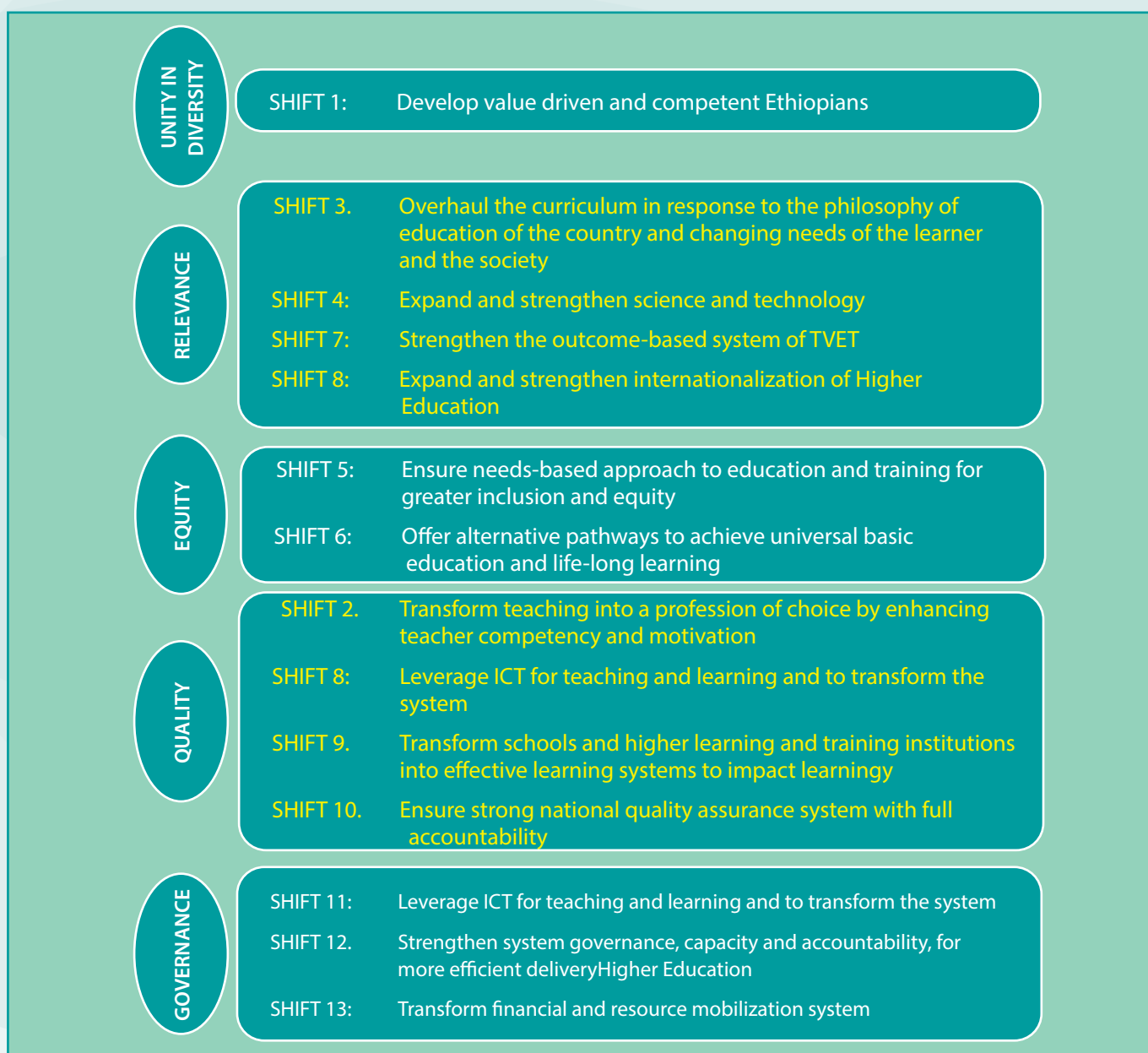


Sections 1 and 2 of each shift may not undergo much change during the Roadmap implementation. Sections 3 and 4 will be further developed in the sub-sectoral plans and strategies such as the ESDP's. This is particularly the case for the targets². Both the initiatives and the targets may therefore undergo change during the Roadmap implementation.

The strategies, initiatives, indicators, and targets are usually presented by sub-sector (for General Education, TVET, and Higher Education).

Five of the thirteen shifts are system-wide, three are more specific for each sub-sector, and the final five are cross-cutting.

The thirteen shifts are linked to the five system goals, as the graph hereunder shows. Some shifts serve different goals.



2. While the Roadmap identifies indicators for all shifts, it does not identify targets for all indicators. This is due to the unavailability of recent data on which to base these targets or the fact that some indicators refer to new initiatives, for which no baseline exists at the moment.

Five System-wide shifts:

1. DEVELOP VALUE DRIVEN AND COMPETENT ETHIOPIANS
2. TRANSFORM TEACHING INTO A PROFESSION OF CHOICE BY ENHANCING TEACHER COMPETENCY AND MOTIVATION
3. OVERHAUL THE CURRICULUM IN RESPONSE TO THE PHILOSOPHY OF EDUCATION OF THE COUNTRY AND CHANGING NEEDS OF THE LEARNER AND THE SOCIETY
4. EXPAND AND STRENGTHEN SCIENCE AND TECHNOLOGY
5. ENSURE NEEDS-BASED APPROACH TO EDUCATION AND TRAINING FOR GREATER INCLUSION AND EQUITY

THREE Sub-sector shifts:

6. OFFER ALTERNATIVE PATHWAYS TO ACHIEVE UNIVERSAL BASIC EDUCATION AND LIFELONG LEARNING
7. STRENGTHEN THE OUTCOME-BASED SYSTEM OF TVET
8. EXPAND AND STRENGTHEN INTERNATIONALIZATION OF HIGHER EDUCATION

FIVE Cross-cutting shifts:

9. TRANSFORM SCHOOLS AND HIGHER LEARNING AND TRAINING INSTITUTIONS INTO EFFECTIVE LEARNING SYSTEMS TO IMPACT LEARNING
10. ENSURE STRONG NATIONAL QUALITY ASSURANCE SYSTEM WITH FULL ACCOUNTABILITY
11. LEVERAGE ICT FOR TEACHING AND LEARNING AND TO TRANSFORM THE SYSTEM
12. STRENGTHEN SYSTEM GOVERNANCE, CAPACITY AND ACCOUNTABILITY, FOR MORE EFFICIENT DELIVERY
13. TRANSFORM FINANCIAL AND RESOURCE MOBILIZATION SYSTEM

SHIFT 01

DEVELOP VALUE DRIVEN AND COMPETENT ETHIOPIANS

Education is the backbone of development that needs commitment from all beneficiaries. The education system needs to equip citizens with knowledge, skill and attitudes that fit the wider world. Competence-based learning is the demand of the 21st century labor market: graduates at all levels need to have proficiency in three basic sets of skills: generic or transferable skills; vocational skills; and job specific skills. In addition, students need to be equipped with ethics and morality. Students have to acquire the right set of values, attitudes and behaviors when they are young and still developing.

GTP II emphasizes the development of competent citizens who are capable of contributing to social, economic, political and cultural development through creation and transfer of knowledge and technology; and the need for children, youth and adults to share common values and experiences and to embrace diversity. In line with this, one focus area of the Roadmap is to achieve learner-aspirations such as critical thinking, creativity, collaboration, communication, and moral values. The purpose of this shift is to contribute to an education and training system that promotes nation building, embraces cultural, religious, and ethnic diversity and gives learners shared values and experiences, by providing children and youngsters with competencies and skills that are relevant to the modern economy, and by developing maturity in social, moral, psychological regards.

SYSTEM

Focus the education and training experience on developing value driven Ethiopians

The education and training system as a whole has to focus, in particular through the curriculum and extra-curricular activities, on creating positive values among learners at all levels. This has implications for the system as a whole and for each sub-sector. The existing curriculum at every level has weaknesses to produce ethical citizens in the country. National unity, moral and civics education

will be incorporated into the curriculum for all levels. A broad revision of the existing curriculum and of its use in General Education, TVET and Higher Learning institutions will precede, if need be, its updating. The appropriate curriculum, training package and modules that enable students to have a proper ethics and morals, will be developed. There will be a stronger focus on co-curricular activities, as essential activities that contribute to promote ethical and moral education.

GENERAL EDUCATION

One strategy consists of strengthening, through the school experience, relationships between different groups in the country. Interaction across schools, ethnicities and socioeconomic groups will be facilitated. At the same time, students will be asked to participate in serving the community around the school. Part of this strategy will include a review of the existing teacher deployment criteria to promote unity in diversity.

Moral education will be offered as a separate subject starting from Grades 1-6 and will be integrated into civic and ethical education from Grade 7 onwards. The General Education sub-sector needs to review the civics and ethical education curriculum that captures the international standard. In the meantime, the schools need to develop the individual talents of students and the teaching should relate the experience of the classroom to the realities of the world.

TVET

Equip students with appropriate skills and ethics for entrepreneurship

The TVET programme does not focus sufficiently on ethics and values. The modules of the skills training need to have ethics and moral contents to produce citizens, who are competent and productive, and have professional and work ethics. In addition, standard ethics modules for training of trainers for different levels of TVET will be developed.

The Roadmap intends to develop holistic and balanced graduates who possess not only job-related skills, but also the entrepreneur mindset and readiness for lifelong learning. Many TVET and University Technology graduates lack generic skills and specific job-related skills, as well as professional ethics. Shift 3 aims more at

strengthening the job-related skills. The focus here is to equip the middle-level and higher-level technicians with appropriate skills and professional ethics that will enable them to be innovative and entrepreneurial, and to become productive, flexible, and responsive to changing needs of the world. This has implications for the curriculum, but even more so for the pedagogy and for the ways in which trainees are participating in training, increasing the time they spend in the workplace through placement and projects. The focus on entrepreneurship will demand changes in the recruitment of trainers, most of whom are recruited from among graduates of TVET and university, with little entrepreneurship experience. Assessments also need to pay attention to entrepreneurship.

HIGHER EDUCATION

Promote Unity in Diversity in Ethiopian Higher Education

Higher education programmes will incorporate national unity, moral, ethics and civics education. Within higher education, specific attention will go to the revision of the modules and training packages of teacher education and training institutions to have appropriate teachers for the education system.

Higher education plays an important role in shaping and enabling students from different backgrounds, religious, and ethnics to interact with each other, understand and accept differences, and to embrace diversity to foster unity. However, the issue of unity in diversity is not addressed in Ethiopian higher education system as desired. Students coming from different backgrounds are not well guided

on the issues related to unity in diversity. This leads sometimes to conflicts among group of students with different cultural and languages. Equipping students with the knowledge, skill and attitude of multiculturalism as well as making them aware of the importance of unity and harmony, has become a priority. This strategic priority will be implemented through various initiatives. Multicultural courses will be given more attention. Student placement and faculty hiring will be reviewed to promote diversity. The relation between students and the surrounding community will be promoted. The reintroduction of the university-student internship service before the final year of their undergraduate study could allow students to be assigned to a sector related to their location and not to their ethnic background.



SYSTEM AND GENERAL EDUCATION

Focus the education and training experience on developing value driven and competent Ethiopians

- Incorporate national unity, moral and civics education into the curriculum for all levels.
- Facilitate interaction across schools and institutions, ethnicities and socioeconomic groups.
- Promote learners' participation in community services.
- Review the existing deployment criteria of teaching staff.
- Create an opportunity for prospective teaching staff to learn various Ethiopian languages.

TVET

Equip students with appropriate skills and ethics for entrepreneurship

- Introduce life skills and entrepreneurship in the curriculum.
- Introduce entrepreneurship in the curricula for TVET teachers/trainers.
- Strengthen institutions' mode of deliveries to educate graduates with entrepreneurship skills.
- Introduce assessment of work and professional ethics in every level of the training.

HIGHER EDUCATION

Promote Unity in Diversity in Ethiopian Higher Education

- Strengthen the delivery of multicultural courses
- Use community associations to expand the system of connecting students with families in vicinity of HEI.
- Promote co-curricular and extra-curricular activities so that students can interact with fellow students and others from different cultures.
- Revisit and replace the existing systems of student placement
- Encourage universities to develop a system to hire and retain faculties from different cultures.
- Reintroduce university-student internship service.

SYSTEM AND GENERAL EDUCATION

System to facilitate interaction across schools, ethnicities and socioeconomic groups: developed and implemented Strategy and guideline to enable students to participate in community service: developed and implemented.

Participation by learners in extra-curricular activities.

TVET

Strategy to enhance entrepreneurial skills and initiatives in the TVET sector: developed and implemented.

Guidelines to strengthen modes of delivery: developed and used.

HIGHER EDUCATION

Students' participation in multicultural courses.

Increased diversity Increased diversity profile of facility, staff, and resource.

% of students participating in national service in regions other than their birth places.



SHIFT 02

TRANSFORM TEACHING INTO A PROFESSION OF CHOICE BY ENHANCING TEACHER COMPETENCY AND MOTIVATION

As the discussion in Ethiopian education and training shifts from improving access to improving quality, equity, and inclusiveness, in keeping with the SDGs, particular attention has to be given to enhancing the status, competency, and motivation of the teaching staff¹, who are at the frontline of education service delivery. No education and training system can be better than the quality of its teaching staff.

Significant progress has been made in Ethiopia in the area of teacher management over the past two decades. The implementation of the 1994 Education and Training Policy and related documents led to the following positive developments:

- Decentralization of certain elements of teacher management to the regional governments, including training, recruitment, hiring, promotion, and transfer of primary school teachers;
- Raising of the training and qualification requirements for teaching staff at all levels;
- Recognition of the importance of continuous professional development (CPD) for teaching staff at all levels; and
- Introduction of a clearer career structure for teaching staff, as well as an improved salary scale and a system of licensing and re-licensing.

However, these interventions have not yet succeeded into providing the education and training system with a fully competent and stable teaching force, benefitting from appreciation within the Ethiopian nation. The system still struggles to attract, develop, recruit, and retain good teachers, which means that improvements in quality have stalled. Problems persist at all levels of the education and training system, including higher education and TVET, where teachers often lack the appropriate qualifications, pedagogical training and practical (e.g. industry) experiences and turnover is high.

The purpose of this shift is to ensure the provision of adequate qualified and motivated teachers in order to provide relevant teaching, training and learning opportunities for all children, youth and adults in all sub-sectors of education and training throughout the country.

1. The term "teaching staff" is used to refer to all those who teach at all levels, including general education teachers, TVET instructors, university professors, literacy facilitators and so on

SYSTEM

Developing, communicating, and implementing clear teacher management policies

Development of new inclusive and equitable policies and strategies on teacher management will facilitate recruitment, training and deployment of young, talented and motivated candidates from secondary school graduates, TVET institutions, polytechnics and universities.

Ensuring fair salaries, benefits, and working conditions for all teaching staff

Improving teachers' motivation and benefit schemes (salaries, medical benefits, housing, transport, adequate pensions, loans, occupational health and safety guidelines, hardship allowances for staff working in remote areas, etc.) will

make the teaching profession competitive in comparison with other professions.

Ensuring career development, professional support and life-long learning for teachers

Career progression of teaching staff will systematically be linked to their licensing and relicensing. The licensing system will be expanded to cover the whole teaching profession. During their career, teaching staff will be supported through continuing professional development. Conceptualizing CPD to meet ongoing professional development needs, including the practical education and training at workplace, will make a difference in the relevance of teachers and teaching.

GENERAL EDUCATION

Acquiring the right candidates to enter the teaching profession

The requirements to enter teaching will become more demanding, as follows: diploma holders to teach in pre-primary grades; Bachelor's degree holders to teach in primary and middle-schools grades; and Master's degree holders to teach in secondary grades. In addition, candidates will be recruited from among the high or medium achievers, on successful completion of Grade 12. The diversification of recruitment criteria, including content and pedagogical knowledge, and attitudes towards teaching, will enable to produce teachers who can meet various demands.

Reforming the pre-service teacher education programme

Introducing competence based pre-service training for teachers to enhance their subject matter and pedagogical skills, and to instill them with core competences and values will prepare teachers to teach in diverse contexts, act with sense of commitment and responsibility for one's

actions and work. A separate National University of Education (NUE) will be established for teachers and educational leaders. Thought will be given to the setting up of a national Teacher Educational Research and Strategy Institute (TERSII). Specific attention will be given to language training during pre-service training to improve teachers' language skills.

Nurturing professional networks, collaboration, and leadership among teachers

Encouragement of teacher participation in teacher organizations and parent teacher committees will enrich professional networks for teachers and thereby improve the quality and relevance of teaching. Building on good practice in peer teacher support mechanisms (e.g. learning circles) and introduction of career structures where experienced teachers can assume school leadership roles will provide incentives and motivations for teachers. Engagement of teachers and teacher organizations in decision-making and policy on education and training will ensure the relevance of teaching and training.

Improving supervision and teacher evaluation and appraisal

Organization of regular meetings between relevant stakeholders at federal, regional, Woreda, and cluster level to discuss and review existing policies and new policy developments will improve the supervision and teacher evaluation. Clarifying disciplinary measures to be taken in cases where teachers are guilty of breaches of professional conduct will ensure the implementation of appropriate appraisal for teachers.

TVET***Acquiring the right candidates to become TVET trainers***

TVET needs to provide graduates with generic skills such as entrepreneurship and innovation, as well as job-related skills. In order to do so, the TVET trainers need expertise in such skills. That expertise is most easily gained through actual work-related experience. A strategy will be developed to attract practicing engineers, technologists and industry professionals to serve as adjunct faculty at TVET institutions. These may need providing pedagogical training and incentives, but their inclusion will improve the quality of the training and may contribute to the attractiveness of TVET institutions. A certification scheme will be set up for all TVET trainers.

HIGHER EDUCATION***Upgrade quality of HEI instructors***

The quality of HE system can only be good if special talents can be attracted and maintained as instructors. The qualification mix of the academic staff to be reached is: 0% Bachelor; 25% Masters; 75% PhD. In order to attract, recruit, and retain the best talent, HEI will be allowed to move towards highly diversified career pathways. As part of this, there will be a review of the minimum qualifications and experience for recruiting instructors from different fields of study. There will be more opportunities for professional development of faculty. This will consist of several strands: training on pedagogical practices, training on formative assessment, provision of mentoring, and establishing face-to-face and online social networking platforms, and creating a collaborative space between academic staff members and academic developers working together in tackling educational problems. As at other levels, licensing and re-licensing of instructors will become a systematic practice.

Enhance a student-centred model of learning and development

To re-vitalize the pedagogic and assessment practices in the higher education classrooms, there is a strong need to move forward to embrace transformative learning through applying a set of intervention programmes that nurture faculties' pedagogical capabilities and students' understanding, skills, efficacy beliefs, and metacognition, thereby, leading to transform student employability in the end.

SYSTEM

Developing, communicating, and implementing clear teacher management policies

- Develop a national policy framework.

Ensuring fair salaries, benefits, and working conditions for all teachers

- Review teachers' salary to make it competitive to that of other professions,
- Provide adequate benefits such as housing, transport, free medical treatment, adequate pension, low interest loans,
- Improve hardship allowances and associated packages.

Ensuring career development, professional support and life-long learning for teachers

- Introduce motivational career structures at all levels,
- Enhance the content and quality of professional development programmes,
- Institutionalize CPD at all levels,
- Align career promotion and incentive with performance and the licensing.

TVET

Acquiring the right candidates to become TVET trainers

- Develop strategy to attract industry professionals to serve as faculty at TVET institutions,
- Certify all TVET trainers,
- Promote teacher/trainer entrepreneurship,
- Diversify career pathways,
- Systematize licensing and relicensing.

GENERAL EDUCATION

Acquiring the right candidates to enter the teaching profession

- Set a minimum and harmonized entry process for teacher recruitment,
- Reforming the pre-service teacher education programme,
- Establish a specialized National University of Education (NUE) with focus on teacher education,
- Use diverse modalities of teacher preparation (including but not limited to integrated/concurrent and add-on/consecutive modalities).

Nurturing professional networks, collaboration, and leadership among teachers

- Create professional networks for teachers,
- Promote teacher organizations in decision-making.

Improving supervision and teacher evaluation and appraisal

- Revise supervision and support policies.

HIGHER EDUCATION

Upgrade quality of HEI instructors

- Diversification of career pathways,
- Introduce systematic mechanisms for talent recruitment and development,
- Provide regular professional development,
- Systematize licensing and relicensing.

Enhance a student-centred model of learning and development

- Develop and run multifaceted and multilevel intervention programme addressing faculties and students.

SYSTEM

National policy framework: developed.

Attrition rates for teaching staff at all levels reduced.

GENERAL EDUCATION

Qualifications of teachers: 100% diploma holders in pre-primary; 100% Bachelor degree holders in primary and junior secondary grades; 100% Master's degree holders in senior secondary.

% of licensed teacher graduates at the end of teacher training.

% of teachers who participated in short and long continuous professional development programmes annually.

% of high performing teachers assessed through standard performance appraisal system.

TVET

% of TVET trainers qualified/certified through revised/developed training programme.

% of TVET trainers acquired industrial practices.

% of high performing teachers/trainers assessed through standard performance appraisal system.

HIGHER EDUCATION

Qualifications of academic staff: 25% Masters; 75% PhD.

No. of developed and functional faculty development strategies.

% of faculty in participated in research, technology transfer, university-industry linkage and community services.

% of faculty participated in capacity development programmes.

SHIFT 03

OVERHAUL THE CURRICULUM IN RESPONSE TO THE PHILOSOPHY OF EDUCATION OF THE COUNTRY AND CHANGING NEEDS OF THE LEARNER AND THE SOCIETY

Curriculum is a manifestation of the vision of society for the future. It presents the knowledge, skills, and values that learners are expected to acquire, develop, and demonstrate not only to meet changing demands of society and economy, but also to initiate and lead these changes. Therefore, the curriculum of the Ethiopian education and training system needs to reflect its transformational goals to develop a competent workforce and active citizens for transitioning towards a middle-income country as well as a thriving democratic culture.

Despite impressive efforts in expanding access, the quality of education and training has been continuously questioned. In particular, the current curriculum is found overly theoretical and knowledge-based, while teacher-dominant instruction fails to develop learners with competencies required for the changing world. Moreover, poor language instruction at schools often leads to poor mastery of foundational skills in reading, writing and mathematics. Furthermore, the weakness of general education is evident in students who are ill-equipped to acquire further education at TVET and higher education institutions. TVET and Higher Education curricula are often criticized for their failure in producing competent and skilled graduates and their rigidity and inability to address the changing needs of the labour market and industries. In particular, TVET curriculum is criticized for its variability across the nation, and the absence of industry involvement.

As a reflection of the country's transformational agenda, this shift proposes fundamental changes in the curriculum of all institutions starting from pre-primary to TVET to higher education. The shift is built on the assumption that quality of education and training should be reflected in the demonstrable capacities of learners who go through the system. This shift will result in the development of national capacity in designing and implementing quality competency-based curriculum, skills and values-oriented programmes across all subsectors, and a regionally and internationally competitive system. To achieve the goals of this shift, several strategic directions are spelt out below.

SYSTEM

Re-organize and revise the structure and curriculum content of the education and training system

Within the next ten years, the duration, structure and content of the curriculum will be substantially changed. Several proposals will be implemented to revise the structure of the education system. The duration of pre-primary education will be from one-year to two-year government-funded pre-primary education with standardized curriculum, play-based instruction, focusing on the holistic development of a child. Children will enter from age 5 and complete until age 7. This two-year programme will be an integral part of general education.

The structure of general education will be 6 years of primary education (Grades 1-6), 2 years of middle school (Grades 7-8), and 4 years of secondary education (Grades 9-12). The entry age to primary education will be age 7. The compulsory and free education will be until Grade 8.

Foundation TVET will be available to Grade 9 students in secondary schools, while the curriculum of pre-primary and general education will include practical skills, experiential learning, and vocational component. The duration of TVET will be extended, thus establishing pathways for graduates to acquire higher education qualifications.

An extra year will be added to the university education through the introduction of the

freshman programme, therefore, extending bachelor programmes from 3 to 4 years. Internships in the field of study will become an integral part of the university education. Moreover, voluntary engagement will also be integrated into university education requirements to develop civic-minded graduates.

There will be nation wide special strategy to carry out adult and non-formal education.

Improve national capacity in curriculum development by establishing a Curriculum Institute

To lead the curriculum reform process and establish national capacity, a National Curriculum Institute will be established. This institute will be supported with a dedicated budget and competent staff and equipped with necessary infrastructure. The capacity of this institute will be further strengthened with the help, among others, of the National Quality Assurance Agency. The institute will be a dynamic and learning organization which develops, evaluates and improves the curriculum for better learning outcomes. Furthermore, as curriculum implementers, administrators and teachers/educators will be the focus of the Institute's training programmes, while a comprehensive system of textbook development, distribution, and management will also be managed by the Institute.

GENERAL EDUCATION

Develop competency-based and differentiated curriculum that integrates 21 century skills and indigenous knowledge

Curriculum of pre-primary, primary, middle school and secondary education will be reviewed to develop skills and competencies to move away from simple acquisition of theory and knowledge. A national curriculum framework will guide subject-based syllabi and instructional

and learning material development. Curriculum content will include relevant indigenous knowledge and diversity of cultures in Ethiopia which contributes to the development of unified civic and national identity. The curriculum framework will also be adapted and differentiated for students with special needs. The new curriculum will integrate digital skills instruction across curriculum areas.

Implement trilingual general education and introduce additional language teaching in the regions

Mother tongue will be a subject as well as a medium of instruction at pre-primary education, general education until Grade 8 along with the federal/official language as a subject from Grades 3-5. English will be taught as a subject from Grade 1 and will be the medium of instruction from Grade 9 to higher education. The capacity of teachers will be improved to produce students with advanced proficiency levels and communication skills in three languages (mother tongue, official, and English). The training of multilingual teachers as well as the development of appropriate instructional and learning materials will be at the core of a trilingual education system. Furthermore, one additional language will be selected by regions to promote inter-regional student mobility and will be taught starting from Grade 3 based on the interest of the region. Students will be encouraged to learn other foreign languages as extracurricular subjects in addition to the required number of languages in their curriculum.

Revamp the National Learning Assessment and Examination system based on the new general education curriculum

With the introduction of the Normative Continuous Assessment, teachers will carry out formative assessments to provide timely feedback to students to improve their learning. Several standardized assessments will be developed and instituted to assess the learning outcomes of students. Such standardized assessments will be conducted at the end of primary, end of middle school, and then at the end of secondary education. More specifically, at the end of Grade 6 (primary education), regional examination will be instituted across all regions and will be administered by the regional education bureaus. At the end of Grade 8 (compulsory education) examination will be administered by regional education bureaus with the national standards prepared by the Ministry of Education. At the

end of Grade 12, a national examination will be administered by the Ministry of Education. Ethiopia will also join cross-national/international assessments (PISA, TIMSS, skill competition), to evaluate the performance of students' learning in comparison to students in other countries (Shift 2).

Train teachers and educators and managers capable of implementing the new curriculum

Successful implementation of high-quality curriculum depends on the quality of teachers, educators and education managers. Therefore, they will be trained and retrained to improve, adapt, and respond to regional and local realities and the individual needs of learners when implementing the curriculum. As curriculum implementers, their feedback and evaluation of the newly developed curriculum will be critical for those at the Curriculum Institute and Teacher Training institutions to further improve the curriculum design.

Improve the Integrated Functional Adult Education Curriculum Framework

The Integrated Functional Adult Education (IFAE) Curriculum Framework and the Implementation Guidelines will be improved to include learning progression in literacy and numeracy as well as functional content areas. The relevance of IFAE programmes is possible through a flexible approach to curriculum design and programme delivery, while standardized learning assessment tools will establish common minimum standards for learner certifications. The latter not only addresses poor literacy learning outcomes among IFAE programme participants, but also establishes alignment with the formal education examination and certification system. The recognition of skills acquired through alternative learning programmes will strengthen the flexibility of the education system: some IFAE graduates will be able to enrol in formal education, while others will enter the world of work and lifelong learning.

TVET

Develop TVET curriculum and assessment tools for technical and vocational training programmes

To improve the relevance of TVET, curriculum will be developed for all technical and vocational programmes. These curricula will be based on the industry-owned occupational standards to design programmes aligned with the National Qualifications Framework. Along with improvement in training in agricultural technologies, new curricula and programmes in fundamental, green technology, and emerging digital technology will be offered by selected TVET institutions or the Centers of Excellence. Standard assessments will be developed and administered to ensure the quality of learning outcomes and contribute to the validity of credentials. The TVET curriculum will further cover fundamental academic subjects including, science, mathematics and languages to prepare the learners to cope up with economic and technological changes.

HIGHER EDUCATION

Develop competency-based curriculum

The course content dominated curriculum will be replaced with competency-oriented curriculum. A range of competencies necessary for the 21st century will be included in the new curriculum. These competencies include creative and innovative skills, critical thinking, problem solving, communication, collaborative learning, digital skills, life skills, accountability, leadership, appreciation of diversity and peaceful resolution of conflicts. The campus-based education delivery model will be reviewed to blend it with the technology-enabled and personalized learning training. In this regard, a national e-learning platform will be developed.

As part of this focus on general competencies and to prepare for academic studies, a freshman programme will be introduced. The programme will include the 21st century skills and competencies, career counselling, ethics, global citizenship, and languages. By adding an additional year for the freshman programme, the undergraduate programme will be extended from three to four years.

Diversify Higher Education offer by establishing specialized universities

To avoid duplication of educational offers and ensure efficient investment in university education, the universities will be specialized in the areas of study. The specialized universities will closely work with relevant industries and sectors to ensure that their training curricula are upgraded continuously to produce relevant skills and workforce to boost the economy. A three-tier system of classification and differentiation that is the research universities, the teaching and applied sciences universities, and the technical universities will be implemented progressively.

SYSTEM

Re-organize and revise the structure and curriculum content of the education and training system

- Re-organize the structure of the education and training system (pre-primary; primary; middle school, secondary; TVET; Higher Education; IFAE).
- Develop broad curriculum framework for whole education and training system.

Improve national capacity in curriculum development by establishing a Curriculum Institute

- Develop national curriculum development policy with a clear strategy for curriculum development and improvement process.
- Establish a National Curriculum Review and Development Committee and a Curriculum Institute.

GENERAL EDUCATION

Develop competency-based and differentiated curriculum that integrates 21 century skills and indigenous knowledge

- Develop competency-based curriculum with learning standards and progression levels.
- Integrate indigenous knowledge in formal education curriculum.
- Develop syllabi, and instructional and learning materials, and adapt these for special schools.

Implement trilingual general education and introduce additional language teaching in the regions

- Develop a comprehensive language in education policy that captures both a flexible medium of instruction with a trilingual language education.
- Implement a trilingual education (mother tongue, official language(s) and English).
- Introduce a sign language for children with hearing difficulties.

Revamp the National Learning Assessment and Examination system based on the new general education curriculum

- Develop and implement a policy framework for National Assessment and Examination system.
- Develop and administer periodically regional and national assessments at the end of Grade 4, Grade 8, and Grade 12 based on the new competency-based curriculum.
- Revamp EGRA and EGMA and undertake learning assessment at the end of each level.
- Develop a set of normative standards for formative assessment.
- Participate in cross-national learning assessments (SACMEQ, PISA, TIMSS).

Train teachers and educators and managers capable of implementing the new curriculum

- Train teachers and school management in the new curriculum.

Improve the Integrated Functional Adult Education Curriculum Framework

- Revamp the IFAE Curriculum Framework.
- Improve the IFAE Implementation Guidelines.

TVET

Develop TVET curriculum and assessment tools for technical and vocational training programmes

- Develop industry led occupational standards.
- Develop TVET curricula based on occupational standards in collaboration with industry leading experts.
- Develop curriculum and TTLM in local languages as required.
- Establish Centers of Excellence focusing on specific fields of study/areas of work.
- Develop training curriculum for specialized Institutes to train skilled and semi-skilled workers for national/international labour markets.
- Develop legal frameworks for internship and apprenticeship as integral part of TVET programmes
- Develop TVET assessment tools.



HIGHER EDUCATION

Develop competency-based curriculum

- Develop a freshman programme standards and frameworks together with relevant curriculum.
- Develop curricula of higher education institutions for blended learning and personalized learning approaches.

Diversify Higher Education offer by establishing specialized universities

- Differentiate universities as research, applied sciences and technical training.

SYSTEM

Curriculum framework and structure: revised and implemented.

National Curriculum Institute: established and functional.

GENERAL EDUCATION

- Two-year pre-primary curriculum framework and curriculum: developed and implemented.
- Competency-based primary education curriculum: developed and implemented.
- Competency-based middle school curriculum: developed and implemented.
- Competency-based secondary education curriculum: developed and implemented.
- Competency-based IFAE programme curriculum: developed and implemented.
- Language-in-education policy: developed and implemented.
- Textbook/learner ratios at different levels.
- National Learning Assessment Policy and Framework: developed and validated.
- % of Grade 2/3 student scored proficient and above on EGRA and EGMA: 95.
- % of student enrolled in Grade 4 scored proficient and above on Learning Assessment composite score: 95.
- % of student enrolled in Grade 8 scored proficient and above on Learning Assessment: 95.
- % of student enrolled in the last grade of secondary education scored proficient and above on Learning Assessment: 95.
- % of student scored 50% and above in primary school leaving examination: 95.
- % of students who scored 50% and above in middle school leaving examination: 95.
- % of student scored 50% and above in secondary school leaving examination: 95.
- Rank in international assessment test (PISA/TIMSS): score 480 and above.
- % of pre-primary, primary, middle school and secondary teachers trained in the new curriculum.

TVET

- National Qualification Framework: developed and validated.
- Number of industry-based occupational standards developed.
- TVET curriculum of all technical and vocational programmes: developed and piloted/tested.
- Number of TVET curriculum designed and piloted/ tested.
- Number of TTLM developed.
- Number of assessment tools developed.
- Uniform TVET curriculum in place.

HIGHER EDUCATION

Number of competency-based curriculum of undergraduate programmes.

Freshman programme curriculum: Designed and offered.

Number of students that have participated in the freshman programme.

% of students in research, applied sciences and technical training universities.

SHIFT 04

EXPAND AND STRENGTHEN SCIENCE AND TECHNOLOGY

The transformational agenda of Ethiopia requires an education system which produces skilled workforce through curriculum across all the levels of education that emphasizes the knowledge and skills in science, engineering, art, mathematics and digital technologies.

The current curriculum reflects more a liberal arts-oriented system with an academic orientation. Without practical skills and learning through observations, experiments, and inquiry, learners simply store knowledge of facts and concepts and do not acquire higher order skills such as critical and creative thinking. Currently, STEAM-focused teacher training programmes attract less applicants as opposed to social science and arts-oriented subject areas. Moreover, ICT courses are neither offered as subject areas nor integrated systematically in teacher training curriculum. This is mainly due to the lack of or poor ICT infrastructure at schools as well as training institutions.

This shift proposes the revision, updating and strengthening of the STEAM curriculum across all the levels of the education and training system. It argues that the revision and expansion of STEAM should begin with the general education curriculum to equip young learners with necessary knowledge, skills, and attitudes and prepare them for TVET and Higher Education in such fields of study with the ultimate aim of producing middle and highly-skilled workforce for modernized agriculture, manufacturing and service industries in Ethiopia. The shift also highlights the importance of investing in the research, innovation and development capacities of higher education institutions and affiliated industries to lead changes in the country as well as become regionally and internationally competitive education system and economy. The STEAM approach also refers to a teaching and learning strategy, that emphasizes application of knowledge, skills and values from the disciplines of science and technology in an integrated manner to help learners solve problems encountered in the real world.

GENERAL EDUCATION

Develop and implement competency-based STEAM curriculum and instruction

To prepare students for higher education institutions in sciences and technology, there is a need for expanding and improving STEAM curriculum and instruction at the level of general education. First, the review of STEAM education will result in the development of competency-based curriculum for mathematics and other sciences according to the level and age. The emphasis will be on the development of higher order thinking, innovative and creative thinking, problem solving and communication skills. With the expanded curriculum of secondary education from two to four years, STEAM curriculum will be further expanded and improved. Second, the general education curriculum will introduce computer science education from primary school level to develop digital competencies of students. Improved digital competencies of both teachers and students will result in using these competencies to acquire further knowledge and develop new skills.

Train STEAM teachers and improve pre-service teacher training and CPD programmes

To shift towards STEAM-oriented middle school and secondary curriculum, competent STEAM teachers will be trained and deployed across the country. In this regard, pre-service as well as CPD programmes will improve the quality of curriculum delivery and training methods. Teachers will learn how to use computers for improving their knowledge and skills, and to design quality technology-enhanced instructions and materials.

Improve school infrastructure and material capacities

Students need to learn through experimentations, observations, and active inquiry if they are expected to develop competencies in STEAM subject areas. New instructional and learning materials will be developed and distributed across all schools in the country. Moreover, the technological and material infrastructure of schools as well as teacher education institutions will be improved. Regional centers of excellence will be established in ICT-assisted curriculum, material development and instruction in different subject areas.



TVET

Train STEAM trainers and improve pre-service teacher training and further training programmes

Too few teachers in the TVET sub-sector have at present the required competencies to equip their learners with the necessary knowledge, and skills related to STEAM. The improvement of the performance of these teachers will demand as a start better pre-service training, while efforts will be made to provide all teachers with regular professional development and further training.

Equip TVET institutions with STEAM related infrastructure

One major challenge to providing training in STEAM related areas, is the lack of appropriate infrastructure within TVET centers. The provision of relevant infrastructure in different centers, taking into account the needs of the curriculum they offer, is an essential strategy in the expansion of science and technology.





HIGHER EDUCATION

Revamp the student intake strategy for higher education and training

The current strategy, which is based on the 70:30 or 40:30:30 distribution model, in which 40% intake will be in engineering, while 30% in natural sciences and another 30% in social sciences, will be replaced by a flexible approach to the intake distribution as the changes in the labour market are dynamic.

Improve STEAM-related training curriculum and instruction

STEAM-specific curricula will be updated and offered with the aim of improving subject knowledge and developing competencies and skills. Through modular approach to curriculum delivery, HEI will also develop new courses and programmes that address current or emerging needs of the labor market. ICTs will be systematically and extensively integrated across all programmes of higher education institutions. Courses will be offered both online and through blended approaches.

GENERAL EDUCATION

Develop and implement competency-based STEAM curriculum and instruction

- Review and develop competency-based STEAM curriculum with an emphasis on middle school and secondary school levels,
- Develop STEAM-related learning materials,
- Implement competency-based STEAM curriculum at middle school and secondary schools systematically.

Train STEAM teachers and improve pre-service teacher training and CPD programmes

- Develop competency-based STEAM teacher training programmes at the pre-service and in-service teacher training institutions,

- Develop and offer ICT courses across all subject areas of general education,
- Use ICTs for instructional and learning material development.

Improve school infrastructure and material capacities

- Equip schools with digital and other types of technologies,
- Establish well-resourced and functioning laboratories and workshop areas,
- Equip teacher training institutions with necessary technologies and equipment,
- Establish regional centers of excellence in ICT-assisted curriculum, material development and instruction.

TVET

Train STEAM trainers and improve pre-service teacher training and further training programmes

- Develop competency-based STEAM pre-service training programmes,
- Provide TVET trainers with in-service and professional development opportunities in STEAM.

Equip and improve TVET infrastructure and material capacities

- Equip TVET centers with technologies, relevant to their curriculum,
- Establish well-resourced and functioning laboratories and workshop areas.

HIGHER EDUCATION

Revamp the student intake strategy for higher education and training

- Shift to a flexible student intake strategy model.

Improve STEAM-related training curriculum and instruction of higher education institutions

- Review and strengthen STEAM-specific curricula,
- Develop and offer new courses related to STEAM areas through modular approach to curriculum and through blended and online modes delivery,
- Develop a strategy for higher education in integrating ICT into curriculum and training.

GENERAL EDUCATION

- Competency-based STEAM general education curriculum: developed and implemented.
- Number of STEAM-related curriculum documents and learning materials developed and implemented.
- Competency-based STEAM pre-service and in-service teacher training curriculum: developed and implemented.
- Number of ICT courses for teachers: designed and offered.
- % of learners in schools equipped with digital and other technologies.
- % of teacher training institutes equipped with digital and other technologies.
- Number of regional centers of excellence for ICT-assisted curriculum, material development and instruction.

TVET

- Competency-based STEAM TVET curriculum: developed and implemented.
- Number of STEAM-related TVET curriculum and TTLM learning materials developed and implemented.
- STEAM pre-service and in-service teacher training curriculum: developed and implemented.
- Number of ICT courses for teachers: designed and offered.
- % of learners in schools equipped with digital and other technologies.
- % of TVET institutes equipped with digital and other technologies.
- Number of STEAM infrastructure per TVET institution.

HIGHER EDUCATION

- University student intake strategy revised, updated, and validated.
- % of students in STEAM-related specialization programmes.
- % of women among students in STEAM-related specialization programmes.
- Strategy for ICT in Higher Education: developed and implemented.
- Number of competency-based STEAM-specific curricula: developed and offered.
- Number of students who completed new STEAM courses through modular, blended and online modes of delivery.

SHIFT 05

ENSURE NEEDS-BASED APPROACH TO EDUCATION AND TRAINING FOR GREATER INCLUSION AND EQUITY

While access to education and training has been steadily expanding in Ethiopia, several barriers remain for disadvantaged learners to participate in and complete education and training. These disadvantaged groups include girls, people from/ in rural areas, people from poor households, ethnic/linguistic minorities, people with disabilities, migrants, internally displaced people and refugees. Even when they succeed to complete the secondary education, continuing their study at higher levels is challenging for most of the disadvantaged students. Under the current system, only 2.6% of the bottom 10% of the income group benefitted from the higher education budget. Disadvantaged students, often the first-generation learners themselves, are filled with stigmatization and do not have the courage to ask for support.

To address this key challenge, universal pre-primary and general education shall be introduced gradually. More flexible training opportunities will be provided to disadvantaged youths and adults so that they can continue developing their skills and competencies for the world of work. TVET and Higher education shall become more accessible for the disadvantaged students by reducing their financial burden and providing additional support.

GENERAL EDUCATION

Achieving progressive universalism in pre-primary, primary, middle school and secondary school with enhanced accessibility and equity

Ethiopia shall commit to making pre-primary, primary, middle school and secondary education gradually universal so that no one will be left behind regardless of their backgrounds. In doing so, several major strategies will be adopted. First, alternative models of primary schooling will allow children who have dropped out, to complete basic education (Shift 6). Second, the resources that the government avails, will be used

first and foremost for the most disadvantaged. The financial burden should be reduced for the disadvantaged families so that they can continue sending their children to school.

Furthermore, access to quality education shall be improved by enhanced use of ICT (Shift 11 on ICT in education). Teachers will be trained to better cater for the needs of the disadvantaged students such as students with disabilities. Safe and child friendly facilities will be provided, including to pastoralist communities. Also, the education system shall become more responsive and ready to ensure the continuation of education when emergencies hit the country.

TVET

Ensuring supportive environment for disadvantaged youth and adults in TVET institutions

Financial, physical and psychological barriers to learning shall be minimized for disadvantaged youth and adults. An important strategy will be the diversification of the training offer, so that a wider range of options are available to potential learners, who can identify the most appropriate one for their situation. This will take the form of different models of TVET both for short term to long term training, and apprenticeships that fit with local contexts. Specific efforts will be made for people with disabilities, for whom TVET institutions will be built, and for youth and adults in underprivileged regions, so that they can be trained in appropriate occupational and technical skills.

HIGHER EDUCATION

Promoting equitable access to higher education

The current provision of higher education is very minimal for the poorer section of the population. To increase access to quality education for the poor and disadvantaged people, there is a need to develop and execute HE programmes that specifically support females, students with disabilities, people from lower economic status, rural communities and pastoral areas. A measure will be taken to reduce their financial burden by reviewing the current student loan system in higher education. With respect to geographical distribution, emphasis should be placed on recruitment of students from marginalized areas, offering financial and career incentives to providers serving these areas, and deploying the power of IT to ease professional isolation. Flexible

and cost-effective access to higher education will be provided through Open University.

As the proportion of women in the workforce increases, equal opportunities need to be in place, through different mechanisms such as flexible working arrangements, career paths that accommodate temporary breaks, support to other social roles of women such as childcare, and an active stance against any form of sex discrimination or relegation. Staff will be better trained to create greater understanding of disadvantaged populations so that they can provide better support.

To enable these focused interventions, a strong database of students with category of economic background of parents, parents' level of education, inhabitant status (rural/urban) must be developed.

GENERAL EDUCATION

- Ensure that preprimary education is free, compulsory and part of the general education.
- Ensure that teacher training institutions are training ECE teachers in the relevant mother tongue.
- Introduce school feeding programme in pre-primary, primary and middle schools.
- Design flexible and appropriate education strategy for the pastoralist community.
- Develop a strategy for implementing education in emergencies.
- Train primary school and middle school teachers in the language they are expected to teach.
- Devise support systems for students with disabilities.
- Prepare teachers for inclusive education, sign language, use of Braille etc.
- Enhance the awareness and pedagogical skills of regular teachers to meet the needs of special needs education children.

TVET

- Develop a strategy to train youth and adults in under-privileged regions, zones and Woreda in appropriate skills.
- Build TVET institutions that train people with disabilities .
- Develop an apprenticeship scheme that fits with local context.
- Develop training programmes using ICT and mainstreaming digital skills.
- Create mechanisms for equitable access to TVET both for short term to long term training.
- Provide appropriate technologies for trainees with special needs.

HIGHER EDUCATION

- Provide support to disadvantaged students (e.g., students from rural areas, poor families, and emerging and pastoral regions).
- Develop and execute special guidelines and training for HEIs on gender and disability support mechanisms.
- Review the existing student-loan scheme to reduce financial burden of students from disadvantaged groups.
- Establish Ethiopian Open University.
- Increase % of female academic staff.



a. Gross enrollment ratios (GERs), disaggregated

Pre-primary:

Primary:

Middle school:

Secondary school:

b. Gender parity index of enrolments

Pre-primary:

Primary:

Middle school:

Secondary school:

TVET:

Higher education:

c. GER of students with disabilities

Pre-primary:

Primary:

Middle school:

Secondary school:

TVET

Higher education

d. Share of female in academic staff

Higher education: 50%

SHIFT 06

OFFER ALTERNATIVE PATHWAYS TO ACHIEVE UNIVERSAL BASIC EDUCATION AND LIFELONG LEARNING

There has been substantial progress in expanding access to universal basic education and improving youth and adult literacy rate. However, challenges remain. Approximately 80% of Ethiopians live in rural areas and in dispersed communities and existence of pastoral and semi-pastoral communities creates further issues for organizing and delivering quality basic education which responds to specific learning needs and realities of such communities. Currently, 40% of the youth and adult population in Ethiopia still lack basic literacy skills. This figure may increase substantially when the data on schooled children and youth with low basic literacy and numeracy skills is included. The population with low basic literacy skills is one of the main barriers for Ethiopia to transform itself into an industrial middle-income country.

This shift aims to offer alternative learning pathways to those children, youth and adults to receive basic education and expand their lifelong learning opportunities. Quality adult and non-formal education allows youth and adults to develop their literacy and numeracy skills – as foundational competencies – so they can avail further opportunities for learning as well as develop functional skills. It also helps out-of-school children and youth, especially those from pastoralist communities, to enter formal education and acquire relevant qualifications. The shift proposes the need for a systematic approach, designing relevant programmes and achieving learning outcomes that are recognized and certified in alignment with other national qualification standards.

SYSTEM

Develop sector-wide policy in youth and adult literacy, non-formal education and lifelong learning

The development of alternative basic education for out-of-school children, especially of the pastoralist and semi-pastoralist communities and of adult non-formal education requires system-wide collaboration in its planning and delivery.

Recognizing unique learning needs of youth and adults who are not traditionally served by formal education institutions, the National Adult Education Policy (2008) emphasized the importance of sustainable and effective networks and partnerships among government and non-government organizations. Despite the existence of several Memoranda of Understanding with

different line ministries, such partnerships have not resulted in sustainable and effective implementation of quality adult education (IFAE) programmes. Against this backdrop, first, the revised policy will identify a clear coordination with other sectors and sub-sectors. Second, it will provide a clear strategy for developing a cross-sectoral and dynamic lifelong learning system for adult non-formal education with a clear accountability and management structure. The policy will also set a strategy for identifying and mobilizing sustainable domestic and external funds. To reflect the regional differences in literacy challenges, region-specific priorities and targets, especially with the focus on female youth and adults, pastoral and semi-pastoral communities will be presented in the revised policy.

GENERAL EDUCATION

Strengthening institutional, organizational and pedagogical capacities for alternative basic education and lifelong learning

A dynamic system of adult and non-formal education and lifelong learning requires institutions and organizations with highly competent personnel and educators. This includes strong competencies in planning, administration, curriculum design, monitoring, evaluation, data collection and analysis. To improve the current situation of weak institutional and professional capacity, professional standards will be developed to recruit, train and retain competent managers and educators. The national curriculum framework for general education will be adapted and the delivery will be made flexible for out-of-school children and youth of pastoralist and semi-pastoralist communities.

The current IF AE Curriculum Framework will be improved to explicitly demonstrate learning as a continuum of proficiency levels in literacy and numeracy and identify a clear integration of functional content and indigenous knowledge to support programme, curriculum and material design as well as organize training of facilitators and managers. This curriculum framework will help establish minimum standards for assessment

and certification of learning outcomes. Modular course components will be designed to address diverse needs of youth and adults in IF AE programmes. The two-year IF AE programme will be flexible to be completed within five years.

Expanding access to universal basic education and lifelong learning opportunities, particularly for girls and women, through non-formal education modalities

Increases in enrolment in IF AE have remained modest, especially among girls and women. Innovative approaches are needed, including the increased use of ICTs/digital technologies in programme delivery, curriculum and instruction. Aligned with the changes in curriculum, the development and effective use of digital applications for literacy and functional content in official, national and local languages will potentially attract more youth to enroll in IF AE programmes. Higher education institutions, especially the Centers of Excellence, will play an important role not only in the design of such learning applications and innovative programmes but also in conducting relevant research and knowledge production activities. Furthermore, the involvement of government and non-government stakeholders is critical in the design and delivery of such programmes,

especially those that target girls and women and low-skilled workers.

Alternative pathways will pave the way for children from pastoralist and semi-pastoralist communities, as well as youth and adults to enroll in formal and non-formal education and training programmes, including TVET institutions, and avail lifelong learning opportunities to improve individual, family and community well-being. This should also lead to the improvement of small and medium enterprises. To motivate out-of-school children to enroll and complete alternative basic education programmes, they, especially girls, will be given specific support and incentives through different initiatives (e.g. school feeding programmes, scholarships and financial support for scholastic materials to low-income families).

Developing standard frameworks for assessment and certification of alternative basic education and lifelong learning

Flexible learning opportunities will require the development of a system of recognition, validation and certification that is closely aligned with the National Qualifications Framework. In addition, to make a strong case for investing in quality and effective IFAE programmes, learning outcomes of youth and adults will be measured using standardized literacy assessment tools. To establish relevant equivalencies, there will be alignment with the National Learning Assessment and Examination standards as well as the National Qualifications Framework.

TVET

Expand access to universal basic vocational education and lifelong learning opportunities, particularly for girls and women, through non-formal technical and vocational education and training modalities

Several contributions will be made by the TVET sector in expanding access to adult and non-formal education and lifelong learning. First, TVET institutions will actively contribute to strengthening adult and non-formal education and lifelong learning programmes through their engagement in policy, practice, innovation, and research. Non-formal TVET education will be made available to youth and adults with low literacy skills through the development of modules

that are integrated into the IFAE curriculum and programme. Second, basic literacy, numeracy, and digital skills will be integrated into the TVET curriculum to improve learning outcomes. Third, different literacy programmes will be offered through TVET institutions at workplaces. Fourth, different generic and job-specific skills training and re-training courses and programmes will be developed and offered to semi-skilled and skilled workers through industry extension services. The learning acquired through non-formal adult education programmes within public and private TVET institutions will be validated and certified through the Centers of Competence and aligned with the National Qualifications Framework.

HIGHER EDUCATION

Strengthen institutional, organizational and pedagogical capacities for alternative basic education and lifelong learning

Higher education institutions will work closely with the relevant units/directorates of the Ministry of Education to provide management and pedagogical training for Alternative Basic Education for out-of-school children and IFAE programmes. They will also build the research and knowledge base in this field.

Develop frameworks for assessment and certification of alternative basic education and lifelong learning

Due to the lack of national capacity currently, higher education institutions will train specialists in adult skills assessment (e.g. psychometricians, content specialists, etc) and monitoring and evaluation of literacy programmes.

SYSTEM

Develop sector-wide policy in youth and adult literacy, non-formal education and lifelong learning

- Develop an Alternative Basic Education strategy for out-of-school and dropout children,
- Develop and implement Alternative Basic Education programmes for out-of-school children with particular attention to those from pastoralist communities,
- Develop holistic and sector-wide national youth and adult literacy policy/strategy,
- Mobilize domestic and external funds and partnership for Alternative Basic Education and Integrated Functional Adult Education programmes.

GENERAL EDUCATION

Strengthen institutional, organizational and pedagogical capacities for alternative basic education and lifelong learning

- Revamp and strengthen adult and nonformal education organizational structure at all levels,
- Strengthen adult and nonformal education institutional and management capacities,
- Develop curriculum for Alternative Basic Education programme for out-of-school children,
- Improve the Integrated Functional Adult Education (IFAE) programme curriculum, instruction, and learning outcomes,
- Develop and implement training curriculum and programmes for IFAE literacy facilitators and managers
- Develop professional standards, certification, and performance-based career progression systems for IFAE programme facilitators, managers and supervisors.

Expand access to universal basic education and lifelong learning opportunities, particularly for girls and women, through non-formal education modalities

- Build and improve partnerships with private education and civil society sectors as well as communities on quality Alternative Basic Education programmes,
- Offer incentives to out-of-school children to enroll and complete alternative basic education programmes,
- Strengthen partnerships, including with communities, in developing youth and adult literacy programmes,
- Offer blended learning and technology-assisted Integrated Functional Adult Education programmes,
- Increase the number of Community Learning Centers that meet minimum standards.

Develop frameworks for qualification, assessment and certification of alternative basic education and lifelong learning

- Design and integrate standardized assessment tests on learning outcomes of youth and adults enrolled in Integrated Functional Adult Education programmes into the National Learning Assessment and Examination system,
- Develop a clear alignment between the learning outcomes of IFAE programmes and the National Qualification Framework.

TVET

Expand access to universal basic vocational education and lifelong learning opportunities, particularly for girls and women, through non-formal technical and vocational education and training modalities

- Design and offer integrated workplace literacy programmes for low literate youth and adults in different industries and sectors,
- Offer Integrated Functional Adult Education programmes to girls and women through different public and private TVET institutions,
- Offer non-formal continuous skills training and retraining programmes for youth and adults through nonformal TVET institutions and private sector partners,
- Offer continuous skills training and retraining programmes for skilled and semi-skilled workers in small and medium enterprises.



HIGHER EDUCATION

Strengthen institutional, organizational and pedagogical capacities for alternative basic education and lifelong learning

- Establish partnerships between higher education institutions and the Ministry of Education to provide management and pedagogical capacity development for Alternative Basic Education and Integrated Functional Adult Education programmes,
- Design and offer training programmes for managers, teachers and literacy facilitators of Alternative Basic Education and Integrated Functional Adult Education programmes through open and distance learning modes.

SYSTEM

- National policy for youth and adult literacy and nonformal education: developed and implemented.
- Number of partnerships with different private sector, civil society, TVET and Higher education institutions established and functional.
- Literacy rate, disaggregated for various groups (sex, regional).
- Completion rates of primary and secondary education of pastoralist groups.
- Assessment instruments developed and psychometricians/assessors trained.

GENERAL EDUCATION

- Integrated Functional Adult Education (IFAE) Curriculum and IFAE Literacy Facilitator Training Frameworks: improved, developed and implemented.
- Number of Community Learning Centers established: 8,000.
- Number of youth and adults enrolled in IFAE programmes: 45.6 million.
- % of women among learners in IFAE programmes: 50%.
- Standardized Youth and Adult Literacy Assessment Framework for IFAE programme designed, aligned, and implemented.
- % of youth and adults in IFAE programmes achieving the minimum levels of functional literacy and numeracy skills, disaggregated by sex: 60%.

TVET

- Number of low-skilled workers in on-the-job training and retraining.
- Number of skilled workers in on-the-job training and retraining.
- Number of low literate youth and adults in different industries and sectors getting integrated workplace literacy programmes.
- Number of girls and women getting Integrated Functional Adult Education programmes through different public and private TVET institutions.
- Number of youth and adults getting non-formal continuous skills training and retraining programmes through nonformal TVET institutions and private sector partners • Number of skilled and semi-skilled workers getting continuous skills training and retraining programmes in small and medium enterprises.

HIGHER EDUCATION

- % of management and pedagogical staff trained and retrained.
- Number of trained specialists in adult skills assessment and M&E of literacy programmes.

SHIFT 07

STRENGTHEN THE OUTCOME-BASED SYSTEM OF TVET

In recognition of the critical role it plays in emerging economies, the Ethiopian government has been pronouncing the importance of TVET to implement growth and transformation plan and invested significant financial and human resource to improve access, quality and relevance of TVET. The Government developed the National TVET Strategy which set as its objective to train competent, motivated, adaptable and innovative lower and middle level professionals who can contribute to poverty reduction and social and economic development through facilitating demand driven, quality TVET and transfer of demanded technology. The Strategy introduced outcome- and occupation standards-based curricula to ensure alignment of the training with the labor market. The Strategy has also introduced cooperative (dual) training to encourage the industry to participate in the skilled labor they need. In cooperative training, the industry is expected to contribute 70% of the training time. The establishment of a Center of Competency (CoC) to undertake an independent competence assessment of graduates of TVET institutions is also one of the attributes of the Strategy.

Although TVET has made significant progress in access, there are multiple challenges that undermine the effectiveness of TVET policy implementers at federal, regional, and institutional level and within CoC offices. The challenges range from limitation in policy to personnel competence; from unavailability to inefficient utilization of resources; from lack of contextualization to economic structure, to relatively underdeveloped business culture.

The purpose of this shift is to strengthen the outcome-based TVET system in Ethiopia and ensure that TVET is relevant to skill needs of the labor market and facilitate the employment of all learners, particularly youth and adults, and to contribute to the technological and economic development of the country.

Strengthening TVET system governance and leadership

The expansion of the TVET system renders its governance more complex and therefore its governance system will change to make it compatible with the size and diversity of the mission of TVET sector. The Federal TVET Agency has so far been responsible for the overall coordination of TVET in Ethiopia, including policy formulation, the development of curricula and occupational standards, and supervision of the occupational competence assessments by accredited centers of competency (CoCs). However, there is little cooperation or coordination across the different line ministries involved in TVET. There are also gaps in coordination between the Federal TVET Agency and the regional TVET authorities.

The governance and leadership of TVET sector, particularly that of the Federal TVET Agency, including its capacity to coordinate with other relevant public and private stakeholders, will be further strengthened in order to provide appropriate outcome based TVET programmes in Ethiopia. The new governance arrangement will facilitate partnership between government authorities and employers and between several ministries involved in TVET. This will avoid fragmentation of decisions concerning curriculum and training and facilitate the coordination of training institutions and stakeholders to ease the implementation of reforms. Specific federal organs will be created, including a federal Quality Assurance Agency.

Strengthening occupational standards, curricula, cooperative training and Competence Assessment

Engagement of industries in developing occupational standards and the provision of TVET is still limited and insufficient. Industries tend to have limited awareness that their participation in TVET is for their own best interest. Lack of

effective industry participation has made it difficult to ensure the provision of the 'dual' TVET system (30% institution-based training and 70% workplace experiential training). Industries' participation in the development of occupational standards and TVET curricula and the provision of training by all types of TVET institutions in Ethiopia and competence assessment and certification will become more systematic to ensure the provision of outcome based TVET.

Strengthening TVET teachers' competence and motivation

Teachers' competence and motivation are critical elements for the provision of successful outcome based TVET. However, TVET teachers and trainers are largely recruited from graduates of TVET institutions and/or universities and do not have sufficient industrial experiences. Ensuring the provision of training on teaching methodologies for youth and adults and industry experiences to TVET teachers and trainers will make a difference in the provision of outcome based TVET in Ethiopia. In addition, efforts will be made to bring salary, incentive and reward of TVET teachers and trainers closer to those of trainers in public higher education institutions.

Introducing a sustainable funding scheme to support the implementation of outcome based TVET

Federal government's financial commitment and overseeing TVET programme is limited and TVET in Ethiopia is fully in the hands of regional governments to provide capital budget and operational budget. The budget allocated to build new standard TVET institutions is not enough to build the facilities and furnish with required equipment to provide outcome based TVET and to run relevant trainings for local job markets. An introduction of sustainable funding scheme, including the resource mobilization from industries and the private sector, will contribute to the effective delivery of outcome based TVET.

Strengthening TVET system governance and leadership

- Strengthen the federal TVET agency,
- Establish Quality Assurance Agency as federal autonomous body with branches in Regional States,
- Establish a federal organ that prepares standardized curriculum,
- Create innovative zonal level governance system for TVET Colleges and institutions,
- Create a National TVET Research and Development Institute,
- Establish National Sector Skill Council (NSSC),
- Establish occupational associations and chambers.

Strengthening occupational standards, curricula, cooperative training and Competence Assessment

- Develop minimum standards required to offer quality and relevant post-secondary TVET programmes to ensure equitable access,
- Revise and/or develop industry owned occupational standards (OSs) and training curricula,
- Enhance industry involvement in provision of training and assessment.

Strengthening TVET teachers' competence and motivation

- Train TVET teacher on teaching and training pedagogy and andragogy,
- Provide TVET teachers with industry experience,
- Capacitate industry trainers,
- Provide a package of incentives, benefits and privileges for TVET teachers.

Introducing a sustainable funding scheme to support the implementation of outcome based TVET

- Recover training cost through introduction of appropriate training funds generation schemes,
- Diversify sources of fund for TVET financing.





- Federal TVET agency strengthened.
- Federal Quality Assurance Agency established as autonomous body with branches in regional states.
- Number of National Sector Skill Councils established.
- % of occupational standards developed and/or revised with support by industry.
- Number occupational associations and chambers established.
- Standardized curriculum developed.
- % of TVET teachers with industry experience.
- Innovative zonal level governance system for TVET Colleges and institutions created.
- National TVET Research and Development Institute created.

SHIFT 08

EXPAND AND STRENGTHEN INTERNATIONALIZATION OF HIGHER EDUCATION

The purpose of this shift is to transform Higher Education in Ethiopia into a competitive and internationally recognized system. The internationalization of the Ethiopian HE is in its earlier stages. Universities have been engaged in accepting students from other countries, mainly African, through student exchange programmes and private applications. In addition, many faculty exchange programmes and research partnerships exist. However, these were not the results of a deliberate focus on internationalization, but the result of ad-hoc initiatives by individual institutions. Part of the reasons for this was the absence of policy directives.

A real commitment for internationalization of the higher education system demands both policy and practice changes. One of the fundamental shifts requires universities to re-examine their mission as transcending the boundaries of the nation, educating for global perspective and advancing the frontiers of knowledge worldwide. For this change in mission to be credible, HEI will have to demonstrate the relevance of their research and training to the local, national, and international community. This requires a move from academia operating unilaterally, to the triple-helix of university, industry, and government working together in partnership for the incubation, development, and the diffusion of creative ideas, skills and people with the aim of creating mutual value. This has strategic implications for the profile and the capacity of HEI staff and in terms of resources.

The purpose of this shift is to strengthen the outcome-based TVET system in Ethiopia and ensure that TVET is relevant to skill needs of the labor market and facilitate the employment of all learners, particularly youth and adults, and to contribute to the technological and economic development of the country.

Developing policy and guidance on internationalization

Many HEI have undertaken initiatives towards internationalization, such as recruiting staff and students from other countries, participating in staff exchange programmes, or collaborating with foreign universities. For such initiatives to become common and systematic practice and to be sustainable, a policy on internationalization will be developed. It will guide universities on issues such as developing international partnerships, exchange programmes, and attracting international students. In line with this, attention will be given to the internationalization of the curriculum.

Strengthen linkage between HEI and industry

For HEI to be internationally competitive and to attract foreign staff and students, they need to demonstrate their high-level expertise. One privileged way of doing so, is to strengthen their linkage with industry, nationally and internationally. A 'triple helix', formed by HEI-industry-government interactions, is key to knowledge-based economic growth and social development. It allows for innovation and entrepreneurship. In this approach, HEI and government act as entrepreneurs with the HEI playing a key role through technology transfer, incubating new firms, and taking the lead in regional renewal efforts and development. By virtue of involving industrial practitioners in curriculum-developing processes, programmes and courses might be more aligned with industrial needs and influence the students' abilities and attitudes toward innovation and employment. In concrete terms, this will translate in agreements between HEI, federal/regional authorities, and industries/corporations, and in allocating 20% of student time spent in higher education for engagement in practical activities.

This strategy fits within the approach to HEI differentiation, categorizing institutes as: research institutes, teaching/applied HEI and technical HEI.

Strengthen capacity of HEI staff

Ethiopian higher education institutions as well as industrial experts will develop capacities in their niche areas of expertise, while participating with industrial partners and international consortiums and building the Ethiopian higher education brand more globally. Faculty members, as producers of new knowledge, are assuming new roles, shifting from traditional independent patterns of inquiry to becoming members of team-oriented, cross-disciplinary, and international partnerships, with research directed more often than before toward real-world problems. This shift in role will require significant investment in professional development and will be reflected in increasing the time allocated to 'community service'. Time allocation will be as follows: 60% for teaching; 25% for research, and 15% for community service.

Provide HEI with necessary resources

The internationalization of HEI has implications for their financial resources and their infrastructure. An increase in the share of the budget dedicated to research, technology transfer and community service activities to at least 5% forms part of the internationalization policy. Measures will be taken to improve technological infrastructure and research infrastructure, such as incubation centers and laboratories. At the same time, the change of roles of HEI, with greater involvement in external services and the need for improved research infrastructure, requires greater administrative efficiency within HEI, related for instance to procurement.

Developing policy and guidance on internationalization

- Developing a policy for internationalization of higher education,
- Internationalizing the curriculum,
- Developing a range of institutional agreements to accommodate diverse needs,
- Implementing exchange programmes (faculty and students).

Strengthen linkage between HEI and industry.

- Appoint industry leaders as part time professors to provide lectures,
- Create new relationships between HEI, federal government and regional administrations, and corporations,
- Encourage and facilitate staff and students to patent their technologies,
- Invite personnel from industry for helping to design a curriculum and formulate specific courses,
- Promote the provision of support by HEI to firms (e.g. feasibility reports; technical advice),
- Allocate 20% of student time in higher education for engagement in practical activities.

Strengthen capacity of HEI staff

- Provide faculty members with practical experience through sabbatical arrangements and short periods working in the industry,
- Co-organize workshops, conferences and seminars with national corporations and international partners,
- Allocate more time of faculty to research (25%) and community services (15%),
- Produce research journals that meet international standards.

Provide HEI with necessary resources

- Increase the budget for research to at least 5% of the total budget,
- Provide budget to improve infrastructure (incubation centers; science parks; laboratory),
- Improve system of procurement,
- Improve administrative support system to increase the efficiency of finance and delivery of research and community services.

Policy on internationalization of HE: developed and implemented.

Number of faculty and student exchange programmes.

% of foreign students in HEI.

% of foreign staff in HEI.

% of student time spent on practical activities: 20%.

% of faculty time spent on research and community service: 25% and 15%.

% of faculty with industry experience.

% of budget for research: at least 5%.



SHIFT 09

TRANSFORM SCHOOLS AND HIGHER LEARNING AND TRAINING INSTITUTIONS INTO EFFECTIVE LEARNING SYSTEMS TO IMPACT LEARNING

One major cause for the continued challenge of quality relates to the functioning of schools, higher learning and training institutions, and other learning centers. This is visible, for instance, in the ineffective management of human and financial resources that are available within schools and institutions, in the lack of motivation among staff, in the difficulty to build positive relations with partners. These various factors form part of the explanation why better results are not achieved.

The reasons for this are related to the availability of resources, and the management of the system which impact institutional functioning. Making improvements on these aspects can make a significant difference in learning.

The purpose of this shift is to contribute to transforming schools, higher learning and training institutions, and other learning centers, so that they become highly performing, well-functioning, and effective in translating the resources at their disposal into results. This shift therefore focuses on the institution, be it school, university or TVET institution, as the unit of change. This fits within one of the directions of the country, and of the education and training system, namely to strengthen decentralization and institutional autonomy. Within the General Education sector, this implies the application of School-Based-Management (SBM) in the governance of schools. Within TVET, this implies innovative initiatives taken by TVET institutions to support incubation of small and medium scale enterprises (SMEs) and creation of industries with a view to creating job opportunities for youth and adults. Within higher education, where autonomy is already much stronger, the focus is on encouraging HLI to become innovative and creative.

SYSTEM

Develop policy for Private-public-community partnership

Institutional transformation requires strengthening the relationships between these institutions, private actors (such as enterprises), and communities. While the specific character of these private actors varies between the different levels, an overall policy clarifying the roles that they and communities can play, and promoting such partnerships, is needed.

Establish specialized institutions for leadership development

Leadership competencies have to be strengthened at all levels. Specialized institutions for leadership development, offering a range of courses and programmes, and providing manuals and guidelines, will be established.

GENERAL EDUCATION

Strengthen school leadership

Research, in Ethiopia and elsewhere, has demonstrated that, where schools are led by staff with leadership competencies, they are more successful in ensuring that students learn. Improvements in school leadership require actions in different areas: raising the required qualifications; merit- and competency-based selection and appointment; licensing; continuous professional development; and incentive schemes.

Develop and apply school standards

Schools need a basic structure and a minimum level of resources to be able to function effectively. Although diversities among schools are evident and unavoidable, it is necessary to define minimum standards which take into account the diversity of contexts. These standards should include guidance on the appropriate organizational structure, and criteria for staff, including support staff. The objective is that all schools meet at least basic standard (Level 3 and above), and support will be provided for this to succeed.

Provide more regular and close-to-school support

In order for schools to use their increased autonomy effectively, many need regular advice and support. Woreda Education Offices are responsible for carrying this out. However, since the distance between WEOs and schools can make such regular support difficult and as WEOs tend to have many other tasks, the cluster supervisor system will be strengthened to ensure that each supervisor is responsible for only three schools.

Enhance parents' and community involvement

In line with the policy for Private-public-community partnership, the role of parents and community will be strengthened, through such mechanisms as providing training to PTSA's. Their role will include the monitoring selected aspects of the schools' performance and tracking the progress of students.

TVET

Leadership

Leadership of TVET institutions is essential to improve the relevance of training and to stimulate the creation of job opportunities for youth and adults in partnership with representatives from industries and employers, and in function of the specific context of each institution. The aim is to have competent, visionary and passionate TVET institution leaders through open recruitment (including the recruitment of professionals from industries and business sectors), professional development, and incentive schemes.

Institutional standards

Standards for TVET institutions will specify the required human and technical resources, in numbers and profile, and the required equipment and facilities. These standards will be inspired by international examples. Interventions will aim at upgrading all TVET training venues (the combination of training institutions and workplace training at industries and enterprises) to international standards. These standards will be used in the accreditation process of TVET institutions at different levels. Selected institutes will be transformed into brand institutions of excellence producing competent, highly performing and innovative graduates.





HIGHER EDUCATION

Institutional strengthening implies building on the assets and positive characteristics of each institution and allow each university to develop along a somewhat different path. This 'differentiation' promotes institutional quality and system competitiveness. Differentiation can be on the basis of different characteristics including:

- i. Structure such as size (large or small) or funding (private or public) or legislated mandate (undergraduate only or mixed undergraduate and graduate student bodies),
- ii. Type of programme offered such as research intensive or teaching/technique intensive,
- iii. Modality: online university or residential,
- iv. Institutional status, prestige, experiences or rankings,
- v. Differences in the composition of the student populations served.

Universities must be allowed to choose their areas of specialization and excellence based on their strength and opportunities. As part of this approach, selected universities will become centers of excellence in specific areas.

Strengthen linkages among universities, TVET and schools, and with industries

Universities form part of the education system. To improve the college-readiness and participation rates of secondary school graduates, partnerships between local educational bodies and higher education institutions should be developed. Partnerships with TVET institutions are equally important, as part of a policy to create pathways between TVET and Higher Education, and because universities and TVET institutions in many cases serve the same job market.

Universities and TVET institutions should strengthen their linkage with industry; hence students have ample exposure to real world of work as well as the teaching of practitioners from industry. Universities should also partner and provide diverse needs-based services to the community at large. These local and international partnerships can be a means to diversify their institutional funding sources.

To facilitate the university–TVET–industry linkage and contribute for advancement of science and technology, universities should encourage and facilitate staff and students to patent their technologies.

Deepen the role of student unions in higher education institutions

The relationship between the management of higher education institutions and students is essential to the proper functioning of these institutions. Strengthening the involvement of student unions makes for a better internal climate, and it offers students a chance to improve various skills such as negotiation, communication, and leadership. Where student unions reflect the diversity of the student population, engagement in the union becomes a way of creating common values. Students' ideas and opinions can also enrich decision-making. Efforts will be made to deepen the involvement of student unions in the affairs of higher education institutions.

Internal organization of higher education institutions

The present organization of higher education institutions is not optimal and may need revising. The following two possible measures can be envisaged, though further diagnosis and reflections are needed. First, as the senior management of higher education institutions is overstretched by routine and non-academic activities such as student services (meals, accommodations, security etc.), outsourcing these activities is suggested. Second, separating the offices responsible for quality assurance and academic development to reflect their different roles (quality assurance focuses on accountability and academic development focuses on quality enhancement) and allow better performance on both.

Improve the functioning of private universities

Private universities will continue to contribute to the expansion of higher education, and the government will regulate and promote their expansion. The government will encourage and support private higher education institutions to provide quality education, including through the creation of a platform of cooperation for these private institutions.



GENERAL EDUCATION

Strengthen school leadership

- Raise the level of qualification to BA for preprimary and Primary, middle school principals, and MA/ MSC for secondary school principals,
- License school principals and cluster supervisors,
- Ensure that recruitment and appointment are done transparently based on merit and objective criteria/KPI, and through competency-based assignments,
- Build the capacity of principals through continuous professional development, supported with incentive schemes,
- Introduce an alternative accreditation pathway linking leadership preparation, research, teaching and policy.

Develop and apply school standards

- Develop context-based school standard,
- Ensure that the school system has the appropriate organizational structure and properly staffed with administrative/support staff,
- Deploy qualified laboratory technicians (BA for primary and middle school and MA for secondary school), qualified ICT technicians, librarians, and guidance and counseling experts.

Provide more regular and close-to-school support

- Deploy a qualified cluster supervisor based on the national standard (one cluster supervisor for three schools).

Enhance parents' and community involvement

- Develop a system that maximizes parents' involvement in the whole school programme,
- Develop parental engagement programmes to track children's learning progress,
- Create a system through which parents, community and private sector participate actively in monitoring and evaluation of education service delivery.



TVET

Leadership

- Ensure transparent recruitment and appointment,
- Build the capacity of TVET institutional leaders through continuous professional development, supported with incentive schemes,
- License TVET institution leaders.

Institutional standards

- Upgrade all TVET training venues to international standards,
- Accredite TVET institutions of different levels,
- Establish brand TVET institutions producing competent, high performing and innovative graduates.

HIGHER EDUCATION

Differentiation

- Develop differentiation policy,
- Set up relevant data system on university characteristics,
- Establish specialized institutions-centers of excellence.

Strengthen linkages between universities, TVET and schools, and with industries

- Alignment between secondary school curriculum and preparation for college,
- Partnerships between universities and TVET institutions,
- Promotion of local and international partnerships with industry,
- Patenting of technologies by staff and students.

Deepen the role of student unions in higher education institutions

- Develop guidance on the role of student unions,
- Provide training to student union members.

Internal organization of higher education institutions

- Diagnosis of internal organization,
- Support to restructuring,
- Provide guidance on outsourcing.

Improve the functioning of private universities

- Support private higher education institutions to provide,
- Create a platform of cooperation for these private institutions.

GENERAL EDUCATION

% of principals with minimum qualifications: 100%.

% of licensed principals: 100%.

% of principals who participate in short and midterm professional development programme annually: 100%.

% of schools which meet at least basic standard (Level 3 and above): 95%.

% of schools which meet Level 4: 75%.

Policy and strategy for parent and community involvement: developed and implemented.



TVET

% of TVET institution leaders with minimum requirements: 100%.

Numbers of accredited TVET colleges/non-formal centers/advanced colleges/advanced polytechnics/universities: 150/825/200/60/20.

Enrolment in brand polytechnics/TVET universities: 100,000/20,000.

HIGHER EDUCATION

Differentiation policy: developed.

Number of partnerships developed between universities and schools, TVET, and industries.

SHIFT 10

ENSURE STRONG NATIONAL QUALITY ASSURANCE SYSTEM WITH FULL ACCOUNTABILITY

Quality, relevance, and accountability have been recognized as areas where reform is needed, for the education and training system to fully play its role in social and economic development. A quality assurance system, which includes attention to relevance, offers a response to these challenges.

The introduction of a quality assurance framework helps the authorities to better identify where they need to intervene, for instance through additional support. Institutions and their staff are informed of the quality threshold they have to achieve, and therefore may become more motivated to improve and change practices. Being informed of the evolution of their performance, through the results of the quality assurance framework, enables national authorities and institutions to track the responsiveness of measures to achieve national transformational objectives.

Quality assurance also raises awareness among institutions about their own performance, and therefore helps create a sense of responsibility. Demanding accountability from institutions and their staff becomes more effective when this is based on the findings of quality assurance tools, such as exams, assessments, or commonly agreed indicators. This poses the challenge that the measurement of the performance has to be based on an appropriate definition of quality, which also pays attention to areas which are difficult to measure, such as relevance to the labor market or contribution to values.

The overall purpose is to design a system that not only performs a regulatory function but one that functions to improve the quality of educational experience as well.

SYSTEM

Strengthen the system of quality and relevance assurance

Ensuring an effective national quality and relevance assurance system requires a system-wide approach, whereby at all levels in and in all sub-sectors quality and relevance assurance is emphasized as a major strategy to improve performance and to exercise accountability. The specificities of each sub-sector are reflected in the frameworks and tools for each sub-sector, with the focus for general education more on quality, and for TVET more on relevance.

One priority measure consists of establishing and/or strengthening independent quality assurance agencies for higher education; teacher education; general education; and technical and vocational skill development, at national and regional levels. A second priority is increased participation in international student achievement tests, such as TIMSS, PISA and in skill competitions.

GENERAL EDUCATION

Revamp a comprehensive assessment and examination system

The main tools through which quality is measured in schools, are the examination and the assessment systems. These systems need revamping and strengthening, based on an overall policy framework. The reforms propose in particular that national and regional assessments and examinations assess students' higher order cognitive competencies and skill development, based on the newly developed curriculum, and that classroom assessment schemes be implemented, that track children's learning through continuous assessment. Further, it is proposed to revamp periodical early grade reading and mathematics assessment (EGRA and EGMA); to undertake a periodical learning assessment at the end of each level, and to participate in regional and international learning assessments.

TVET

Revisit the certification system for learners in line with international standards

The readiness of learners to enter into the labor market is a key criterion in their assessment and certification. In order to bring the existing certification system in line with international standards, improvements are necessary in the quality of competence assessment and their assessors, and in the assessment tools. The development of assessors' qualification requirements and assessment centers' qualification requirements will precede and inspire the design and implementation of these improvement programmes. The aim is for centers to undertake assessments once a month. The incorporation of the TVET qualifications framework into the National Qualifications Framework will guide the revision of the certification system.

Facilitate upgrading/revisiting of occupational standards and assessment by the industry

One of the major recent attainments of TVET is the design of Occupational Standards (OS) and Occupational Assessment Tools. These standards link the TVET programmes to the needs of the industry, and they can form part of a 'relevance assessment' framework. They form an integral element of the competency assessment and certification of graduates. However, the large number of standards, around 800, has been criticized by the employers who reported that this micro-splitting of Occupational Standards (OS) does not reflect the needs of the industry. The revisiting of the set of standards will give a stronger voice to the industry representatives, such as trade unions, occupation-based craftsmen and professional chambers. To ensure broader understanding and use of these standards, they will be prepared in the language(s) in which the training will be delivered.

Promote improvement through ranking

TVET institutions will be ranked on the basis of their quality and performance. This will require the development of specific indicators which properly reflect quality and performance. Some of these are evident, for instance graduation rates. Others are more demanding, for instance the "% of graduates that find relevant employment within a year after graduation". The purpose of such ranking is to create positive competition between institutions in order to improve the overall quality of the TVET system. The proper functioning of such a ranking system demands much careful reflection on the choice of indicators and regular support to institutions which are underperforming.

HIGHER EDUCATION

Strengthening quality assurance system

Quality assurance in higher education aims not only at quality improvement and regulation, but also at facilitating the use of multiple pathways to achieve a degree. Degree attainment has multiple pathways, and each pathway, for example residential, distance education or online learning, should be considered as alternative variants to degree attainment. Hence, distance and online learning should achieve the same high standard of academic rigor and professional practicability as conventional higher education. However, at present, academic fraud is a serious problem in on-line and distance education. Specific quality standards for these modalities and a corresponding quality assurance framework are necessary. The standards go beyond the assessments of individual performance in tests and examinations. They contain four crucial building-blocks: course effectiveness, adequacy of access in terms of technological infrastructure, student satisfaction, and academic satisfaction. These standards also provide teachers with guidelines for good practice in distance and online teaching.

To facilitate effective quality assurance, it must be separated from quality enhancement activities. Organizationally, within a university, there must be a separation between the quality assurance office and quality enhancement services. The participation of professional associations in accreditation should be supported as a tool to improve the quality of programmes and services in universities.

Harmonize programmes across public and private institutions

Private higher education institutions play a useful role in expanding access, but there is insufficient regulation and control over the quality of their

offer. This leads to the delivery of degrees of little value and discrepancies between programmes across public and private institutions. Quality control and assurance over the private university offer has to be strengthened, especially as the share of private enrolment in higher education may expand. This will lead to harmonization of programmes in both public and private institutions. However, this quality assurance should focus on the content of the programmes, the quality of delivery and of learning, and the legitimacy of the degrees. It should avoid creating unnecessary excessive bureaucracy or rigid adherence to administrative rules and formalities.

Strengthening the existing universities ranking

University ranking based on key performance outcome indicators, can serve as a useful yardstick and benchmark as to where a higher education system's strengths lie, and how it can improve. However, the existing national ranking exercise is weighted heavily towards some components of quality while neglecting others. Cognizant of the many pitfalls in the existing ranking, it will be reshaped with the inclusion of additional quality measures such as the proportion of staff and students from disadvantaged regions, results from engagement survey of current students, results from an employer survey, and the proportions of international academic staff and international students. The inclusion of these measures provides a broader perspective, thereby providing the ministry with a better sense of the system's trajectory and operations.

Even with the inclusion of these measures, rankings provide an incomplete picture. The authorities need to use university ranking as one of several measures to monitor higher education institutions. Moreover, the ranking should be used to identify areas of weakness and remediation measures.



SYSTEM

Strengthen the system of quality and relevance assurance

- Setting up and/or strengthening quality assurance agencies at various levels.

GENERAL EDUCATION

Revamp a comprehensive assessment and examination system

- Develop and implement policy framework for assessment and examination system,
- Introduce national and regional assessment and examinations which assess students' higher order cognitive competencies and skill development,
- Implement classroom assessment scheme that tracks children's learning,
- Revamp periodical early grade reading and mathematics assessment (EGRA and EGMA); and undertake a periodical learning assessment at the end of each level,
- Participate in regional and international learning assessments.



TVET

Revisit the certification system for learners/trainees in line with international standards

- Assessment centers qualification requirement revised/developed,
- Improve the quality of competence assessment services,
- Assessors qualification requirement revised/developed,
- Assessors training and certification guidelines revised/developed,
- Holistic and versatile assessment tools developed,
- Assessment centers undertake assessment once in month,
- Ensure the incorporation of TVET qualification framework into the NQF.

Facilitate upgrading/revisiting of occupational assessment system by the industry

- Introduce policy to empower industry representatives to develop occupational standards and undertake occupational competence assessment,
- Define the breadth and depth of each level of occupational standards in each sector industry with active participation by major stakeholders,
- Prepare occupational standards in training language(s),
- Provide support and guidance to industry representatives in the revision/preparation of occupational standards and assessment.

Promote improvement through ranking

- Develop a system to rank TVET institution and collect relevant data,
- Regularly evaluate and rank institutions,
- Award the best performing TVET institution.

HIGHER EDUCATION

Strengthening quality assurance system

- Development of framework with guidelines for quality assurance of distance education and on-line learning,
- Implementation by universities of quality assurance plan for distance and online teaching and learning,
- Awareness-raising and training of relevant staff on framework and guidelines,
- Internal restructuring of universities.

Harmonize programmes across public and private institutions

- Develop quality assurance guidelines for private HEI,
- Awareness-raising and training of relevant staff in quality assurance,
- Support in making Internal restructuring of private HEI,
- Regular quality assurance of private HEI.

Strengthening the existing universities ranking

- Development of a comprehensive ranking system,
- Training of relevant staff in use of the ranking system,
- Production of university ranking and of analytical reports,
- Recognizing best performing universities.

SYSTEM

Quality assurance agencies: established.

GENERAL EDUCATION

Examination and assessment system reformed.

Classroom assessment scheme: continuously implemented.

Learning assessment at end of each level: regularly undertaken.

Participation in regional and international learning assessments.

TVET

New occupational standards: 100.

Revised occupational standards: 250.

Occupational standards prepared in training language(s):

- Accreditation and quality assurance system established,
- Curriculum developed in training language.

Number of accredited public, NGO and private institutes.

HIGHER EDUCATION

Quality assurance frameworks for distance education and on-line learning and for private universities: developed and being used.

Increase in level of harmony between programmes of public and private universities.

Comprehensive ranking system: developed and applied.

Regular availability of university ranking.

Annual event to recognize best performing universities.

SHIFT 11

LEVERAGE ICT FOR TEACHING AND LEARNING AND TO TRANSFORM THE SYSTEM

Development in ICT has changed and continues to change how people live, work, and connect to each other throughout the world. ICT has a potential to transform the society, while the challenge of digital gap is immense. By harnessing the power of ICT, Ethiopia aims to expand access to education and training across the country. The curricula, teaching/training and learning materials, teaching methodologies and assessments will be updated and upgraded to equip the learners with sufficient skills, knowledge, and competencies to ensure their full participation in the society using ICT. This shift also aims to improve efficiency and effectiveness of the education and training sector by increased use of data for decision-making at all levels of administration in education and training.

SYSTEM

Integrating ICT in teaching/training and learning

At every level of education and training, quality is a major concern in Ethiopia. It is felt that education and training in Ethiopia do not help learners/trainees develop practical skills that are required in the world of work and for their participation in society and economy.

ICT plays a key role in today's world and it is increasingly becoming a prerequisite of developing a knowledge-based economy. In this context, skills and competencies on using ICT are required to thrive in the modern society as an individual and as a nation. It is therefore critically important that Ethiopia integrates the use of ICT into education and training to equip all learners with the necessary skills and competencies, regardless of their social and economic status.

At the same time, ICT can help learning be more interactive, enjoyable, and practical. It also allows diversification of teaching, training and learning materials as well as delivery. It can be effectively used in Ethiopia where the learning and training needs are diverse across children, youth and adults.

Utilization of ICT at all levels of the education and training system shall be maximized to enhance quality delivery with emphasis on: curricula, teaching/training materials, teaching methodologies, teacher education and assessments at all levels of education and training, so that the learners will be equipped with the appropriate skills, competencies and values needed to fully participate in the society and economy. It provides learners with personalized and active learning experiences through the use of digital resources that are culturally grounded. To ensure effectiveness in delivery of the ICT-enhanced curricula, the capacities of teachers, trainers and instructors

will be enhanced to support the integration of ICT in teaching, training and learning.

This involves, among others, development of a comprehensive national digital competency framework for all learners, review and revision of the curricula, development of digital teaching, training and learning materials, upgrading of the teacher training programmes, and revision of the learning assessment system.

Improving data for evidence-based decision-making and governance at all levels of education and training

Data play a vital role in transforming education and training at different levels. Without timely and accurate data, making right decisions is not possible. Data can also facilitate good governance by enabling regular monitoring. Management Information Systems (MIS) on education, training and labor market are central to the education and training data ecosystem and ICT can greatly enhance functionality of MIS from data collection, analysis, and reporting. With effective use of ICT, MIS can go far beyond the traditional institution-based administrative data system. With enhanced use of ICT, the existing data can be better utilized as well. The integrated MIS can include teacher and instructor management system, labor market information in order to capture skills needs in the country, financial and procurement management system, learner management, and other key functions of the education and training management to support evidence-based decision-making.

It is also important to develop sufficient ICT capacities at all levels of administration from the Federal Government to the local governments and to education and training institution levels, so that the quality data will be fed into MIS and the information from MIS will be effectively used at all levels of education and training

The current existing available MIS shall be reviewed and upgraded to improve the quality of data and its use. A comprehensive and integrated management information system shall be put in place for informed decision-making and evidence-

based planning, monitoring, and evaluation. It helps in improving the capacity of educational and training leaders and administrative officials to support the integration of ICT in management of education and training.

GENERAL EDUCATION

Ensuring inclusive access to education through the use of ICT

While access to education has steadily expanded in Ethiopia, the progress has been unequal. There are several reasons behind this persistent challenge, but distance to school is one major factor for those still out of school or who drop out, and especially for people with disabilities. When introduced strategically, ICT can mitigate

this access gap. Some innovative initiatives have been put in place across countries. It is necessary that Ethiopia identifies the most suitable strategy.

Access to general education through an ICT facility shall be expanded in a phased approach. Selected schools, as well as a teacher training institutions and non-formal education institutions will expand the use of ICT to ensure the provision of education. Learning from their experience, the programme will be expanded.

TVET

Making access to training more equitable and relevant through the use of ICT

Access to training remains limited and inequitable, and recent expansion has been slow. There are several causes, with lack of facilities and therefore physical access to TVET institutions (including the access to training at workplace at relevant industries and enterprises) being a major one. While construction of institutions is envisaged, its cost to government is high, while many potential learners will not have easy access or will not be able to afford the cost. ICT can offer an answer by providing access through distance and on-line training, or when linked with on-the-job apprenticeships. One challenge is that those who are physically far away from TVET institutions, industries and/or enterprises, may also have the

least access to ICT. For youth and adults in the remote areas where stable on-line connection is not always available, using relevant off-line training programmes to complement existing available training would be taken into account.

A phased approach will be adopted to reduce the digital divide among learners. Public-private partnership (including with industries, enterprises, private IT providers, and private providers of training contents both in on-line and off-line) will be considered in the process. TVET institutions as well as training administration offices and relevant private sector representatives will be supported to examine what potential there is for the use of ICT and, in a following phase, resources will be made available to selected institutions to expand the use of ICT to ensure the provision of training. In a later phase, more institutions will build on these experiences.

HIGHER EDUCATION

Ethiopian Open University

As the demand for access to higher education increases and costs of residential studies make it difficult for many potential students to attend, a distance and on-line learning alternative is necessary. Ethiopia therefore proposes to create an Open University. As part of this, mobile and online higher education platform will be created.

SYSTEM

1. Develop an ICT Policy in Education.
2. Develop a national ICT standard for education.
3. Develop a policy framework for public-private partnership on ICT in education.
4. Develop ICT competency standards for school leaders and teachers.
5. Develop ICT capacities of education administrators.
6. Design digitized data management system in the education sector including unique national identification number for students at all levels, teachers, schools, resources, etc.
7. Develop curricula that include ICT for all levels.

GENERAL EDUCATION

1. Provide tablets with learning resources for primary and secondary students.
2. Equip all schools with computer laboratory, internet service, and smart classroom supported with technology for pedagogy.
3. Establish Educational content and data center
4. Contextualize the content of the curriculum through using local learning and play materials such as games, stories, songs and puzzles, and organize technology-supported learning and reading corners.
5. Allocate adequate finance for primary education and institute built-in transparent, accountable, decentralized and data-based financing system.
6. Review and revise the teacher training curricula to integrate ICT-enhanced pedagogy.
7. Provide adequate access to ICT infrastructure; and facilities field-based learning experiences both for student teachers and teacher educators.
8. Establish centers that design ICT support materials for different subjects (e.g. simulation, role play, demonstration); and develop capacity of teacher education institutions in ICT applications.

TVET

1. Developing a strategy to equip TVET Institutions with state-of-the-art training technology and highly competent trainers so that they can effectively offer appropriate training for occupations demanded in the labor market.
2. Developing training strategy on using ICT to overcome shortage of experienced trainers and infrastructures in TVET institutions, as well as the lack of access to appropriate workplace learning at industries and enterprises, across the country.

HIGHER EDUCATION

Strengthening quality assurance system

1. Establish a strong database of students with category of economic background of parents, parents' level of education, inhabitant status (urban/rural).
2. Enhance outreach of higher education through online platforms.
3. Create the Ethiopian Open University.



a. % of education and training institutions meeting the national ICT in education standard, by sub-sector:

Pre-primary: 50%,

General: 80%,

TVET: 100%,

Higher Education: 100%,

Non-Formal Education: 50%.

b. % of the curriculum contents delivered with ICT, by sub-sector and by the area of education and training:

Pre-primary: 10%,

General: 15%,

TVET: (to be defined depending on the area of training/occupation),

Higher Education: average of 20% (to be defined depending on the area),

Non-Formal education: 10%.

c. % of the teachers/facilitators/instructors meeting the National ICT in Education Competency Standards, by sub-sectors:

Pre-primary: 30%,

General: 50%,

TVET: 50%,

Higher Education: 50%,

Non-Formal Education: 50%.

d. % of the education and training institutions submitting data for EMIS with ICT: 80%.

SHIFT 12

*STRENGTHEN SYSTEM GOVERNANCE, CAPACITY AND ACCOUNTABILITY,
FOR MORE EFFICIENT DELIVERY*

The promotion of effective leadership, management and governance at all levels of the education and training system is a continuous priority of the Ethiopian government, reflected in GTP II as well as in ESDP V. Good governance is one of the values guiding the system and this Roadmap, while “enhancing governance, planning and management to improve efficiency and effectiveness throughout the sector/system” is a major goal of the Roadmap.

The strategies proposed under this shift aim to transform governance and to empower stakeholders. They address the challenges identified earlier, in particular the complexity of the governance and management structure and the quality and use of data, they also focus on strengthening the relationship with public and private partners.

Good governance depends on strong capacity within the administration and among leaders and managers of learning institutions. Such capacity is also essential to the successful implementation of the Roadmap. This issue will therefore be discussed in more detail in Chapter 5.2, which proposes the capacity development strategy that underlies programmes aiming at strengthening capacity.

SYSTEM

Review the responsibilities and relationships across all levels of education and training

The transformation of governance requires a coherent policy framework, to strengthen the relationship and accountability among policy makers and decision makers, providers of education and training, and users/beneficiaries. The policy guides all stakeholders and ensures that all work along the same direction. It can be further reflected in an education law. The policy clarifies responsibilities, thus strengthening accountability, and may include the setting up of new institutes, to ensure ownership of specific policy domains and measures, for instance on quality assurance, management of teaching staff, curriculum, or Adult and Non-formal education. Specific sub-sectoral or thematic policy documents may add detail to the broad policy framework.

To ensure that the policy remains relevant, policy reviews will be undertaken periodically to recalibrate management across all levels and in all sub-sectors, if need be.

Strengthening partnerships, including public-private partnerships and with NGOs

While the ultimate responsibility for the organization of the education and training system remains with the national authorities, the actual delivery can be expanded and, in some cases, the quality can be improved through partnerships, for instance with the private sector, NGOs, faith-based nonprofit organizations and other organizations including industrial bodies and domestic and foreign enterprises. They can play a role at all levels of the education and training system. The Roadmap aims to support and encourage their participation in the education and training sector. In TVET, the private sector (professional chambers, trade unions, industry associations) is an indispensable partner, including in defining the content (through occupational standards and curricula), providing cooperative training and in quality assurance. In higher education, the private sector plays a significant role in providing

access to internship and technology transfer through university industry linkage as well as through providing opportunities for enhanced community service. Further, partners provide additional access through private schools, and bringing in innovative practices.

Improving the quality and use of data on education and training

Good governance takes the form of management decisions, for instance about distribution and use of budgets, or recruitment and deployment of teaching staff, which are based on reliable and relevant data. At present, the education and training sector lacks adequate, relevant and timely data for such planning and management decisions. To address this, data management systems will be better connected, collaboration among directorates at various levels and in different ministries and agencies will be consolidated, while capacity to analyze data, utilize findings for decision making, and monitor implementation will be strengthened. The type of data will be broadened to include the social and demographic background of students as a basis for guiding the implementation of equity-oriented policies. On the other hand, use of both traditional and non-traditional labor market information and intelligence (including possibly the use of real-time data from on-line job search platforms) will inform the offer of vocational and technical training.

Review the existing career and promotion system

The successful transformation of governance demands that competent staff is selected for the leadership, management, and administrative posts in the ministries, agencies, offices and institutions that design and implement education policy. This will demand the production of detailed profiles for such posts. The motivation of staff will be strengthened through the development of rewarding career paths, and a more robust constructive performance assessment which helps ensure that the right person is in the right post and which is linked to incentives for good performance.

GENERAL EDUCATION

Strengthen decentralization

The management of general education is decentralized since many years, with several important responsibilities being exercised at regional, zonal, and Woreda levels. Schools also have increased responsibilities. The Roadmap continues this decentralization process, with a focus on the school as a unit of change and applying school-based management. This has a number of implications for the functioning of schools. Their autonomy will be accompanied by programmes to deepen the competence and

motivation of the school leadership and by the strengthening of accountability mechanisms (Shift 2). It also leads to changes in the roles exercised by the education offices at various levels of the administration. The widely diverse characteristics of Woredas, for instance in terms of the vulnerability to disaster or the presence of Internally displaced peoples and refugees, implies the need to allow for a flexible decentralization policy. The expansion of early childhood education is another factor to be taken into account, when redesigning the decentralization policy.

TVET

Strengthening TVET system governance and leadership

The expansion of the TVET system renders its governance more complex and therefore its governance system will change to make it compatible with the size and diversity of the mission of TVET sector. The Federal TVET Agency has so far been responsible for the overall coordination of TVET in Ethiopia, including policy formulation, occupational standards, the development of curriculum framework and, and overseeing of the occupational competence assessments by an accredited Quality Assurance Agency. However, there is little cooperation or coordination across the different line ministries involved in TVET or skills development. There are

also gaps in coordination between the Federal TVET Agency and the regional TVET authorities.

The governance and leadership of TVET sector, particularly that of the Federal TVET Agency, including its capacity to coordinate with other relevant public and private stakeholders, will be further strengthened in order to provide appropriate outcome based TVET programmes in Ethiopia. This governance arrangement will facilitate partnership between government authorities and employers and between several ministries involved in TVET. This will facilitate the coordination of training institutions and stakeholders to foster the implementation of the TVET strategy. Specific federal organs will be created, including a Federal Quality Assurance Agency .

HIGHER EDUCATION

Governance reform

The creation of the Ministry of Science and Higher Education is the first step in the process of reform of the governance of higher education. The aim of this process is to get the administration as well as the leadership of higher education institutions (HEI) to focus on core functions, through a more effective distribution of functions between the ministry, the HEI, and private actors, to which specific services can be outsourced. The intention is also to create stronger links between HEI, the community, and industry. There will also be autonomy of HEI in the mobilization and the use of funding.

SYSTEM

Review the responsibilities and relationships across all levels of education and training

- Ratify education policy document; development and implement education law,
- Establish institutes (Curriculum and Research, Teacher service Commission, and Regulatory body) at national level,
- Develop a policy for adult and non-formal education that gives direction on programmes, curriculum, structure, facilitators, budget, administration and management; develop an independent structure for adult and non-formal education at federal and regional level,
- Leverage ICT to enhance teaching and learning,
- Develop a policy that appreciates the variation of learning pace and learning methods among children,
- Recalibrate education and training management periodically.

Strengthening partnerships, including public-private partnerships and with NGOs

- Encourage the private sector to get involved in the production of teaching and learning materials, and provision of education and training,
- Establish scholarship programmes for talented learners and those with special needs by engaging the private sector,
- Further strengthen TVET governance system which allows private sector, industry, occupational associations, chambers

and trade unions to be engaged in the development and implementation of outcome based TVET,

- Further strengthen university–industry–community linkage.

Improving the quality and use of data on education and training

- Design digitalized data management system including unique national identification number,
- Develop database of students with categories including economic background of parents, parents' level of education, inhabitant status (rural/urban),
- Establish reliable and sustainable national labor market information and ensure its systematic use for TVET and higher education decision-making,
- Develop education abstract periodically.

Review the existing career and promotion system

- Design career paths with detailed profiles for leadership and management posts,
- Apply recruitment and promotion processes, leading to good governance,
- Implement competency- and performance-based career progression,
- Introduce a career structure whereby experienced teachers could assume school leadership positions,
- Introduce attractive trainers/instructors career structure with different ranks depending on depth of practical specialization and knowledge of the occupations.

GENERAL EDUCATION

Strengthen decentralization

- Redefine the responsibilities, accountabilities, and relationships of MoE, REB, ZED, WEO, and schools in light of decentralization,
- Make REBs responsible for general education, including training of primary school teachers and leadership in the region,

- Make ZEDs responsible for secondary education and WEOs responsible for pre-primary and primary education,
- Establish a structure for ECCE from WEO to MoE,
- Establish a unit within WEO responsible for parents' and community mobilization/engagements.

TVET

Transforming and Empowering TVET Governance

- Establish Quality Assurance Agency as federal autonomous body with branches in Regional States,
- Establish a federal organ that prepares standardized curriculum framework,
- Create innovative zonal level governance system for TVET Colleges and Centers,
- Create a National TVET Research and Development Institute,
- Strengthen TVET council from federal level to the regional level.

HIGHER EDUCATION

Governance reform

- Develop guidelines for the generation and execution of internal revenue of HEI,
- Outsource specific services,
- Organize universities according to their focus, as technical, applied, teaching and research.

SYSTEM

Education law: approved.

National standards for recruitment of staff at different levels: prepared and respected.

National levels of staff qualification requirements: prepared and respected.

Education and training management information system policy, strategy and procedures: developed and implemented.

GENERAL EDUCATION

Level of school autonomy (in share of responsibilities and budget management) increased.

Responsibilities of MoE, REB, ZED, WEO clarified.

Administrative structures for ECCE: established and functioning.

A unit within WEO responsible for parents' and community mobilization/engagements established.

TVET

Establish a Federal TVET council.

TVET sector legal framework put in place.

A federal organ that prepares standardized curriculum framework established.

Innovative zonal level governance system for TVET Colleges and Centers created.

National TVET Research and Development Institute created.

TVET council from federal level to the regional level strengthened.

HIGHER EDUCATION

Ratio of non-academic staff to academic staff established.

Guidelines for the generation and execution of internal revenue of HEI developed.

Specific services outsourced.

University organized according to their focus, as technical, applied, teaching and research.

SHIFT 13

TRANSFORM FINANCIAL AND RESOURCE MOBILIZATION SYSTEM

Ethiopia, facing diverse education challenges, allocates a large portion of its national budget to education. The education sector requires additional resources to overcome the current challenges and to implement the Roadmap. Tax revenue has been the major source of domestic revenue. The Roadmap implementation will demand sources other than government to contribute to education funding, in particular for those levels which are not compulsory. External aid, cost sharing, community contributions and internal income can be additional sources for the education sector. Increasing reliance on domestic resources including income generating activities reduces the risk of volatility associated with external funding.

The purpose of this shift is to formulate financial and resource mobilization strategy that respond to the need for additional resources to enhance quality education in Ethiopia.



The strategic implications are all system-wide, as funding is intended for the system as a whole, though specific interventions are different for each sub-sector.

SYSTEM

Develop finance and resource mobilization policy

It is important to develop a clear policy for finance and resource mobilization for the whole education and training sector, and to share it throughout the country. Resource mobilization can be counterproductive if it leads to keeping certain people out of education and training, and if it leads to worsening disparities. The policy needs to protect the weakest and to respect the commitment to provide free and compulsory education from pre-primary to Grade 8 and making secondary education free.

Increase contributions to the cost of education and training by learners

While ECE, primary and secondary education will be free of charge to students, cost sharing will become more systematic in TVET and especially in Higher Education. At present, TVET trainees share a small amount of the cost for their training. For HE students, the costs of food and boarding are subsidized and they pay for only some 15% of the education cost. Cost-sharing for students in HEI will change so that students contribute 30% of total cost. At the same time, student loan schemes will be introduced.

Promote resource mobilization by learning institutions

Higher Education and TVET institutions will strengthen their linkages with industries. They will use this linkage to demonstrate their contributions to industrial development. This collaborative work will become a means of increasing funding from these partners. They will also be encouraged to develop local and international partnerships, with the same purpose. Advice and guidance will be given to schools to help them mobilize resources within the surrounding communities.

Increase contributions by beneficiaries of education and training

The contributions of the beneficiaries of education and training, such as parents, communities and especially enterprises and companies, will be increased. The sub-sector where this will be most actively done, is in TVET, where training funds generation schemes will be set up in consultation with the industrial bodies and employers' associations

Diversify and intensify financial partnerships

The role of the community, of the private sector, and of the international community is vital to the advancement of the education and training system, and to its proper financing. Strengthening Public Private Partnerships at different levels is essential to mobilize financial resources as well as innovative ideas. These partnerships can also increase the employability of the graduates. Support from development partners will remain important.

SYSTEM

Develop finance and resource mobilization policy

- Develop policy for finance and resource mobilization in education and training,
- Develop a national framework that guides business and industry as they try to support education and training,
- Develop policy that introduces user fees for those who are capable to pay; continue free education at lower levels; and strengthen community financing and public-private partnerships and partnerships with non-government organizations.

Diversify and intensify financial partnerships

- Establish a Multilateral Development Bank or any other appropriate funding facilities, investment mechanism for education and training,
- Mobilize all relevant stakeholders, including NGOs, the private sector and bilateral and multilateral development partners, to build model system and institutions,
- Support and encourage the private sector, NGOS, faith-based nonprofit organizations and other organizations including foreign companies to expand participation in the education and training sector.

GENERAL EDUCATION

Promote resource mobilization by learning institutions

- Develop and provide guidance to schools on resource mobilization among communities,
- Develop a system that maximizes parents' involvement in the whole school programme,
- Establish community financial support system designated to improving quality of education.

TVET

Increase contributions by beneficiaries of education and training

- Strengthen TVET–industry linkages,
- Build local and international partnerships,
- Develop a national framework that guides business and industry to support education and training,
- Recover training cost through introduction of appropriate training funds generation schemes,
- Mobilize NGOs and bilateral cooperation to build model TVET institutions.

HIGHER EDUCATION

Increase contributions to the cost of education and training by learners

- Implement a system to gradually increase the cost sharing while paying sufficient attention to the needs of the disadvantaged students,
- Strengthen University–Industry linkages,
- Build local and international partnerships.

SYSTEM

Share of government budget on education and training.

Share of education and training provided by partners.

Policy for finance and resource mobilization in education and training: developed and implemented.

Strategy and procedure to enable public and private partnership: developed and implemented.

TVET

National TVET financing policy and proclamation: enacted.

TVET public financing formula for federal and regional government prepared.

Share of financial contributions by industry.

HIGHER EDUCATION

Share of cost of higher education borne by students.

Guidelines for the generation and execution of internal revenue of HEI: developed and applied.

A photograph of a building under construction. The image shows a wall with corrugated metal siding and wooden framing. The wall is partially covered with a grey, textured material, possibly insulation or a protective layer. The lighting is bright, suggesting an outdoor setting.

CHAPTER 5

TURNING THE ROADMAP INTO REALITY





Chapter 5

Turning the Roadmap into reality

The Roadmap offers an ambitious vision for the development and transformation of the education and training system. That ambition may be both necessary, as this vision is essential to socio-economic development, and justified, because of Ethiopia's impressive record in expanding access to education and training. The realization of the Roadmap will undoubtedly encounter constraints and will put pressure on the actors in charge of the education and training system.

This chapter examines two major constraints: the capacity of the institutions and human resources that will implement the Roadmap and the estimated financial resources needed for its realization (respectively Sections 5.2 and 5.3). The chapter starts by highlighting that the present environment contains several encouraging characteristics and ends with a brief discussion of the structures in charge of the Roadmap's implementation.

Building on strengths and opportunities

Ethiopia's recent history and present context are characterized by several strengths, on which to build to implement the Roadmap, while there are opportunities in the future, which can facilitate its realization. Among these strengths and opportunities, we can mention:

- The government's vision for the country's development, as expressed most clearly in the ambition to become a lower middle-income country by 2025. This vision is shared throughout the country and the socio-economic policies are aligned towards it. The vision is accompanied by strong political will for reforms in the education and training system.
- The commitment to education and training, as demonstrated in the rapid expansion of enrolments, teaching staff, schools, TVET, universities and other learning centers, and in the share of the budget dedicated to education and training.
- The strong economic growth, averaging 10.3% a year from 2006/07 to 2016/17, has led to a decrease in poverty. The benefits of that growth have been used to provide social services to a wider range of people. GDP growth is expected to continue at about 7 to 8%. Compared to a population growth rate of 2.5%, this opens space for further expansion and improvement of public services, including education and training.
- The strong belief in the social and economic values of education and training among the population. As education was for a long time a scarce good and because of its linkage to the steady economic growth, it has so far offered many of those who have benefitted from it, integration into the expanding economy and social mobility.
- The country has a tradition of development planning and education planning. The Growth and Transformation Plans have defined the overall socio-economic development path, while educational development is guided, very broadly, by the 1994 Education and Training Policy, which has been translated in strategic terms in several five-year education sector development programmes, which cover the whole education and training sector, and, in operational terms, by more detailed action plans and major programmes.
- Ethiopia follows a federal system. In general education, the decentralization policy, introduced several years ago, has allowed the educational administration to be present throughout the country, and has given some autonomy to Regional Bureaus and Woreda Offices. The scenario is somewhat different in TVET and Higher Education, where autonomy is more at the level of the institutions than offices, which is guided by the specific legal frameworks and strategies. While further improvements are needed in the functioning of many offices and institutions, the decentralization policy is being practiced in the education and training system.
- The education and training system receives support from and collaborates with many partners. These partnerships include:
 - Local and international development partners, who support the system through a range of major programmes and projects,
 - The teachers' association,
 - NGO's and communities,
 - Private entities (e.g. enterprises, industries, employers' associations, investors),
 - Federal and regional government sectors,
 - Different professional associations/social partners.

- The growing availability and increased affordability of IT infrastructure, an area to which the government gives much attention, can promote innovation, in teaching and learning, and effectiveness, in planning and resource management.

Developing administrative and institutional capacity

The successful implementation of the Roadmap and of the plans, programmes, and projects will require effective management capacities throughout the whole administration and among institutional leaders. Within the administration, this includes staff in charge in particular of planning, organizing, implementing, monitoring and evaluation within responsible federal and regional bodies.³

Shift 12 in particular pays some attention to capacity development, as one component of governance reform, while Shift 9 focuses on institutional leadership. In addition, the plans and programmes, which will result from the Roadmap, in particular the ESDP's, will include specific proposals for capacity development programmes. The purpose of this section is to emphasize the need for a common approach. Capacity development can be interpreted in different ways, and has taken many diverse forms, not all equally effective.

Effective capacity development of these two groups of key actors requires an integrated set of actions in various areas:

- Clarification of the responsibilities of the various actors (including both public and private entities) in the education and training system. This is necessary, not only to avoid overlaps and conflicting responsibilities, but also to ensure that the capacity development programmes will strengthen actors in those areas that are under their responsibility.
- Identification of relevant profiles for the different posts of responsibility. For staff to exercise effectively the responsibilities, related to their specific function, it is important that they have the minimum required profile. These profiles therefore need to be defined in some detail, including required training, qualifications, experience, skills, and competencies.
- Recruitment criteria and procedures. These profiles can serve to define the relevant recruitment criteria for specific posts. In addition, recruitment procedures may need reviewing to ensure that they lead to the identification and selection of the most appropriate candidates.
- Equitable deployment of staff. Living and working conditions are unavoidably very different within the very diverse contexts that make up Ethiopia. Equitable deployment is reflected not only in numbers of staff, but needs also to take into account their competence (are skilled staff equitably deployed?) and the relevance of their profile (do they have the specific characteristics, for instance language skills, that make them an effective actor in this specific context?). This may require improving the existing Human Resource management information system.
- Professional development. Specific pre-service or induction training may be needed for particular posts, which require specialized expertise. The preparation of professional development plans can guide the actual training offer. These plans need to take into account the needs of the office or institution to which the staff belongs, the existing profile of the staff, and possibly their future career. The provision of manuals and guidelines, to accompany or in addition to training can be an effective and affordable component of any capacity development programme.

3. Institutional leadership encompasses school principals, and senior management staff in Community Learning Centres, and in TVET and higher education institutes. The capacities, competencies and skills of other major groups will also need strengthening, such as teaching staff, curriculum developers, or teacher trainers. Several shifts in the Roadmap pay attention to these needs and propose various capacity development strategies. The focus here is on those staff in charge, at their own level, of planning, managing, monitoring and evaluating the implementation of the Roadmap.

- The development of career ladders and pathways. Career ladders in the education systems tend to be flat and promotion is slow. The design of a career ladder with detailed profiles for administrative and management staff has two core objectives: to strengthen their motivation, and to improve their performance, by linking career progression to profile as well as performance. Financial and career incentives will be provided to those serving in disadvantaged areas. This career ladder will be integrated with that of the teaching staff, so that experienced teachers can either remain in the teaching profession or assume school and system leadership roles. The rules governing career progression will promote equal opportunities for women, through different mechanisms such as flexible working arrangements, or career paths that accommodate temporary breaks,
- Accountability, evaluation and support. The research and consultations during the Roadmap preparation identified insufficient accountability at different levels of the system as a weakness to be reckoned with. This relates both to the absence of a well-functioning system to hold departments, institutions and their staff accountable and to the inadequate sense of responsibility among these actors. Promoting accountability has different implications, in particular
 - The need for regular evaluation of departments, institutions and staff. This will compare their actual performance to expectation. In case of unsatisfactory performance, the evaluation will identify the possible reasons.
 - The identification of actions as a response to the evaluation. These actions should address the reasons for unsatisfactory performance and propose remediation measures, which can be positive ones (more support) or negative. Where performance is exceptional, some form of recognition or reward may be envisaged.

Estimating the cost of the Roadmap, and the implications for funding

Translating the vision of the Roadmap into reality is a complicated process and insufficient funding can be one of the main hindrances to the Roadmap implementation. To avoid such a situation, this section aims to:

- Estimate, in broad terms, the financial resources required for the implementation of the Roadmap,
- Raise awareness of the need for efficiency gains,
- Advocate for increased domestic investment to education and training.

It is worth emphasizing that the purpose of this exercise is not to do any detailed budgeting or planning, neither to estimate the exact costs of different interventions. As the details of the Roadmap will be further articulated in the subsequent planning processes (e.g., ESDP VI), these will offer the opportunity to do a more detailed costing.

The purpose of this exercise is to have a first general assessment of the financial feasibility of the Roadmap. This estimate is based on a few key hypotheses, in particular about the expansion of the system, as reflected in the key targets, and about the increase in the unit cost of the cost drivers.⁴

4. A simulation model was developed using Excel. The school administrative data were extracted from EMIS for 2017 and 2018. Where recent data were not available, estimations were made based on the past trends.

Key Assumptions and Targets

The below key assumptions were used in the simulation.

A first set relates to the expansion of coverage by the education and training system:

- Beginners'-class coverage will be gradually expanded to 90% for 5-year-olds and 6-year-olds by 2030.
- Total participation rate of 4-6 years old children in organized preschool programmes will reach 50% by 2030.
- Universal primary education will be achieved by 2030, while significantly improving the coverage for other sub-sectors with gender parity.
- Repetition and dropout will be eliminated in primary school by 2030, improving the primary completion rate to 100% by 2030.
- The enrolment in secondary education among 15-18 years old will reach 70% and the enrolment in post-secondary education among 19-23 years old will reach 17%.
- The share of non-government students will increase to 30% in TVET and higher education.
- Students from disadvantaged backgrounds will receive additional financial support.

The following assumptions concern the available funding and the cost:

- The current positive economic trend will continue (namely 8% of annual real GDP growth).
- The education sector will continue to receive 4.6% of GDP, 26% of the total government budget.
- The original unit costs were calculated based on the administrative and financial data from 2017. For the simulation, the original figures were increased by 30% for ECD, primary, secondary, and IFAD to enable quality enhancing interventions.
- By 2063, in line with the African Union Agenda 2063, Ethiopia's investment in education per student in relation to GDP per capital will reach the same level as the OECD average.⁵
- 15% of the education budget will be devoted to system enhancement and management (e.g., strengthening the EMIS and other information systems for all levels; system restructuring, revising assessment systems, capacity development etc.). The percentage will decrease gradually to 2% by 2030, as the system matures.

As discussed above, the simulation model does not capture the details of the key initiatives and their targets, as well as the implementation timeline of the Roadmap, which will be further articulated in the future. It is therefore important to note that the projected figures in the Roadmap are broad and indicative. They shall be further reviewed and articulated in subsequent planning processes, such as the preparation of the next Education Sector Development Plan(s).

The simulation model was developed based on the available data in the EMIS. For certain ongoing programmes, for instance in TVET, and for future innovations, data on present costs are not available. The option taken, namely to use existing unit costs and to project a generous increase in these costs, is the most appropriate one, though far from ideal: it is based on available real data and allows for sufficient space for the development and implementation of new modalities and of innovations. Further review and discussion with the partners and the stakeholders will be necessary in preparation of the Roadmap implementation.

5. OECD (2019). Education at a Glance. Indicator C1: How much is spent per student on educational institutions? <https://www.oecd-ilibrary.org/docserver/0fdccb3b-en.pdf?expires=1574078109&id=id&accname=ocid195767&checksum=A9FC6940C699EBBA45CBEA06F47FF60E> accessed on 18 November 2019.

Simulation Results

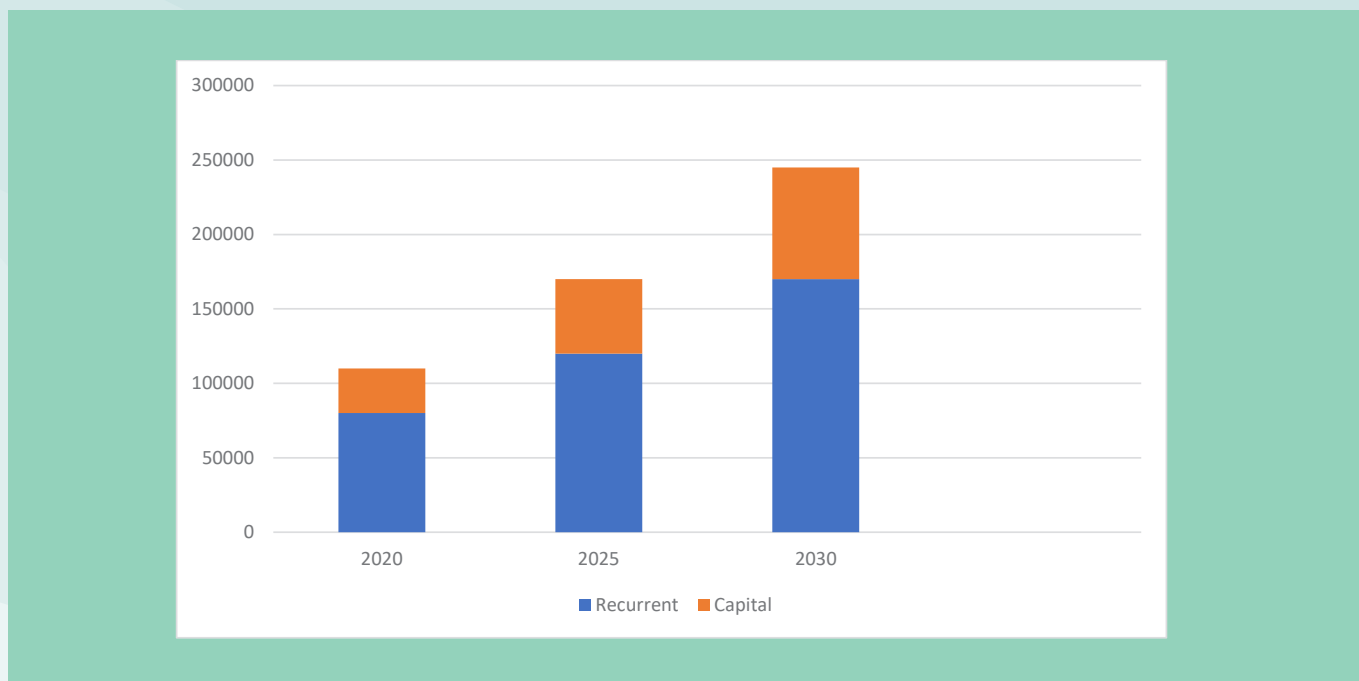
1. Macro-economic framework for education: Estimating the domestic resources available to education and training

The positive economic outlook for Ethiopia suggests that higher level of investment in education can be possible. Assuming that the current economic trend continues (8% annual real GDP growth) and the share of education as % of GDP (4.46%) stays at the current level, Ethiopia's domestic resources for education (both Federal and Regional) can be expected to grow to 246 billion Birr by 2030 (Table 1 & Figure 3). This will give Ethiopia much needed fiscal space to transform the education and training sector.

Table 1. Macro-economic framework

	2020	2025	2030
GDP (billion ETB)	2,511	3,723	5,522
Real GDP growth rate	8%	8%	8%
Share of education as % of GDP	4.46%	4.46%	4.46%
Education budget (billion ETB)	112	166	246
Recurrent	78	116	173
Capital	34	50	74

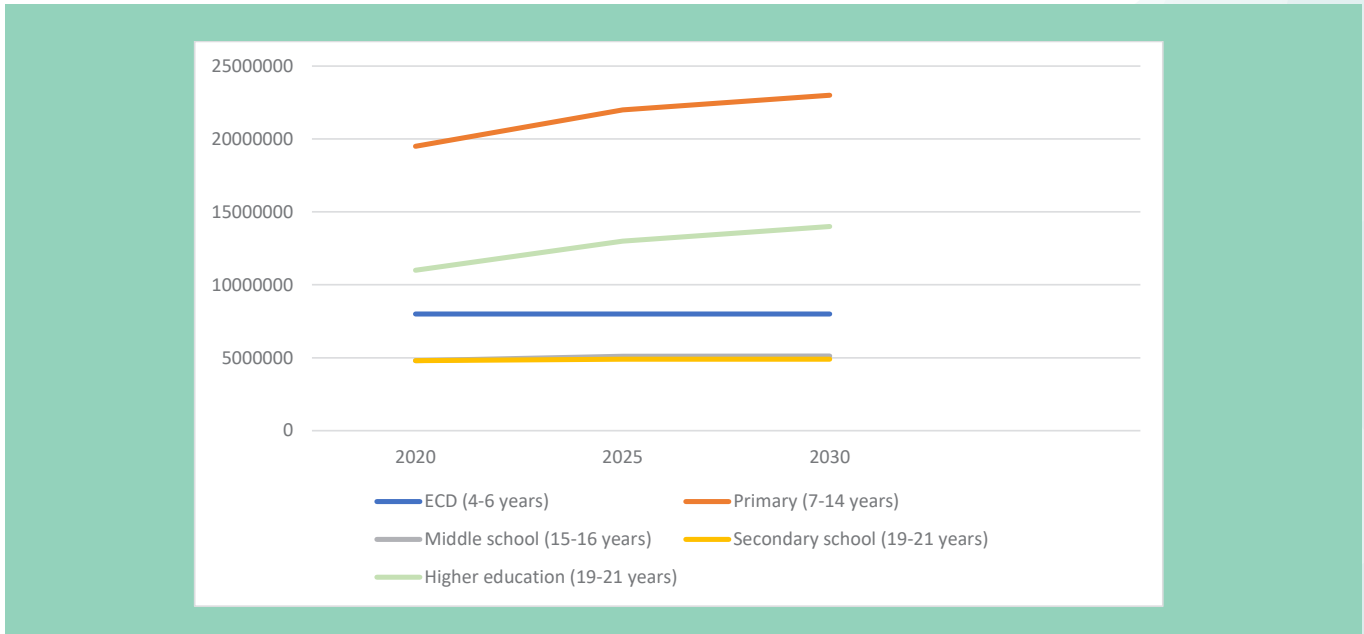
Figure 3. Available resources for education (million 2018 ETB)



2. Population and enrolment changes and their implications to the costs

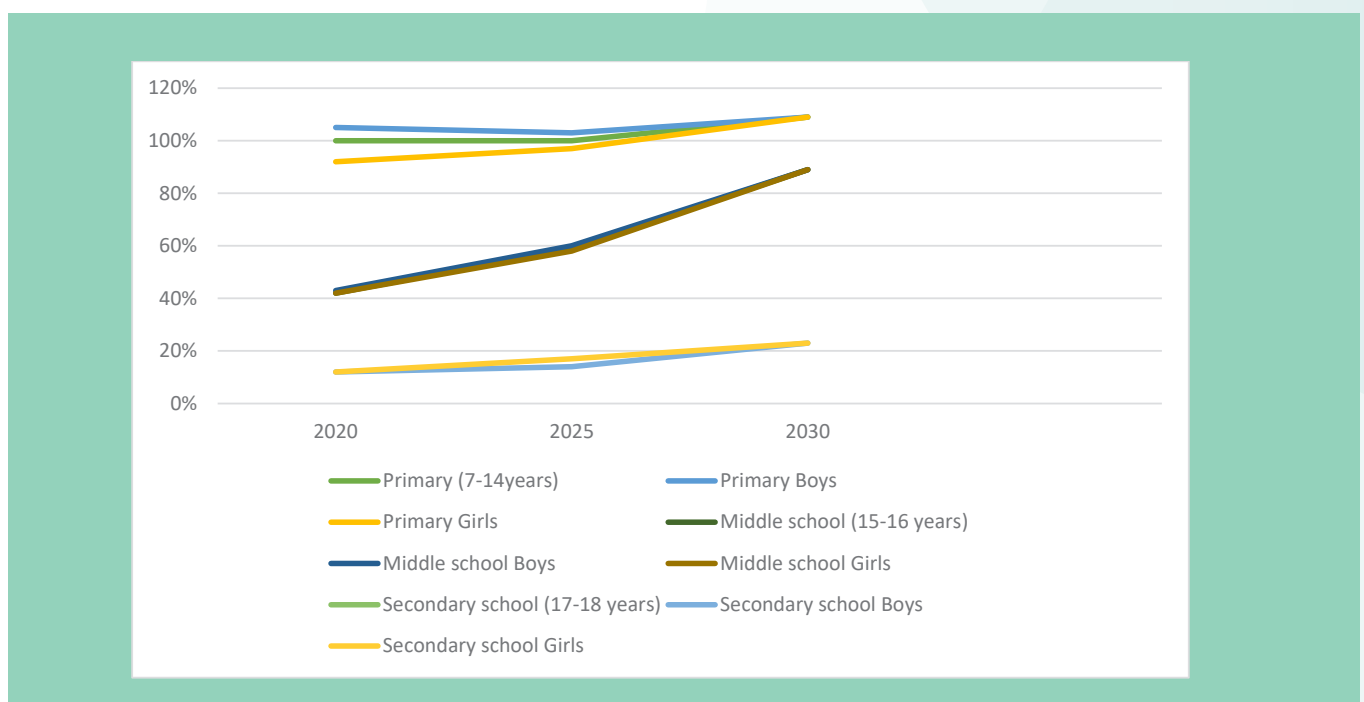
According to the population projection by the Central Statistics Agency, school-aged population is expected to grow slightly up to 2030 for all levels, indicating the continued demographic pressure for the provision of education and training (Figure 4).

Figure 4. School age population, 2018–2030



Based on the population projection and the assumptions/targets discussed in the previous section, the simulation model calculated the projected trends of enrolment as below (Figure 5).

Figure 5. Gross enrolment ratios, General education, 2019–2030



With the implementation of the Roadmap, it is expected that universal primary completion will be achieved by 2030, while GER for middle school education will reach 90%. The above simulation results show that during the first 5-7 years of the Roadmap implementation, the number of students will grow slowly while the primary education internal efficiency is being improved. Once primary completion rate hits about 75% around 2025, the expansion of secondary education picks up the pace. This suggests that the first years of the Roadmap implementation are critical for laying the strong foundations of the education system before the financial pressure to accommodate the increased demand for secondary education (as a result of universal primary completion) becomes high in the second half of the Roadmap implementation period.

During the Roadmap period, other sub-sectors of education and training will also be expanded (Table 2).

Table 2. Evolution of enrolments until 2030

NUMBER OF STUDENTS ('000)	2020	2025	2030
ECD	3,837	4,788	5,681
Kindergarten	703	764	814
Child-to-child	353	586	814
Beginners-classes	2,781	3,439	4,054
PRIMARY (INCLUDING EVENING CLASSES AND ABE)	19,678	20,823	23,216
Of which: non-government	944	1,449	2,089
% of non-government students	5%	7%	9%
SECONDARY	2,439	3,678	5,880
Middle School	1,958	2,954	4,587
Secondary	481	725	1,293
Of which: non-government	199	334	588
% of non-government students	8%	9%	10%
TVET	456	864	1,295
Levels 1-2	241	482	739
Levels 3-5	214	382	556
Of which: non-government	91	216	388
% of non-government students	20%	25%	30%
HIGHER EDUCATION	1,015	1,214	1,368
Of which: non-government	1,845	293	410
% of non-government students	18%	24%	30%
IFAE	5,040	5,297	5,568

The Roadmap is committed to a large investment in quality of education and training, as is reflected in the significant increases in unit costs. The projected additional available funding, based on those increases, can be used for various purposes, for instance, for a decrease in student/teacher ratio, better training of teaching staff, and additional textbooks. The increased unit cost for capital spending can cover the cost of better laboratories, greater ICT availability, better protection for disaster, or easier access for disabled learners.

3. Projected costs and funding gap

Based on the above, the simulation model calculated that the funding gap will range from 13% to 17% of the total education budget over the Roadmap implementation period (Figure 4). The projected cost of the Roadmap implementation to be 113 billion Birr for 2020, 179 billion Birr for 2025, and 278 billion Birr for 2030 (Table 3).

This results in a funding gap of approximately 15% of the education budget annually up to 2030 (Figure 5), even if Ethiopia enjoys a sustained economic development of 8% and the Government of Ethiopia continues to invest 4.6% of GDP in education and training. To address this challenge, Shift 13 has presented various resource mobilization that could be used to support the Roadmap implementation especially at the higher levels of education. Once the details of Shift 13 implementation are articulated, the projected funding gap shall be reviewed and updated.

Table 3. Projected costs and funding gap (billion ETB)

	2020	2025	2030
Projected costs	113	179	278
Recurrent	79	129	207
Capital	34	50	71
Funding gap	14	25	37
% funding gap	13%	15%	15%

Figure 6. Funding gap from 2020 to 2030

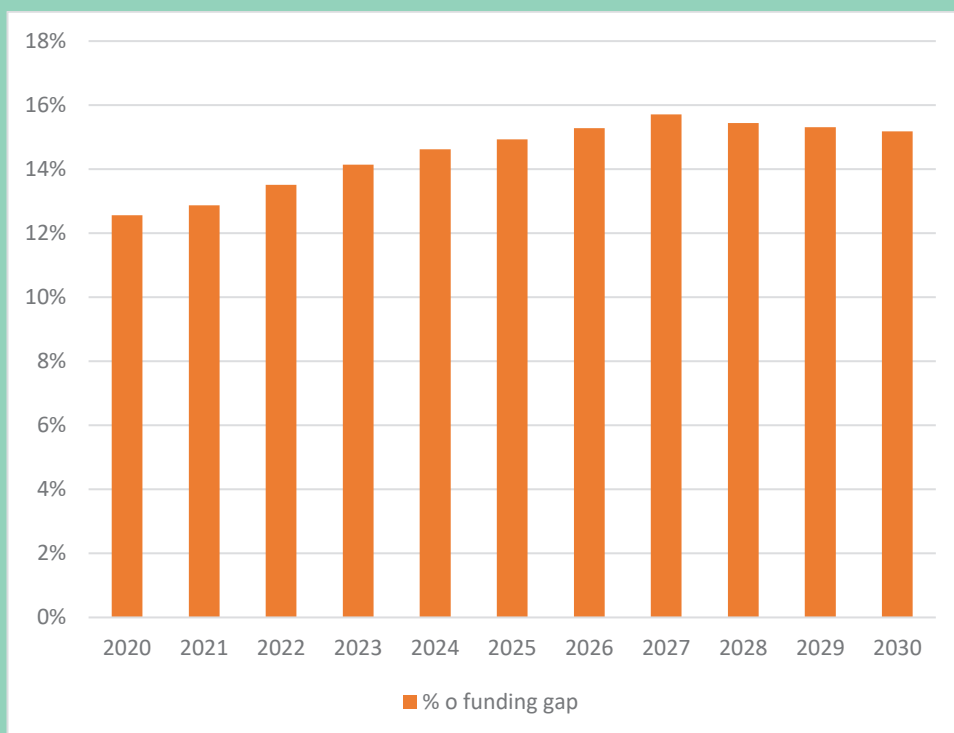


Figure 7. Projected costs and funding gap (million 2018 ETB)

