EPRC ECONOMIC POLICY RESEARCH CENTRE

ACET African Center for Economic Transformation

## Youth, Employment, and Skills (YES)

# STRENGTHENING EDUCATION AND LEARNING SYSTEMS TO DELIVER A 4IR-READY WORKFORCE

## Uganda Case Study

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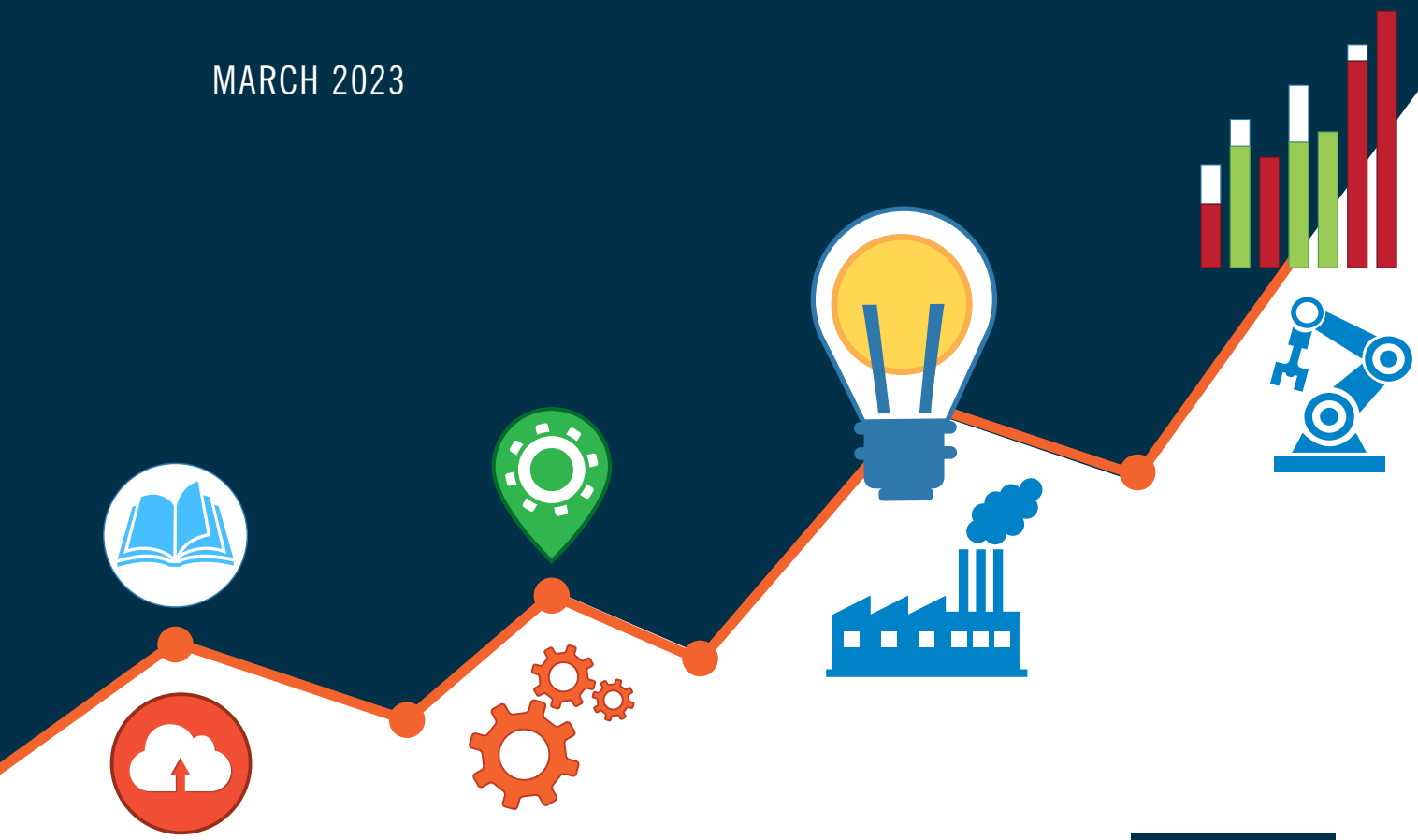
MARCH 2023



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# TABLE OF CONTENT


Acronyms 4
Executive Summary 5

**Chapter 1: Introduction 7**
1.1 Background to the study 7
1.2 Objectives and scope of the study 9
1.3 Analytical Framework 9
1.4 Methodology 11
1.4.1 Desk review 11
1.4.2 Quantitative methods 12
1.4.3 Qualitative methods 12
1.4.4 Fieldwork management approach 12

**Chapter 2: Country Overview 14**
2.1 Overview of Uganda's social-cultural, economic, demographic, and political landscape 14
2.2 Overview of education, skills development, and labour trends 16
2.2.1 Education structure and learning pathways in transition 16
2.2.2 Education financing and performance indicators 18
2.2.2.1 Education financing 18
2.2.2.2 Education performance 18
2012/13 19
2.2.2 An overview of curricula and pedagogy in Uganda 20
2.2.2. 1Primary curriculum 20
2.2.2.2 Lower and upper Secondary School Curriculum 21
2.2.2.3 BTVET curriculum 22
2.2.3 Education policies, strategies, and management systems 23
2.2.3.1 Education legal frameworks, policies, and strategies 23
2.2.3.2 Relevant strategic plans 25
2.2.3.3 Education management 26
2.2.4 Labour market indicators and trends 27

**Chapter 3: Supply Side Perspectives 30**
3.1 Access to Secondary Education and Skills Training 30
3.1.1 Curriculum 30
3.1.2 Teacher Training 31
3.1.3 Career Guidance 34
3.1.4 Physical and Digital Infrastructure 35
3.1.5 COVID-19 effects on access to education and the role of digital infrastructure 36
3.2 Quality and Relevance of Supply-Side Levers 39
3.2.1 Curriculum 39
3.2.3 Teacher training 41
3.2.4 Career Guidance 43
3.2.5 Physical and Digital Infrastructure 43
3.2.6 Life-long Learning 45
3.3 Summary 45

**Chapter 4: Demand-side opportunities and constraints 46**
4.1 Engagement in curriculum development and career guidance 46

4.2 Participation in shaping labour market needs 46
4.3 Working environment 47
4.4 Summary 49

**Chapter 5: Conclusions: Emerging issues and policy actions 49**
5.1 Emerging issues 49
5.2 Policy actions 50

**References 52**

**Annexes 53**
Annex Table A1: Summary of Key Informant Interviews and Focus Group Discussions in Gulu, Lira/Kole and Kiryandongo 53
Annex Table A2: Summary of Key Informant Interviews and Focus Group Discussions in Iganda, Kaliro and Mubende districts 54
Annex Table A3: Education indicators by facility level: 2010-2016 55
Annex Table A4: Net and Gross Enrolment Rates in primary and secondary schools, 2016/17 58

## LIST OF FIGURES

Figure 1 Analytical Framework 10
Figure 2 Trends of select Macroeconomic Indicators 14
Figure 3 Sex distribution of the population (millions) 15
Figure 4 Is career guidance is embedded within the training system? % 34
Figure 5 Availability of critical infrastructure by institutional level, % 36
Figure 6 Alignment of the current curriculum to the current and future job market 39
Figure 7 Teacher capabilities and quality, % 42
Figure 8 Secondary and TVET learners' perceptions of a school environment 44
Figure 9 Support and work environment, % 47

## LIST OF TABLES

Table 1 Summary of project activities, 2019-2020 11
Table 2 Tool, survey method, and number completed 13
Table 3 Population dynamics 15
Table 4 Structure of the formal (private and public) education system 16
Table 5 Education subsector shares of the total Sector budget 2018/19 17
Table 6 Comparison of education subsector allocations between 2017/18 and 2018/19 18
Table 7 Tertiary education completion by degree/diploma/certificate type 19
Table 8 Policies and programmes that ensure equal access to education 23
Table 9 Labour market indicators and trends 27
Table 10 Sectoral Composition of Employment, 2012/13 and 2016/17 (%) 28
Table 11 Informal Employment by Age and Sex (Non-agricultural Activities) 28
Table 12 Informal Employment by Educational Attainment (Mean Averages) 29
Table 13 Mean averages of youth Not in Education, Employment, or Training (NEET) 29
Table 14 Training of Trainers perceptions on ICT/STEM/TVET issues 33
Table 15 Average student-counsellor ratio, % 35
Table 16 Average computer/student ratio, % 36
Table 17 Contact hours per week dedicated to subjects by secondary level type, % 40
Table 18 Contact hours dedicated to practical vs theory sessions by level type, % 40
Table 19 When and method of assessing learners by sector level 41
Table 20 Duration of upskilling teachers/trainers, % 43

## ACRONYMS

| | |
|---|---|
| **4IR** | Fourth Industrial Revolution |
| **ACET** | African Centre for Economic Transformation |
| **AfDB** | African Development Bank |
| **BTVET** | Business, Technical, Vocational Education and Training |
| **CBET** | Competence-Based Education and Training |
| **CDP** | Continuous Professional Development |
| **COVID-19** | Corona Virus |
| **CSOs** | Civil Society Organisations |
| **FGDs** | Focus Group Discussions |
| **ICT** | Information, Communication, and Technology |
| **ILO** | International Labour Organisation |
| **KIIs** | Key Informant Interviews |
| **MDAs** | Ministries, Departments, and Agencies |
| **MoICT & NG** | Ministry of Information Communication and Technology and National Guidance |
| **MoES** | Ministry of Education and Sports |
| **MoGLSD** | Ministry of Gender Labour and Social Development |
| **NCDC** | National Curriculum Development Centre |
| **NCHE** | National Council for Higher Education |
| **NCS** | National Curriculum Statement |
| **NDP** | National Development Plan |
| **NFE** | Non-Formal Education |
| **NGOs** | Non-Governmental Organisations |
| **PPET** | Post Primary Education and Training |
| **SESEMAT** | Secondary Science and Mathematics Teachers |
| **STEM** | Science Technology Engineering and Mathematics |
| **TIET** | Teacher Instructor and Education Training |
| **TISSA** | Teacher Initiative in Sub-Saharan Africa |
| **ToT** | Training of Trainers |
| **UACE** | Uganda Advanced Certificate of Education |
| **UBOS** | Uganda Bureau of Statistics |
| **UCE** | Uganda Certificate of Education |
| **UIRI** | Uganda Industrial Research Institute |
| **UNEB** | Uganda National Examinations Board |
| **UNHS** | Uganda National Household Survey |
| **UPE** | Universal Primary Education |
| **UPPET** | Universal Post Primary Education and Training |
| USE | Universal Secondary Education |
| YES | Youth Employment and Skills |

## EXECUTIVE SUMMARY

This study is part of a six-country project coordinated by the African Center for Economic Transformation (ACET) on Youth, Employment, and Skills (YES) in Cote d'Ivoire, Ghana, Ethiopia, Niger, Rwanda, and Uganda. The study on Uganda's case draws out implications for the future of work considering the fast-evolving digital innovations under the fourth industrial revolution (4IR). Overall, the project aims to obtain a clearer understanding of the youth (demographic), employment, and education/skills challenges in the selected countries and to learn about country initiatives to boost decent work, considering the rapidly evolving nature of work.

The overall objective of this country case study was to examine how education and training systems in Uganda are adjusting to meet the evolving labour demand considering the rapidly evolving digital technologies and the changing nature of work. The study further explores youth employment and skills challenges and opportunities. More specifically, the study: i) Undertook an in-depth review of the structure and composition (demographic, education, and skills) of the workforce, ii) reviewed policies, regulations, and institutional arrangements aimed at boosting employment opportunities for youth and ways to implement innovative education and training initiatives iii) examined the impact of digital technologies on job creation and the nature of skills needed to create jobs and grow the economy iv) examined the effects of COVID-19 on the learning systems and labour markets and the harnessing of digital technologies in changing times.

The study adopted a mixed approach involving desk reviews and quantitative and qualitative analysis. The analysis is based on the triangulation of information from desk reviews of various documents (Government and non-government) concerning Youth, Employment, and Skills and primary data collected. In addition, the study adopts an analytical framework based on five levers that drive supply and demand, i.e., curricula, teacher training, career guidance, physical and digital infrastructure, and lifelong learning.

The study findings reveal that:

a) Government policies and interventions such as Gender in Education policy UPE, USE, and Skilling Uganda have successfully ensured equal access and inclusion of gender and people with disabilities in education.
b) Policies and interventions have increased access to free and compulsory education, uptake into BTVET, and enrollment of girls in STEM subjects.
c) Vocational courses were relevant and well aligned to the current and future job market needs. At the same time, the secondary curriculum is exam-oriented, teaches students to cram and pass exams, and is highly theoretical.
d) Career guidance is well embedded in the curriculum system. However, more counsellors are required, and it needs to be better formalized, and schools have resorted to using senior teachers and nurses to perform the tasks of a counsellor.
e) The study finds increased access to digital infrastructures such as computer laboratories and computers. However, the use of digital tools still needs to be improved due to a lack of skills by teachers, poor internet connections, and electricity outages. The outbreak of COVID-19 has fuelled the use of digital technologies in learning, although this is feared to gear the digital divide between urban and rural areas.
f) Stakeholder involvement in curriculum development was reported more at the BTVET level than secondary.
g) The study also reveals that Uganda has very good BTVETS with good infrastructure. However, while private BTVETS are operating at full capacity, government BTVETS with good facilities are empty due to entry requirements compared to private institutions.
h) Career guidance is well embedded in the curriculum system. However, more counsellors are required, and it needs to be formalised as a result, schools have resorted to using senior teachers and nurses to perform the tasks of counsellor.
i) The study also highlights several challenges,

such as limited financing for upskilling, inadequate infrastructure, and class congestion from an analysis of the supply side. In addition, the industry practitioners reported challenges such as a lack of ICT skills among graduates, high cost of doing business, and lack of government support are affecting their operations.

The policy actions recommended are:

- Skilling in new technologies: Government can support people in accessing learning opportunities by easing access to the internet for people to undertake online courses and making it mandatory for teachers to upskill after every two years.
- Government can also offer support through continuous learning to trainers through annual conferences and seminars, refresher training on career/ lifelong learning, and short courses.
- Teach learners how to learn. This is because technology moves faster than curriculum reform; while one is still consulting stakeholders, a new technology comes on board. Therefore, it is essential to teach people how to learn by giving them basic education.
- Increase and update learning equipment: Equip TVET workshops with necessary tools (training equipment, i.e., electrical and hand-sowing machines), as well as increase the time given for practical sessions.
- Vocational and ICT skills should be implemented at all levels of education and in every subject to ensure that at whatever level a learner leaves school, they have acquired a skill.
- In addition, internship periods for TVET and University students should be long enough to enable learners to gain employable skills and work environment ethics.
- The curriculum should focus on consumer needs through the engagement of industry practitioners. There is a need to ensure leavers meet market demands by engaging employers to provide information and guidance on what they require in the labour market in the form of skills.
- Focus on soft skills: Learning institutions should focus on building confidence in students through soft skills and emphasis on practical skills. Given the current technical skills requirements in the job market, Government should employ ICT instructors in learning institutions to teach basic computer knowledge, communication skills, and lifelong skills/interpersonal skills, which are vital.
- Workshops and career guidance sessions should be fostered and included in all school curriculums. In addition, there is a need to employ qualified career counsellors in schools to shape learners' perceptions of what career to take.

# CHAPTER 1: INTRODUCTION

## 1.1 Background to the study

This study is part of a six-country project that the African Center for Economic Transformation (ACET) coordinates on Youth, Employment, and Skills (YES) in Cote d'Ivoire, Ghana, Ethiopia, Niger, Rwanda, and Uganda. The project draws out implications for the future of work considering the fast-evolving digital innovations under the fourth industrial revolution (4IR). Further, the project aims to obtain a clearer understanding of the youth (demographic), employment, education/skills challenges in the selected countries and to learn about country initiatives to boost decent work considering the rapidly evolving nature of work, using the ACET Policy Engagement Model (APEM)[1]

Uganda's population has grown rapidly in recent years (at 3 percent per annum), and its total fertility rate remains one of the highest in the world at an average of 5 births per woman. Uganda's population was 34.6 million, as per the National Population and Housing Census (2014). This is estimated to increase to 54.5 million in 2030 (UBOS, 2019). In 2015, the population below 35 was estimated at 81.5 percent and was projected to reduce to 79.1 percent in 2030 (ibid) marginally. Specifically, the youth population was 29.1 percent in 2015 and is projected to increase to 31.9 percent in 2030.[2] The challenge is how the Government should prepare and plan for this youthful population amidst the global dynamics, such as harnessing the 4IR. Studies such as UNICEF, 2020 have demonstrated that Uganda might miss out on the demographic dividend if the status quo remains unchanged.

While Uganda is among the few countries on the African continent that has registered strong economic growth as measured by GDP (on average, 6 percent in the last ten years), this growth is yet to create adequate decent and productive employment for the growing population. Further, this growth has yet to be transformative. The Government has initiated several interventions, especially targeting youth employment. These include the Youth Livelihood Programme (YLP), Entandikwa Scheme, and Uganda Women Entrepreneurship Programme (UWEP). However, the outcomes are mixed because they need to be integrated and well-coordinated. Although the national unemployment rate reduced from 11 percent in 2012/13 to 9.2 percent in 2016/17, this reduction masks wide gender disparities. In 2016/17, the unemployment rate was higher among females (13.2 percent) compared to that of males at 5.6 percent (UBOS, 2017). Relatedly, youth unemployment declined from 13.7 percent in 2012/13 to 11.6 percent in 2016/17, with female youth unemployment higher (16.5 percent) than that of male youth (6.5 percent). Evidence shows that about 30 percent of Uganda's institutionally qualified youth need help finding jobs, which is worse for semi-skilled and unskilled youth (ILO, 2017).

Underemployment is also a critical development challenge facing the youth, partly explained by skills, time, and wage-related aspects. For example, youth time-related underemployment was 20.0 percent for females and 18.5 percent for males (UBOS, 2017). Inequality of opportunities is also growing. Some employed youths live in poverty due to their not-so-decent jobs. At least about 16 percent of youth who were employed were also considered poor (ibid).

The industry and services sectors primarily drive GDP growth.[3] Growth in agriculture[4] However, this has been very weak since the early 2000s, yet it absorbs a large share of employment (see UBOS's various reports). Indeed, in 2012/13, agriculture's labor productivity (GDP per worker) stood at only USD 581 (NPA, 2015-NDP II, Table 4.1). Despite an earlier strong growth performance of the manufacturing sector (from a low base) during the 1990s, growth in the sector slowed down during the 2000s and has been uneven since 2010. Formal jobs from the Government and private sector have remained at less than 5 percent for the last

1 The APEM model uses research and policy dialogue to identify common problems and challenges faced in a particular issue area by multiple countries and also identifies examples of best practices in one or more countries that can be shared with other countries to facilitate evidence use for policy uptake.
2 Population projections in UBoS and using the youth definition within the context of this project of 18-35 years. In Uganda, youth means a person between eighteen and thirty years old.
3 Industry sector activities grew by 10.8 percent in FY 2018/19 compared to 8.0 percent in 2017/18. The performance of services sector activities grew by 4.9 percent in FY 2018/19 compared to the 7.0 percent growth in 2017/18 (UBOS 2019).
4 Agricultural activities grew by 5.0 percent in FY 2018/19 from 3.8 percent registered in FY 2017/18.

five years implying that the informal. [5]The agricultural sector is the majority employer of many Ugandans, especially the youth, irrespective of gender. Uganda's informal economy is growing and contributes over 50 percent of the GDP. Estimates using UNHS data show that in 2016/17 for the working-age population (14-64 years), about o.31 million new jobs were created (demand side), yet 1.06 million were seeking jobs (supply side), showing significant deficits in the job market to absorb all job seekers. Among the youth, unemployment rates were 15.4 percent and 13.6 percent for those who had completed secondary and post-secondary education, respectively. These are above the national unemployment rate of 11.6 percent for the same age group (UBOS, 2017).

From the discussion, a large informal sector, pervasive underemployment, and stagnant productivity dominate Uganda's labour market. There are two primary reasons for this trend. First, formal sector job creation has not kept pace with the increased number of secondary and tertiary school graduates—a rise fuelled by the population surge but also rapidly improved access to education (especially with Universal Primary and Secondary Education). Moreover, second, where job demand in the formal sector does exist, necessary skills and training do not, due either to the poor access and quality of education or to the specialization of degrees in subject areas (e.g., arts and humanities) outside those that employers demand (e.g., science, technology, and mathematics, or STEM). The rapidly changing technology has worsened the situation in which some jobs are not changing with technology due to the high cost of adaptation.

Indeed, what is often called the 4IR—encompassing the rapid evolution of robotics, artificial intelligence, 3-D printing (or additive manufacturing technology), and the "internet-of-things"— is fundamentally disrupting manufacturing technology, with significant implications for the nature and growth of jobs. Nonetheless, this will be a long way in Uganda as technological change is slow. The BTVET institutions and education in general in Uganda have not changed their delivery mechanisms since colonial times. However, reforms in the sector are ongoing to respond to the much-needed changes in global times.

While education and training have improved, many young Ugandans still need to complete their formal education. Education completion is worse among girls, significantly lower and upper secondary education levels (MoES, 2018-Annex Table 3). Improvements in education and training witnessed over time have yet to translate into better work opportunities (School to Work Transition Survey-SWTS, 2015). As a result, many young people find themselves in irregular employment; nearly 40 percent work less than 20 hours per week, a sign of time-related underemployment. Most young unemployed Ugandans in search of work spend more than a year searching for a job. Indeed, most have yet to transition from school to work (SWTS, 2015). Most stuck in the transition between school and work are in non-satisfactory self-employment (UBOS, 2015).

Following the outbreak of COVID-19, education systems worldwide have been significantly disrupted, which is likely to offset the gains that most countries have achieved in education attainment and other related training programmes. In Uganda, more than 73,200 schools and institutions were closed, affecting more than 15.1 million learners and 548,000 teachers (MoES, 2020). This is because most schools, whether day or boarding, are highly crowded because of high population growth. As such, they presented an environment for easy transmission of the COVID-19 virus. In response to the danger posed by the pandemic, the President of Uganda took proactive measures on Wednesday, 18 March 2020, and announced the closure of all schools and educational institutions from 20 March 2020. The need to leverage digital technologies to foster continuity in education and training amidst these disruptions must be over emphasised.

Robust institutions are needed, including the political will to make trade-offs between population groups and sectors. Like many other African countries, Uganda increasingly recognizes the urgent need for tailored strategies for the future of work even as the unfolding technological revolution is speeding up the present. Key to this is (1) transformative strategies that promote job creation and boost productivity in labour-intensive

5 The term "informal economy" refers to all economic activities that are by practice or by law not covered sufficiently or at all by legal measures (ILO).

sectors and (2) ensuring young people have the skills for productive, fulfilling, and future work.

## 1.2 Objectives and scope of the study

The overarching objective of the country case study is to examine how education and training systems in Uganda are adjusting to meet the evolving labour demand considering the rapidly evolving digital technologies and the changing nature of work. Against this backdrop, this study examines the youth[6] employment and skills challenges and opportunities. More specifically, the study:

i. Undertakes an in-depth review of the workforce's structure and composition (demographic, education, and skills).
ii. Reviews policies, regulations, and institutional arrangements aimed at boosting employment opportunities for youth and ways to implement innovative education and training initiatives.
iii. Analyses the impact of digital technologies on job creation and explores the nature of skills needed to create jobs and grow the economy; lastly,
iv. Pays attention to the effects of COVID-19 on the learning systems and labour markets and the harnessing of digital technologies amidst this disruption.

To guide the specific objective, we pose five main questions:

1. How is labour demand in the industry[7] changing in the face of digital technologies?
2. What is the current level of mismatch between labour supply and the demand for skills, and its implication on employment?
3. How are education and training systems responding to the changing nature of work in Uganda?
4. What role does the industry play in ensuring education and training produce the right workforce?
5. What are the likely effects of COVID-19 on the demand and supply of digital technologies in education and employment? Also, how has COVID-19 affected the adoption rates of technologies?

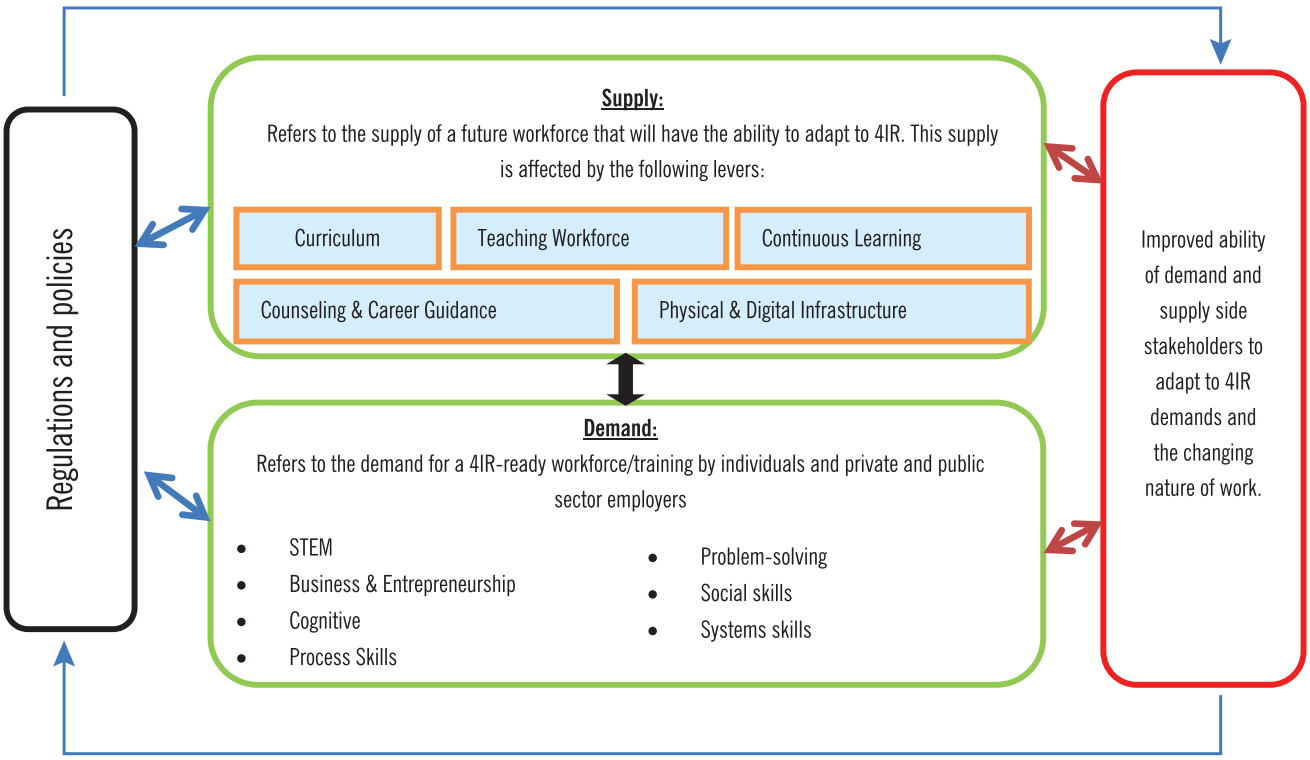
With continuing and unabated demographic headwinds, the need to rethink and compose appropriate educational policies and future-oriented skills development, such as the ongoing reforms in the BTVET subsector, is increasingly critical for the private sector, governments, and society. Answers to these questions are critical to informing decision-making to address the key challenges of the growing population, skills mismatch, and the changing nature of work. Uganda's growing youth population makes it imperative to understand the current labour market demands and future expectations to restructure education and learning systems that hold value in the labour market.

## 1.3 Analytical Framework

Figure 1 provides the analytical framework that underpins the study. Policies and regulations are fundamental drivers of aligning the education and skills development systems to the changing world of work under 4IR. They drive the workforce's supply, quality, and relevance in response to rapidly changing labour market demands. Thus, aligning the supply-side factors (stated below) to the demands of the labour market, such as critical thinking, analytical and soft skills, are crucial.

6 Defined within the context of this study as 18-35 years
7 For this study, the term 'industry' refers to agriculture, manufacturing, and services.

**Figure 1** Analytical Framework




Source: Adopted from ACET, 2019

In adopting a mixed methodology--primary and secondary data collection, the study examines how the five education-related levers, listed below, drive supply and demand factors:

- Ensuring future readiness of curricula: This refers to the alignment of curricula to the needs of the changing/future labour market.
- Investment in developing and maintaining a professional teaching workforce focuses on measures to prepare the workforce for new 4IR-relevant pedagogical approaches, skills, and subjects.
- Early exposure to the workplace and career guidance: This lever explores opportunities such as internships, apprenticeships, etc., and tools such as counsellors and career fairs to prepare students.
- Physical and digital infrastructure: This lever looks at key inputs, e.g., access to safe buildings, computer/student ratio, access to the internet, and frequency of classes that are important to develop ICT literacy skills.
- Creating a culture of lifelong learning: This lever looks at the readiness of the demand and supply side to adapt to changing skills demands continuously.

Supply and demand

Examined are the interaction between the demand and supply sides of these five levers to identify gaps between the present state of supply and the demand side's expectations as they adapt to the changing nature of work. Supply here refers to the present and near-term supply of labour (and covers youth, i.e., students, fresh graduates, employed, Not in Employment Education and Training (NEET). In contrast, demand refers to employers who use these resources to produce output.

Understanding the performance of these five levers helps us comprehend the outcome defined as the 'improved ability for demand and supply-side stakeholders to adapt to 4IR needs and the changing nature of work.'

The two circular arrows represent the use of regulations to drive reform in a continuous process. The ideal goal is to reduce the time taken for each of these loops

to complete, i.e., reduce the time and strengthen the capacity for the market to adapt to changing technology.

Through this analytical framework, the study assesses the educational system in the country through the lens of access to education and skills, its quality, and its relevance to the workforce. Access is defined as not just including physical access (distance, facilities, human resources) but the costs (tuition fees and associated expenses such as uniforms, transportation, school feeding programs) and the socio-cultural norms that govern access to education. This study understands the key drivers and challenges to education access in-country by reviewing government programs in place to improve access. While access is an overarching lens in the study, the quality and relevance to the workforce of each of these education levers at the country level are studied, with inputs and recommendations sought from the demand and supply side.

## 1.4 Methodology

The means and sources of information/data were through desk reviews of development literature and official documents, backed by primary research using quantitative and qualitative (including gender response qualitative methods of data collection) research methods. A discussion of each method is in subsequent subsections below, but first, a summary of timelines by activity is provided in Table 1. The study was conducted between 2019 and 2020, with inception meetings from August to September 2019.

### 1.4.1 Desk review

The review relies on the existing documents, including government laws and policy documentation, for example, The Constitution of the Republic of Uganda 1995 (which obliges the Government to provide free primary and secondary education to all Ugandan citizens; The Government White Paper on Education (GWPE, 1992); The UNEB Act (1983); the BTVET Act (2008); the NCDC Act (2000); Education Service Act (2002); the Universities and other Tertiary Institutions Act (2001); and the recently enacted Higher Education students' Financing Act(2014). In addition, the Local Government Act as amended in 2002 (which devolves the responsibility for primary and secondary education to the local governments); The Education (Pre-primary, Primary, and Post-Primary) Act, 2008 (which makes primary education compulsory); and International Commitments on Education, particularly the Millennium

**Table 1 Summary of project activities, 2019-2020**

| Activity | | Period |
|---|---|---|
| **Phase 1: Preparatory** | | |
| 1. | Fine-tuning of survey instruments | November 2019-February, 2020 |
| 2. | Fixing appointments and conducting KIIs with government MDAs and influencers | 6-21 February 2020 |
| 2. | Training of enumerators | 20 February 2020 |
| 3. | Final fine-tuning of survey instruments | 21 February 2020 |
| **Phase 2: Fieldwork survey** | | |
| 1. | Team 1 (North and West) | 23 February -7 March 2020 |
| 2. | Team 2 (East and Southwest) | 23 February -7 March 2020 |
| **Phase 3: Data Entry and Analysis** | | |
| 1. | Design of 13 data entry screens | March 2020 |
| 2. | Data entry | April 2020 |
| 3. | Data Analysis | May 2020 |

Note: KIIs with influencers

Source: EPRC's compilation, 2020

Development Goals (MDGs), Sustainable Development Goals (SDGs) and the Education for All (EFA) Goals).

Also reviewed were the National Teacher Policy (2019), BTVET Strategic Plan, Skilling Uganda reforms, education and training plans and strategy documents, and performance reports. Specific reviewed reports include the Teachers Initiative in Sub-Saharan Africa (TISSA) report on Uganda "MoES (2014)'s Teacher issues in Uganda: A shared vision for effective teachers' policy" Uganda National Household Survey Reports, and other research papers AfDB (2019) on "Creating decent jobs strategies, policies, and instruments policy research document" and ACET (2018) on "The Future of Work in Africa Implications for Secondary Education and TVET Systems". In consultation with the Ministry of Gender, Labour, and Social Development (MoGLSD), Ministry of Education and Sports (MoES), and Ministry of Information, Communication and Technology (MoICT), interventions were documented in line with YES project objectives.

### 1.4.2 Quantitative methods

Quantitative methods involved rigorous descriptive analysis to provide a snapshot of the demographic, education, employment, and skills trends. The analysis was conducted by sex, age group, the industry of employment, informal and formal employment, and education level with a focus on the youth. The study uses secondary data from the Uganda Bureau of Statistics (UBOS), especially the latest comparable Uganda National Household Surveys of 2012/13 and 2016/17. These consider the new employment definitions redefined in the ILO (2013) Labour Force Framework adopted at the 19th International Conference of Labour Statisticians (ICLS), which issued new guidelines for measuring and compiling labour statistics.[8] Also, labour statistics in Uganda from the surveys can be provided at an interval of three years rather than on an annual basis to generate averages. Additional education and skills-related data on enrolment, expenditures, completion, and repetition rates were sourced from the MoES. During the analysis, a validation workshop and close collaboration were undertaken to ensure that secondary data collected from UBOS and MoES was correct and well interpreted.

### 1.4.3 Qualitative methods

The approach mainly captured information through Key Informants' Interviews (KIIs) and Focus Group Discussions (FGDs). In this regard, qualitative field survey instruments (questionnaires) provided by ACET were grouped into three categories by target group; those that capture the demand-side, supply-side, and policy YES issues. Specifically, the:

(i) Demand instruments include the formal sector, informal sector, graduates, and transition leavers.
(ii) Supply-side instruments include secondary school leavers, TVET learners, Training of Trainers institutions (secondary and TVET), and TVET Institutions.
(iii) Policy instruments: Government officials from Education, labour, and influencers (NGOs, Development Partners, CSOs), Teachers and administrators from secondary and TVET institutions.

More specifically, interviews with the Government were conducted with the MoES [i.e., Commissioner-secondary education, Commissioner-Guidance and Counselling, Commissioner, BTVET and Commissioner, Teacher Instructor, and Education Training (TIET)]. At the Ministry of Gender Labour and Social Development, interviews were conducted with Director Labour, Employment and Social Development, Commissioner of Employment Services, and Commissioner of Guidance and Counselling. Lastly, for curriculum development, interviews were held with: the Director of the National Curriculum Development Centre (NCDC), and at NCDC, the Head of ICT, the Head of BTVET, and the Head of Secondary Curriculum Development.

Influencers in the education and employment space included: International Labour Organisation (ILO), Platforms for Labour Action, Uganda National Teachers Union (UNATU), National Youth Council, and Irish Aid.

### 1.4.4 Fieldwork management approach

Two teams conducted the remaining part of the data

8 The previous surveys are based on the 1982 framework. The Tables presented in this report do not correspond with the years ACET provided on standard table formats (2000-2007; 2008-2013; and 2014-2018).

collection process in the different parts of the country based on the geographical coverage of the districts of interest and the available budget. The selection of the institutions was purposive, and in this regard:

(i) Team one activities covered the Northern and western districts of Gulu, Lira/Kole, and Kiryandongo. In Gulu and Lira/Kole, the team visited four secondary schools (two in each district); in Gulu and Kiryandongo, the team visited two TVET institutions (one in each district), two training of trainers' institutions in Gulu and Lira/Kole as shown in the Annex Tables A1. In addition, the team interacted with formal businesses, Transitions/Leavers, Graduates, and Informal businesses in each of the districts of Gulu and Lira/Kole.

(ii) Team 2 activities covered Kaliro and Iganga in the East and Mubende in the Southwestern part of the country. In Kaliro/Iganga and Mubende, the team visited four secondary schools, three TVET institutions, and two National Teachers' colleges. The team also interacted with local businesses (formal and informal) in the districts visited and Graduates, Leavers/Transition. Details are in Annex Table A2.

Table 2 provides a summary of persons interviewed by a survey instrument. Annex Table A1 and A2 provide the details with specific education institutions named[9].

**Table 2 Tool, survey method, and number completed**

| Tool/Questionnaire | Type of method | No. of tools completed |
|---|---|---|
| Teachers and administrators secondary | KIIs | 27 |
| Secondary learners | FGDs | 16 |
| Teachers and administrators TVET | KIIs | 15 |
| TVET Learners | FGDs | 5 |
| Training of Trainers | KIIs | 15 |
| Formal sector | KIIs | 9 |
| Transition/ Leavers | KIIs | 11 |
| Graduates | KIIs | 15 |
| Informal sector | KIIs | 12 |
| Policy Influencers (Education) | KIIs | 7 |
| Policy Influencers (Labour) | KIIs | 3 |
| Total | | 135 |

Source: EPRC's compilation, 2020

9 The challenges faced during fieldwork are well documented in a separate fieldwork report experience submitted to ACET in March 2020.

# CHAPTER 2: COUNTRY OVERVIEW

This chapter provides a snapshot of key economic and social indicators on the population's demographics and labour force composition, disaggregated by sex and age. It further presents Uganda's education structure, learning systems/pathways, performance, and supporting policy frameworks. The discussion is divided into two subsections: Subsection 2.1 provides an overview of Uganda's social, cultural, and political landscape, and subsection 2.2 provides an overview of education, skills development, and labour trends.

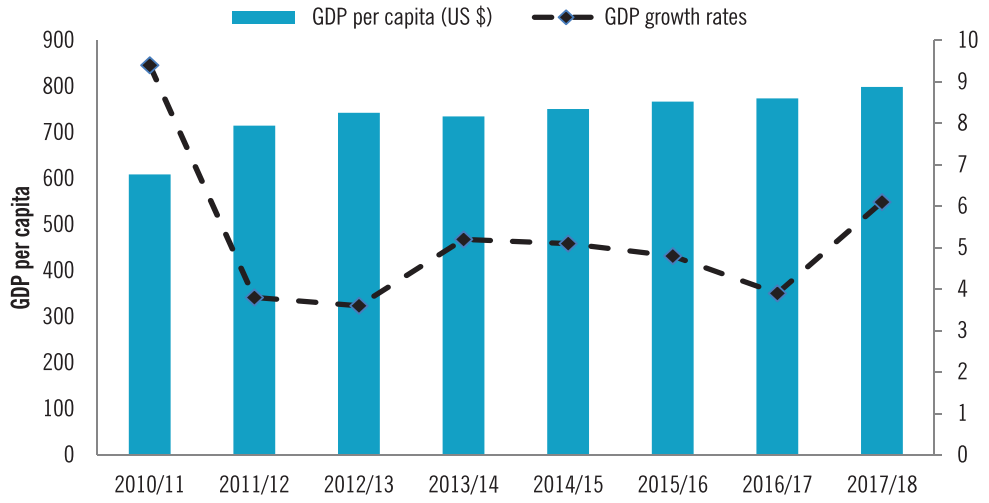
## 2.1 Overview of Uganda's social-cultural, economic, demographic, and political landscape

On the political and social-cultural front, Uganda is under a multi-party system. The 1995 constitution allows for free and fair political participation irrespective of gender. The country has enjoyed peace and stability for more than 30 years now under the leadership of President Yoweri Kaguta Museveni. This has led to sustainable growth and development, albeit slow and yet to be transformative. The country has a decentralised system of governance. Uganda's social-cultural heritage is diverse, organised around families, clans, and/or traditional leaders as chiefs and kings. Most people have different beliefs, traditions, values, and myths deeply ingrained in their cultural and religious values. These play a key role in shaping aspirations and education. This is the same challenge affecting the girl child in accessing her education.

Concerning the economy, Uganda has enjoyed macroeconomic stability characterized by single-digit annual inflation rates and stable exchange rates. Strong economic growth has been registered, averaging 6 percent since 2000, though this growth is less strong than that experienced in the 1990s. Uganda's economic growth has been narrow-based, leading to growing income inequalities. The growth needs to create more jobs for its growing labour force. The growth is primarily driven by the services sector (contributing over 50 percent). However, the sector contributes less than 15 percent of the total employment as agriculture remains the largest employer (see UBOS 2017).

Uganda's GDP per capita has remained stagnant, averaging US$ 750 over the last eight years (Figure 2). This questions the NDP II's strategic aspiration of ensuring Uganda attains low middle-income status by 2019/20 with an income per capita of 1,039 to upper middle-income status with a per capita income averaging US$9,500 by 2040 (NPA, 2015). The low GDP per capita growth is due to the high population and low productive labour force.

**Figure 2** Trends of select Macroeconomic Indicators




Note: GDP per capita is at constant 2009/10 prices

Source: Statistical Abstracts, Uganda Bureau of Statistics (various years)

**Table 3** Population dynamics

| Year | % Working-Age Population (15-64yrs) | % of the Youth population (18-35yrs) | Total population (Million) |
|---|---|---|---|
| 2015 | 52.3 | 29.1 | 35.5 |
| 2020 | 54.4 | 30.7 | 41.2 |
| 2025 | 56.0 | 31.7 | 47.7 |
| 2030 | 57.4 | 31.9 | 54.5 |

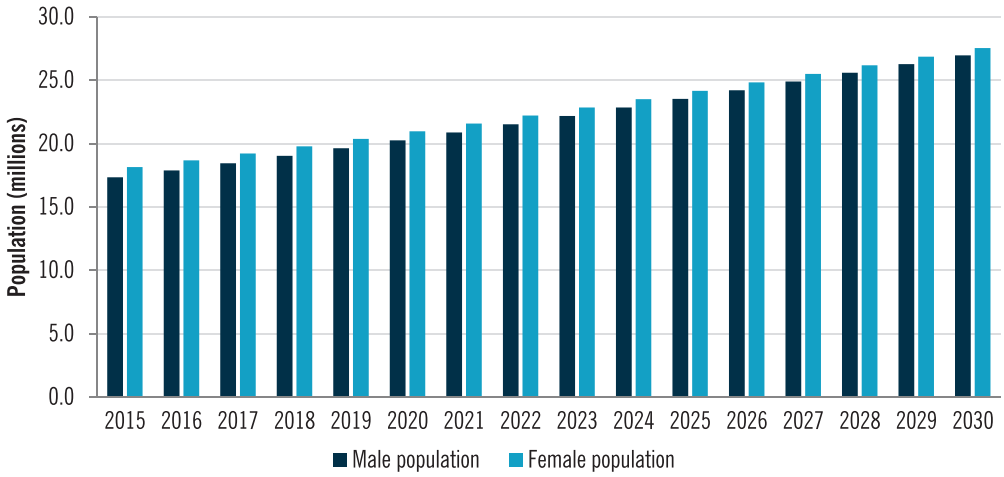
Source: Uganda Bureau of Statistics, 2019

Demographics indicate that Uganda's population in 2020 is projected to be 41 million (Table 3), increasing by 13.9 percent over five years. It is projected to grow by 24.4 percent in the next ten years (by 2030). The working-age population is more than half, of which three out of ten persons are youth (Table 3). The dynamics of Uganda's population will create a massive challenge for policymakers to provide opportunities for this group, especially the youth. The Government will have to deal with unemployment and underemployment challenges if job opportunities are not created. Failure of which will worsen poverty and income inequalities.

Uganda's population is mainly female. Population projections consistently reveal that this trend will remain unchanged by 2030 (Figure 3). The high population growth is driven by the high fertility rates and improving health indicators, as mentioned in Chapter 1. The theory argues that providing access and ensuring a girl child stays in school is a sure way of controlling the population. Indeed, as will be later elaborated, partly the introduction of Universal Primary, Universal Secondary, and Universal Post O'level Education and Training coupled with health campaigns led many girls to enrol in school, and fertility rates declined from 6.3 children per woman to an average of 5 per woman.

The demographic trends pose several challenges to future growth and structural transformation, as well as the pace of development. One key challenge concerns the education, training, and skills development sector (MoES, 2014). With many school-going populations, the ability of the system to recruit enough teachers conversant with changing technologies in the world of work is vital. This poses a question, is Uganda's education and job market system ready for this demographic dividend?

**Figure 3** Sex distribution of the population (millions)




Source: Uganda Bureau of Statistics, 2019

## 2.2 Overview of education, skills development, and labour trends

### 2.2.1 Education structure and learning pathways in transition

Uganda's current formal education system was inherited from the colonial Government (MoES, 2014; NPA, 2018). The system provides for four levels of education (Table 4), that is:

a) An initial non-compulsory preschool for early childhood development mainly provided by the private sector for 3-5 year olds;
b) Seven years of primary education for children 6-12 years;
c) Four years of lower secondary for children aged 13-16 years (leading to Uganda Certificate of Education), followed by two years of advanced secondary education for 17-18 year olds (leading to the Ugandan Advanced Certificate of Education); and
d) Tertiary and University education.

Other than the formal systems mentioned above, other education and training modalities that have evolved recently, often called post-primary and secondary, are BTVET, informal, and non-formal training systems. Specifically, the:

**Table 4** Structure of the formal (private and public) education system

| Education level | Cycle/ years | Awards | Progression Opportunities |
|---|---|---|---|
| Pre-primary | 3 | | Primary education |
| Primary | 7 | Primary Leaving Examination (PLE) | 1. Lower secondary (O'Level) |
| | | | 2. Technical schools |
| | | | 3. Community polytechnics |
| Lower Secondary (O'Level) | 4 | Uganda Certificate of Education (UCE) | 1. Upper secondary (A'level) |
| | | | 2. Primary Teachers College |
| | | | 3. Technical/Vocational institutions |
| | | | 4. Farm institutions |
| | | | 5. Health Institutions |
| | | | 6. Other departmental training institutions |
| Technical Institutes | 3 | Certificate | 1. Technical colleges |
| | | | 2. Universities |
| Upper Secondary (A'Level) | 2 | Uganda Advanced Certificate of Education (UACE) | 1. University |
| | | | 2. Uganda College of Commerce |
| | | | 3. National Teachers College |
| | | | 4. Uganda Technical College |
| | | | 5. Other training institutions |
| Primary Teachers College | 2 | Certificate | National Teachers College |
| Uganda College of Commerce | 2 to 3 | Diploma | University |
| National Teachers College | 2 | Diploma | University |
| Uganda Technical College | 2 | Diploma | University |
| University | 3 to 5 | Diploma/Degree | Postgraduate studies |

Source: Copied from MoES, 2014

a) BTVET system has two broad categories: formal and non-formal BTVET. While formal BTVET is delivered by formal training institutions (both public and private), non-formal BTVET is delivered by multiple providers, including Private Training Providers, Private Companies, and Rural -based informal providers and formal training institutions. The BTVET system is under the authority of the MoES, which is responsible for programme implementation and monitoring, including procedures for planning, budgeting, and annual reviews.

BTVET is integral to Post Primary Education and Training (PPET). It constitutes both the second and third levels of the education system. The BTVET second-level education system comprises technical and farm schools at the secondary school level (i.e., those admitting Primary Seven (P.7) completers). In contrast, the third level BTVET education system comprises institutions that admit "O" level and "A" level secondary education completers. The BTVET sub-sector is exceedingly diverse, with education and training institutions spanning from business, health, and agriculture to technical, vocational, and paraprofessional fields. BTVET in Uganda is an overlapping three-tier system comprising: Craftsman level training offered by technical schools and institutes, Technician level training offered by technical colleges, and Graduate Engineer level training offered by universities.

Although the BTVET sub-sector is expanding, it is still tiny regarding the share of secondary enrolment at around 3 percent (Annex Table A3). This is because in Uganda, BTVET is not the first choice and most join either due to low grades or lack of school fees for secondary and Tertiary education. Also, despite good infrastructure, some public BTVETs need to be more utilized compared to their private counterparts due to high entry requirements. In addition, f the negative attitude towards BVET by parents and learners has derailed the system.

b) Informal and non-formal training systems: These in Uganda are combined into Non-Formal Education (NFE) which offers a modular programme of three to six months, open to all to acquire vocational and technical skills based on competency-based education and training (CBET). The NFE aims to fulfil the educational needs of people not in the regular education system by using tailor-made approaches to cover literacy, life skills, continuing education, equity education, and income generation. The significant activities implemented under the NFE programme are a basic literacy campaign, continuing education, community learning centres, equivalency programmes, and non-formal primary education. For instance, the Ministry of Gender, Labour, and Social Development (MoGLSD) functional adult literacy (FAL) program complements NFE interventions. Here there is also recognition of prior learning, e.g., Workers PAS

**Table 5** **Education subsector shares of the total Sector budget 2018/19**

| | GoU Recurrent | | GoU Development | | Donor Development | | Total Allocation (UGX. Bn) | Overall % share |
|---|---|---|---|---|---|---|---|---|
| Subsector | Expenditure | % share | Expenditure | % share | Expenditure | % share | | |
| Primary | 1068.69 | 48.48 | 45.19 | 18.83 | 47.26 | 14.03 | 1161.14 | 41.75 |
| Secondary | 459.01 | 20.82 | 97.92 | 40.81 | 14.03 | 4.17 | 570.96 | 20.53 |
| BTVET | 111.04 | 5.04 | 23.83 | 9.93 | 200.51 | 59.52 | 335.37 | 12.06 |
| Tertiary | 441 | 20.01 | 49.42 | 20.6 | 75.09 | 22.29 | 565.52 | 20.33 |
| Others | 124.57 | 5.65 | 23.57 | 9.82 | 0 | 0 | 148.13 | 5.33 |
| **Total** | **2204.3** | **100** | **239.93** | **100** | **336.89** | **100** | **2781.13** | **100** |

Source: EPRC's compilation from MoFPED sector allocations, 2020

### 2.2.2 Education financing and performance indicators

#### 2.2.2.1 Education financing

From Table 5, the primary sub-sector received the highest share (41.8 percent) of the total sector allocation, followed by the secondary sub-sector (20.6 percent), tertiary (20.3 percent), then BTVET (12.1 percent), and others.[10] (5.3 percent) in 2018/19.

A comparison of subsector shares for 2018/19 and 2017/18 (Table 6) indicates that all sub-sectors had an increase in the budget allocation except for the primary sub-sector, which declined by (5.4 percent). The Secondary subsector had the highest increase of 2.8 percent, followed by other category with an increase of 0.99 percent. BTVET and Tertiary subsectors allocations increased by 0.9 percent and 0.7 percent, respectively.

The decline in percentage share for the primary subsector was attributed to a reduction in donor allocation for the GPE project by UGX. 47.6bn as it is tending to closure. The increment under the secondary sub-sector is attributed to the Uganda Intergovernmental Fiscal Transfer (UGFT) World Bank-funded project that provided funds for the construction of secondary schools in some sub-counties with no secondary schools. The rise in Tertiary is attributed to additional resources for the Students Loan Scheme, the establishment of Karamoja Agricultural Constituent College in Gulu, and operationalization of new universities (Busoga and Mountains of the Moon University). Under BTVET, the increase was due to additional allocation towards the Examination Boards (Uganda Business Technical Examinations Board (UBTEB), Uganda Nursing and Midwifery Examinations Board (UNMEB), Uganda Allied Health Examinations Board (UAHEB) and Directorate of Industrial Training (DIT)). The increase in the category of others can be explained by additional allocation for the facilitation of national sports teams and associations.

The public spending for education as a share of total government expenditure declined from 18.6 percent in 2005/06 to 13.3 percent in 2017/18 to 11.1 percent in 2018/19, which is way below the target of 20 percent recommended by the Global Partnership for Education (GPE). Nonetheless, in absolute terms, the budget had increased. That is, in 2018/19, MoES approved budget was UGX. 2,781.13bn, including external financing. This reflects an absolute UGX 280.01bn budget increase from 2017/18. Despite the increments, Uganda's education expenditure is only about half (i.e., 11.1 percent of the national resource envelope and 2.8 of the total GDP) of the recommended benchmarks for achieving the SGD4. At least 15 to 20 percent of public expenditure and 4 percent to 6 percent of GDP should be devoted to education. Therefore, Uganda needs to increase its public education expenditure to meet its SGD4 goal.

#### 2.2.2.2 Education performance

Concerning enrolment, Annex Table A3 shows that primary enrolment increased from 8,37 million in 2010 to 8.65 million in 2016, with girls' enrollment accounting for 50.3 percent. Out of the primary students in 2016, 61.5 percent completed the primary level. More girls (63.4 percent) completed compared to boys (59.7 percent). Literacy levels have increased

10 Physical Education and Sports, Special Needs Education, Guidance and Counselling and Policy, Planning and Support Services.

**Table 6 Comparison of education subsector allocations between 2017/18 and 2018/19**

| | 2017/18 | | 2018/19 | | |
|---|---|---|---|---|---|
| Subsector | Allocation (UGX. Bn) | %share | Allocation (UGX. Bn) | %share | Change in %share |
| Primary | 1178.06 | 47.1 | 1161.14 | 41.75 | (5.35) |
| Secondary | 443.54 | 17.73 | 570.96 | 20.53 | 2.8 |
| BTVET | 279.49 | 11.17 | 335.37 | 12.06 | 0.88 |
| Tertiary | 491.55 | 19.65 | 565.52 | 20.33 | 0.68 |
| Others | 108.49 | 4.34 | 148.13 | 5.33 | 0.99 |
| **Total** | **2501.12** | **100** | **2781.13** | **100** | **0** |

Source: EPRC's compilation from MoFPED sector allocations, 2020

from 57.6 percent in 2010 to 60.2 percent in 2015. The number of students enrolling in secondary schools also increased from 1.2 million in 2010 to 1.46 million in 2016. In contrast to the primary level, more boys completed than girls enrolled at this level. More so, of the 61.5 percent who had completed primary, only 69.2 progressed to secondary; further, of the 69.2 percent joining lower secondary, only 37.8 percent completed this level. Of these, only 29.2 join upper secondary, with 24.2 percent girls. Post-primary enrolment has also increased from 23,536 in 2010 to 45,242 in 2016. Tertiary/University enrolment increased from 174,375 in 2010 to 258,866 in 2016, with more males 104,432 than females 81,980.

From Annex Table A3, the male students have persistently outnumbered girls in BTVET enrolment, in some instances by over double. The enrolment rate of girls has experienced mild growth in absolute terms from 14,650 in 2013 to 16,051 in 2017 -9 percent. Total BTVET enrolment in 2017 was 45,153 (male: 29,102, females: 16,051), implying greater enrolment of boys than girls at a ratio of 0.55. The sector plan was to achieve a boy-to-girl ratio of 0.87 by 2016 and full gender parity by 2020. Therefore, they have yet to reach their medium-term target and are far from reaching 2020 (ESSAPR, 2017). Some female-dominated courses include tailoring, hairdressing, and Arts (History, literature, religious studies). Evidence from our KIIs (2020) pointed out a negative perception towards BTVET due to the low initial investment in the sub-sector compared to higher education (see above on education financing). Furthermore, lack of equipment, sub-standard quality, and inability to meet the market needs leading to the view that BTVET is a less desirable option than education at the University. The MOES selection criteria for students proceeding to other levels of education, specifically at secondary school, needs to prioritize BTVET, as is the case for O & A 'level.

**Table 7** **Tertiary education completion by degree/diploma/certificate type**

| | 2012/13 | | |
|---|---|---|---|
| Subject | Female | Male | Total |
| *Panel A: Liberal arts* | | | |
| General Programmes | 12,529.4 | 11,980.2 | 24,509.6 |
| Education | 70,432.5 | 50,395.3 | 120,827.8 |
| Humanities and arts | 15,959.2 | 8,041.8 | 24,001.0 |
| Social science, business, and law | 55,306.6 | 55,461.9 | 110,768.5 |
| Services | 34,230.4 | 11,731.7 | 45,962.1 |
| Life sciences | 5,705.0 | 892.4 | 6,597.4 |
| Physical sciences | 1,168.0 | 3,299.6 | 4,467.6 |
| Other | | 518.5 | 518.5 |
| Panel B: STEM | | | |
| Computing | 12,602.7 | 12,091.2 | 24,693.9 |
| Engineering and engineering trades | 4,233.1 | 43,393.6 | 47,626.7 |
| Manufacturing and processing | 8,194.1 | 6,389.1 | 14,583.2 |
| Architecture and building | | 43,560.0 | 43,560.0 |
| Agriculture, forestry, and fishery | 929.4 | 3,977.9 | 4,907.3 |
| Veterinary | | 882.1 | 882.1 |
| Health | 33,537.8 | 6,214.7 | 39,752.5 |
| Social services | 9,323.0 | 941.9 | 10,264.9 |
| Other | | 8,066.4 | 8,066.4 |
| Do not know | 2,562.8 | 2,567.7 | 5,130.5 |
| Total ('000) | 266.7 | 270.4 | 537.1 |

Source: EPRC's calculations based on UNHS 2012/13 survey

From this discussion, it is noted that although more girls enroll in school at lower levels, their completion rate and enrolment in higher levels of education are low. This could be attributed to the high dropout rates for girls compared to boys rather than enrolling in alternative training systems such as BTVET. From Annex Table A4, we note that the Net Enrolment Rate (NER) stands at 78.9 percent while the in full (GER) stood at 115.2 percent for primary schools. The NER and GER for secondary schools stood at 20.4 percent and 27 percent respectively. From Table 7, the completion rate for tertiary education reveals that more students are completing with a degree in liberal arts (337,652) compared to those completing with a degree or certificate in STEM subjects (200,004) in 2012/13. This highlights the preference for non-STEM subjects.

In sum, although there is gender parity in primary school enrolment, completion rates for girls remain low, even worse at higher levels of learning (secondary plus). Further, gender disparities in education remain high, especially at higher levels of education, despite several strategies, including the affirmative action policy that gives young women an additional 1.5 points on top of their Advanced Level examination results (Namatende-Sakwa, 2014). Since the early 1990s, when the initiative was put in place, more females have enrolled at the university level but not necessarily in STEM-related courses (Table 7).

In addition, female students continue to be disproportionately represented in science, technology, engineering, and math (STEM) disciplines despite the overall improvement in STEM enrolment at A' Level of secondary education. According to the Gender in Education Policy of 2016, while there is an almost equal number of males and females enrolled in computing, economics, the arts, management, and the social sciences, there continues to be a strong male bias in agriculture (81 percent), forestry (72 percent), science (69 percent), veterinary medicine (82 percent) and education (75 percent) in tertiary and higher learning institutions.

Evidence that women are socialized away from STEM disciplines is linked to gender roles and gender division of labour (Watera, 2018). In Uganda, like in most countries, house chores like cleaning, cooking, washing clothes, and everything that relates to sustaining the household, like fetching water or wood fuel, as well as small-scale agriculture for self-sustainment, are typically female tasks even when the woman has a paid job outside the home. On the other hand, more technical house tasks, like dealing with electrical or mechanical equipment, are traditionally considered male jobs.

According to Key Informants (2020):

> *"it is perceived that TVET (technical) education is suited for failures (e.g., those who needed to earn more in-take pass points into secondary or University). In addition, there is community bias towards female learners taking BTVET courses, as many still believe that technical education is for male learners. Parents, too, have a mindset that favours white-collar jobs. This has created a negative mindset among learners toward STEM subjects. Since most sciences are compulsory, most learners hate them and waste their time, leading to failure at the end of the academic cycle and in life."*

### 2.2.2 An overview of curricula and pedagogy in Uganda

#### 2.2.2. 1Primary curriculum

Uganda's primary curriculum has undergone several reforms including 1965, 1967, 1990, 1999, and 2007-2010 reforms which have, however, only resulted in minimal changes in critical aspects such as the scope, sequencing, relevance, and language (Ezati, 2016). The other change has been the thematic formatting and recontextualization of subjects. As such, there needs to be more distinction between, for instance, the 1967 curriculum that had 12 subject areas and the current curriculum (2007- 2010) that merged and repackaged subjects to 9 (NPA, 2018). The 1990 curriculum reform was undertaken with the key objective of making basic education relevant to the needs of individuals by equipping them with basic skills, which resulted in a new curriculum developed in 1998/1999. The concerns on the 1998/1999 curriculum included that: (i) The curriculum had too many subjects (10 subjects) and too much content hence significantly; (ii) expensive,

particularly in terms of textbooks; (iii) there were high-cost implications of subjects like Integrated Production Skills (IPS); (iv) there was lack of critical focus on literacy skills; and (v) There was lack of detailed implementation planning and a dedicated budget.

To address the concerns raised over the 1998/1999 curriculum, another review was undertaken and concluded in 2005. In this regard, acting on the guidance and recommendations from the 2005 evaluation report, the MoES, through NCDC, embarked on the review, development, and rollout of the fifth post-independence Primary Schools curriculum for all schools in the country (NPA, 2018). The rollout started with Primary one class and continued adding one class yearly to primary seven. The review was handled in three main cycles, namely: The Thematic Curriculum (P1-P3), which was rolled out in 2007-2009; the Transition Curriculum (P4 class) was rolled out in 2010, and the Upper Primary Curriculum (P5 – P7) rolled out between 2010 and2012. The first cohort of the revised curriculum sat for their Primary Leaving Examinations in 2012.

The curriculum of classes 1 to 3 is thematically designed to consist of themes from daily life, such as the human body and health, peace and security, animals, and plants. Pupils with a native language other than English are recommended to be taught in the local language. However, the subject of the local language itself is taught in English in cosmopolitan areas. In class 4, the thematic curriculum changes to a subject-oriented curriculum. The year is divided into three trimesters. The lessons are still in the local language in the first trimester, with a gradual switch to English. By the end of the year, the language of instruction is English. From classes 4 to 7, pupils follow the subjects: English, mathematics, integrated science, social studies, religious education, creative arts, and physical education, mother tongue/local language, and Swahili. However, the absence of a language board in every district/municipality still affects the progressive implementation of the thematic curriculum. In addition, teachers still use chalk and blackboard to teach learners, use of technology-related gadgets is almost nonexistent.

#### 2.2.2.2 Lower and upper Secondary School Curriculum

The Uganda Secondary Education and Training Curriculum, Assessment and Examination (CURASSE) 2008 report points out that the secondary education sector in Uganda has been the least reformed area of Uganda's education system. The report listed several problems that necessitated the need to review the secondary education curriculum, and these included:

- The teaching methodologies inbuilt into the existing syllabuses did not promote effective learning and acquisition of skills;
- The existing curriculum, for historical reasons, was greatly overloaded;
- The existing curriculum did not address the needs of the majority of students entering secondary education;
- The existing secondary curriculum did not adequately address the social and economic needs of the country;
- The existing curriculum was not sufficiently flexible to address emerging fields of knowledge; and
- Key characteristics required of the 21st-century curriculum needed to be included.

According to the curriculum review report (2016), Uganda's secondary education sector has been accused of many evils-being overloaded, lacking key characteristics of 21st-century skills, lacking the needed flexibility to absorb new knowledge, failing to address the social and economic needs of the country, failure to meet the needs of the majority of learners who enter the secondary education, declining and poor quality, being too theoretical, and use of teaching methodologies which do not allow active learning and acquisition of skills that can be applied to solve contemporary problems.

Some critics have argued that the secondary education system in the country is too colonial and out of touch with the national development aspirations of the country, as contained in the flagship policy document of government-Vision 2040. The country's National Development Plan and the Education Sector strategic investment plan both recognize the urgent need for

reforming the secondary education sector.

These arguments have resulted in the revision of the lower secondary curriculum. In 2020, MoES rolled out a new lower secondary school curriculum to respond to the changing education and labour markets. The new curriculum has eight (8) learning areas- Creative Arts, Languages, Life Education, Mathematics, Religious Education, Science, Social Studies, and Technology and Enterprise. At the center of the curriculum are generic (soft/transferable) or 21st Century skills and desired societal values (UNESCO, 2013). Under the new curriculum, teachers will compile the learners' achievements under the Formative Assessment in the four-year cycle, find an average score and submit it to the Uganda National Examinations Board (UNEB) to contribute at least 20 percent in the final national examinations grading. The Chinese language has been added to the menu of foreign languages. At the same time, Kiswahili, Physical Education, and entrepreneurship will be compulsory for all students in Senior One (S.1) and Two (S.2). Cross-cutting issues such as climate change, patriotism, human rights, peace, gender, and HIV/Aids have been integrated into various subjects. ICT will be used as both an instructional tool for learning and a subject. A summative assessment of UNEB will be administered at the end of Senior 4 (S.4). The end-of-cycle UNEB results, together with the results from the formative assessment, will lead to the award of a Uganda Certificate of Education (UCE). For both certifications, the learner can progress to the next levels of education. Apart from the summative assessment, continuous assessment is prioritized in the assessment grid for the revised lower secondary school curriculum.

The new curriculum is being taught to S.1 new students and is expected to progress until the old curriculum is phased out. While teachers were trained to teach the new curriculum, only a few benefited and are expected to transfer the skills to those who could not be accommodated. In addition, the timeframe for training was considered too short, too hurried, and so close to the school opening that even those who attended needed to be more confident to teach (KII, 2021).

For upper secondary, during these two years, students follow a combination of 3 subjects at the Principal level and two subjects at the Subsidiary level, of which the general paper subject is mandatory. Principal subjects include biology, chemistry, mathematics, economics, geography, entrepreneurship, history, fine art, music, Swahili, English literature, Christian religious education, Islamic religious education, agriculture, the local language, foreign language (Arabic, French, German, and Latin), metalwork, woodwork, clothing and textiles, food and nutrition, technical drawing. In contrast, subsidiary subjects are mathematics, ICT, and general paper. With the gradual implementation of the revised curriculum, it is planned that by 2025, the upper secondary curriculum will also be revised as part of a complete curriculum revision for the secondary school sub-sector.

#### 2.2.2.3 BTVET curriculum

BTVET curriculum is competence-based to address the government policy of Skilling Uganda, which is aimed at shifting from traditional academic teaching to skills development. The BTVET system emerged from an educational sub-sector into a comprehensive skills development system for employment, enhanced productivity, and growth. The primary purpose is to create employable skills and competencies relevant to the labour market instead of educational certificates (MoES, 2011). BTVET Policy of 2003 outlined the framework of an integrated, stakeholder-involving, and competency-based BTVET system that aims at broad and equitable access, quality and relevance of training, financial sustainability, and institutional efficiency. It describes avenues for integrating and supporting different provider systems, including formal, non-formal, and enterprise-based training, and for the development of an appropriately diversified system of BTVET delivery.

This links with the revised lower secondary curriculum in which DIT plays a role in accessing students' competencies alongside the school curriculum. For example, Non-Formal Training Program (NFTP) admission occurs irrespective of whether an individual has any prior schooling. The language of interaction is determined by the community where the training will occur. This skilling is community-driven and relatively more flexible to avoid conflict with typical community

activities such as harvesting or planting seasons. Upon completion, an individual could seek a competence certification from DIT (Okumu and Bbaale, 2018).

### 2.2.3 Education policies, strategies, and management systems

#### 2.2.3.1 Education legal frameworks, policies, and strategies

The provision of quality basic education is well embedded in the Constitution of the Republic of Uganda of 1995. It is spelled out under Article 30 of the Right to Education that all children in Uganda are entitled to quality education. Others that reinforce the legal education setting are the: Local Government Act (1997), amended, the Higher Education Students Finance Act (2014), the Education Act (2008), the Gender in Education Policy (2010), The National Council of Sports Act (1964), The Nakivubo War Memorial Stadium Trust Act (1954), the Business, Technical and Vocational Education and Training (BTVET) Act (2008), the Universities and Other Tertiary Institutions Act (2001), the Uganda National Examinations Board (UNEB) Act (1983), the National Curriculum Development Centre (NCDC) Act (2000) as amended, the Industrial Training Act Cap 130 and the Education Service Act (2002).

Uganda's education policies have a basis from the Government White Paper (GWP) on Education of 1992 and the Education Sector Strategic Plan (ESSP) 2017/18-2019/20 (MoES, 2017). Specifically, the Gender in Education Policy 2010 encourages gender equity in all aspects and eliminates gender disparities in the education sector. It guides all the education stakeholders in planning, resource allocation, and implementation to address some of the gender disparities at all levels. It emphasizes gender mainstreaming in planning, resource allocation, and budgeting to promote the provision of relevant knowledge and skills equally to males and females for harmonious national development. It is, therefore, imperative to eliminate gender disparities among all stakeholders in order to ensure gender responsiveness in all activities of management.

The Government has put in place various programmes and policies to ensure inclusive access to quality education. These are summarised in Table 8, together with their relevant objectives.

**Table 8 Policies and programmes that ensure equal access to education**

| Policy, Programme, or Initiative | Objectives |
|---|---|
| The Constitution of the Republic of Uganda (1995) | Article 30 makes education for children a human right, and Article 34 provides that children are entitled to basic education by the state and parents |
| Universal Primary Education (UPE) Programme 1997 | • Provide the facilities and resources to enable every child to enter and remain in school until the primary cycle of education is complete.<br>• Make education equitable to eliminate disparities and inequalities.<br>• Ensure that education is affordable for many Ugandans.<br>• Reduce poverty by equipping every individual with basic skills. |
| Special Needs and Inclusive Education Policy 2011 | • Increased enrolment, participation, and completion of schooling by persons with special learning needs.<br>• Strengthen and systematize existing initiatives/programs on SN&IE.<br>• Enhance the participation of stakeholders in the management and implementation of SN&IE programs in Uganda; and<br>• Promote sporting programs for learners with special learning needs. |
| Gender in Education Policy, 2010 | • Enhance equal participation for all in the education system;<br>• Promote the provision of relevant knowledge and skills equally to males and females;<br>• Ensure gender-responsive planning, budgeting, programming and monitoring and evaluation;<br>• Promote an enabling and protective environment for all persons. |

| Policy, Programme, or Initiative | Objectives |
|---|---|
| Basic Education Policy for Educationally Disadvantaged Children, 2006 *(This Policy has been revised to be called Non-Formal Education Policy 2011, still in final draft)* | • Address the inclusion of children out of school, who are often excluded because of the rigidity of the formal school system, by providing viable complementary basic education programmes and by making the formal school approach more responsive;<br>• Strengthen and harmonize existing and future partnerships in ongoing strategies for providing basic education for educationally disadvantaged children; and<br>• Provide an opportunity for reviewing and harmonizing existing policies with particular emphasis on addressing the rights of educationally disadvantaged children. |
| Universal Post Primary Education and Training(UPPET) Universal Secondary Education (USE) Programme 2007 | • Increasing equitable access to Universal Post Primary Education and Training (UPPET); assuring achievement of the Millennium Development Goal of gender parity in education delivery by 2015;<br>• Enhancing the sustainability of UPE; and<br>• Reducing the high costs of UPPET. |
| ICT in education sector policy ( still in draft) | • To sensitize and create awareness of the use of ICT.<br>• Apply to all education sub-sectors, including non-formal education.<br>• Focus on the development of ICT competencies as well as using ICT to teach across the curricula<br>• Include strategies for the development of digital learning content.<br>• Develop teachers' ICT competencies.<br>• Foster research in educational applications of ICT.<br>• Improve the level of investment in educational ICT equipment, software, and broadband connectivity to primary, secondary, and tertiary institutions.<br>• Impact teachers with the necessary ICT skills to enable them to use ICTs in the teaching and learning process.<br>• Establish educational networks for sharing educational resources. |
| Education Sector Strategic Plan (ESSP) 2017/18-2019/20 (MoES, 2017) | • Achieve equitable access to relevant and quality education and training;<br>• Ensure delivery of relevant and quality education and training; and<br>• Enhance efficiency and effectiveness of education and sports service delivery at all levels. |

Source: EPRC's compilation from various documents, 2020

Implementing the Government White Paper on education has successfully ensured equal access, regardless of gender and disability, by introducing Universal Primary Education (UPE), Universal Secondary Education (USE), and Skilling Uganda. In addition, the Gender in Education Policy of 2010 provides a 40 percent enrolment requirement for females at TVET, and 1.5 affirmative points for girls joining government universities from secondary level has contributed highly to equal access to education. All these ensure that education is accessible and free, regardless of sex and disability. For instance, affirmative action encourages girls to take up STEM subjects in addition to the compulsory offering of STEM subjects at the lower secondary. The school environment and infrastructure often might only accommodate some persons with special education needs. However, most schools have put-up ramps for persons in wheelchairs to ensure that the disabled quickly access facilities in the school. Furthermore, students with disabilities are given special treatment, such as extra time to complete exams during national examinations and not lining up for services.

Uganda has done well on access-related targets since the introduction of UPE in 1997 and USE ten years later (see subsection 2.2.2.2), but this has affected the quality of education (ESSAPR 2016/17). The enormous enrolment increase did not only severely impact the education system and infrastructure, but it also changed the school-going population. Uganda offered poor, uneducated parents from remote areas the opportunity to send their children to school irrespective

of gender (Akampulira, 2016).

ICT is now a subsidiary subject at the upper secondary education level to respond to technology changes. Teachers are being retooled on how to use digital technologies through Continuous Professional Development (CPD) provision of scholarships by the MoES. Also, sometimes through the Student loan scheme for both Government and private students/trainers. In some schools, it is a requirement for teachers to have a laptop/iPad, and all student report cards have been computerised to encourage teachers to use computers. A draft ICT policy/guideline to foster specific aspects of education access has been put in place. The EMIS policy and the Digital Agenda Framework support the ICT policy.

#### 2.2.3.2 Relevant strategic plans

The Education for all global agenda post-2015 envisaged an education that is a public good and a basic right. Education is also viewed as an essential catalyst for the achievement of all other global development goals and the flourishing of human potential and dignity. The quality of education is an integral part of access. It must include quality concerning the education process (including quality curricula and reasonable class sizes), adequate and safe infrastructure, learning and teaching resources, and interventions that mitigate non-school factors impacting teaching and learning.

Uganda's Education Sector Strategic Investment Plan (2017/18-2019/20) is a key policy document that provides a broad framework for understanding education in Uganda. Investment in education has got educational, social, political, and economic returns, reaching most of the population. More schooling is associated with reduced gender disparities and externalities like improved family health, nutrition, and lower fertility. Education participation is viewed as a part of the solution to poverty and a vector in its reduction and increase in quality of life.

The ESSP (2017-2020) policy framework is hinged on the National Resistance Movement (NRM) Manifesto (2016-2021), the NDP-II, the GWP, as well as international education commitments enshrined in the UN-SDGs-specifically SDG4 (the Education 2030 Agenda). The three strategic objectives of the ESSP are to:

i. Achieve equitable access to relevant and quality education and training;
ii. Ensure delivery of relevant and quality education and training; and
iii. Enhance efficiency and effectiveness of education and sports service delivery at all levels.

The targets under SDG4 focused on the ESSP 2017-2020 and are also in line with the recommendations of the International Commission on Financing Global Education Opportunity, also known as the Education Commission, for achieving the SDGs through transformations of; (i) reforming performance of education systems to put results at the centre; (ii) innovation using new and creative approaches to achieve results including harnessing technology and improving partnerships with non-state actors, among others; (iii) inclusion that prioritises access for the most disadvantaged and marginalised as well as early years; and (iv) improved and increased financing through domestic and international financing and effective leadership and accountability systems. Nonetheless, while a key strength of the strategy is to have a liberalised education and sports sector, a major weakness has been the underutilisation of ICTs in the delivery of education services and products. A significant achievement to date has been the revision of the lower secondary (O'Level) curriculum and assessment systems. This was rolled out in January 2020, starting with the first Senior One intake until the old curriculum is phased out. The new development is expected to significantly generate a skilled workforce meeting the demand for labor and skills.

Business Technical Vocational Education and Training (BTVET) Strategic Plan 2011-2020 "Skilling Uganda" is well-positioned. However, a key area for improvement in its implementation is finance and human resource. In addition, the equipment in BTVET institutions being used to train learners is old, yet the industry has evolved. A KII asserts that:

*"Some new public BTVETs are well*

*equipped but lack students due to high entry requirements. This is not the case for private BTVETs which, despite lack of equipment, are oversubscribed because the entry requirements are more relaxed to accommodate talented and interested students regardless of formal education. For instance, mechanics/plumbers can be good regardless of prior qualification."* (KII, 2020)

Institutions such as the Uganda Industrial Research Institute (UIRI) fill a gap as an incubation hub. However, it can only accommodate some would-be innovators and is centralised. Solutions such as setting up subsidiary UIRIs at a regional level are in the pipeline in addition to other private incubation centres.

Uganda has policies and initiatives to empower girls and women to participate in the knowledge society. In addition, there have recently been harmonized efforts to exploit ICT sector opportunities, especially with the COVID-19 pandemic. STEM policies, plans, and strategies, such as the National Science, Technology and Innovation Policy, 2009, the National Science, Technology and Innovation Plan, 2012/2013-2017/2018, and the MoES's National Strategy for Girls Education (NSGE) in Uganda (2014–2019) have attempted to address the technical aspects like infrastructure and science teacher numbers. However, girls' enrolment in STEM, which is mainly a social issue, is often left unaddressed. For instance, the policy interventions have emphasised human resource development and capacity-building with little emphasis on gender-responsive pedagogy.

#### 2.2.3.3 Education management

The education sector is institutionally organized into several entities: Public Institutions, The Private Sector, Civil Society/Non-Government Organizations (NGOs), and Development Partners. Within the Public Sector, since civil service was decentralised in 1998, Primary and Secondary Education is in the hands of the local governments (LGs). The MoES remains responsible for policy formulation, implementation, and maintenance of standards through teacher training, curriculum development, and examinations. The Cabinet Minister of MoES offers leadership with the other three State Ministers responsible for primary education, higher education, and sports. The Ministry has a technical and administrative head, the Permanent Secretary (PS), the Chief Accounting Officer, and the overall supervisor of education and sports. The Ministry has four Directorates headed by Directors. These are (i) Higher Technical Vocational Education and Training; (ii) Basic and Secondary Education; (iii) Directorate of Education Standards, and (iv) Directorate of Individual Training. From these are 13 technical departments headed by Commissioners: (i) Pre-primary and Primary education; (ii) Secondary Education; (iii) Private Schools and Institutions; (iV) BTVET; (V) Higher education; (vi) Special Needs and Inclusive Education; (vii) Guidance and Counselling; (viii) teacher Instructor Education and Training; (ix) Education Planning and Policy Analysis (EPPAD); and (x) Sports; as well as (xi) Finance and Administration; (xiii) HIV/AIDs and (Xiii) gender units. All commissioners report to the Director of Higher, Technical Vocational Education and Training and the Director of Basic and Secondary Education other than that of EPPAD, who reports directly to the Permanent Secretary.

Semi-autonomous institutions that support the function of the MoES include The National Curriculum Development Centre (NCDC); the Uganda National Examinations Board (UNEB); the Uganda Business Technical Examinations Board (UBTEB); the National Council for Higher Education (NCHE); the National Council of Sports (NCS); the Education Service Commission (ESC); National Health Service Training Colleges and public universities, Uganda Nurses and Midwives Examinations Board (UNMEB) and Uganda National Commission for UNESCO (UNATCOM). Of interest, the Ministry of Science, Technology, and Innovation (STI) ensures the development, promotion, application, and integration of Science and Technology into the national development process. The government provides the sector's required policy and regulatory framework through the Uganda National Council of Science and Technology (UNCST).

Some of the key players in the education sector include Parents and students through the Parents Teachers Association, civil society/ NGOs such as-Forum for

African Women Educationalists (FAWE), Uganda National Teachers Union (UNATU), Coalition of Uganda Private School Teachers Association (COUPSITA), Federation of Non-State Education Institutions (FENEI), Orphans Community Based Organisations, World Vision, SNV-Uganda, and Forum for Education NGOs in Uganda (FENU); Religious and Community Foundations such as Church of Uganda, Catholic Church, Uganda Muslim Supreme Council, Seventh Day Adventist (SDA); private sector. For example, financial institutions and firms have contributed to developing the new curriculum and provided scholarships and instructional materials such The Madhavani Foundation and Aga Khan Foundation. Most active Development partners include UNICEF, UNESCO, USAID, AfDB, World Bank, UNDP, UNFPA, Irish Aid, Action Aid, OXFAM, Save the Children, and WHO. These are fully involved in the development process of education policies; contribute towards advocacy, resource mobilisation, infrastructure development, policy support, reform, and implementation. The challenge they bring is duplication of programmes conflicting priorities with the Government, etc.

In sum, reviews show that institutional education systems still have capacity gaps. Specifically, the ability to inspect/monitor education delivery systems for quality outcomes still needs to be improved, and this does not bode well for integrating the 4IR services into education training. The policies, strategies, and plans mentioned above on paper are well articulated but still need more effective delivery for the ready workforce. More importantly, there needs to be more integration of technology-related activities in education policies.

### 2.2.4 Labour market indicators and trends

From Table 9, the working-age population increased to 18.1 million in 2016/17 from 15.4 million in 2012/13. Of these, 9.8 million are youth, and females dominate these. Out of the working-age youth, only 5.9 million are in the labour force, dominated by males (3.1 million) compared to females (2.8 million).

Table 9 also shows a reduction in total unemployment from 10.2 percent in 2012/13 to 9.1 percent in 2016/17. Although national unemployment was reduced, youth unemployment increased to 11.3 percent from 10.8 percent in the same period, mainly driven by an increase in female unemployment from 15.2 percent

**Table 9 Labour market indicators and trends**

| | 2012/13 | | | 2016/17 | | |
|---|---|---|---|---|---|---|
| Indicator | Female | Male | Total | Female | Male | Total |
| Working age population (Youth) [million] | 4.4 | 3.6 | 8.0 | 5.4 | 4.4 | 9.8 |
| Working age population (Total] (million) | 8.1 | 7.3 | 15.4 | 9.6 | 8.5 | 18.1 |
| Labour Force Participation (Youth)[million] | 2.6 | 2.7 | 5.3 | 2.8 | 3.1 | 5.9 |
| Labour Force Participation (Total) [million] | 4.5 | 4.9 | 9.4 | 4.6 | 5.3 | 9.9 |
| Labour Force Participation Rate (Youth) | 59.7 | 73.4 | 65.9 | 52.3 | 69.7 | 60.1 |
| Labour Force Participation Rate (Total) | 56.1 | 67.2 | 61.4 | 47.4 | 62.3 | 54.3 |
| Unemployment Rate (Youth) | 15.2 | 6.5 | 10.8 | 16.5 | 6.5 | 11.3 |
| Unemployment Rate (Total) | 13.2 | 7.3 | 10.2 | 13.2 | 5.6 | 9.1 |
| Employment (Youth) [millions] | 2.2 | 2.5 | 4.7 | 2.4 | 2.9 | 5.2 |
| Employment (Total) [millions] | 3.9 | 4.5 | 8.5 | 4.0 | 5.0 | 9.0 |
| Employment to population ratio (Youth) | 50.6 | 68.6 | 58.8 | 43.7 | 65.1 | 53.3 |
| Employment to population ratio (Total)) | 48.7 | 62.2 | 55.1 | 41.2 | 58.8 | 49.4 |
| Vulnerable Employment (Youth) | 69.2 | 54.5 | 61.1 | 36.7 | 34.5 | 35.6 |
| Vulnerable Employment (Total) | 72.4 | 56.9 | 63.9 | 27.5 | 36.9 | 37.2 |
| Working Poverty (less than $1.90 per day) | | | | | | |
| Productivity growth | | | | | | |

Source: EPRC's calculations based on UNHS surveys

**Table 10 Sectoral Composition of Employment, 2012/13 and 2016/17 (%)**

| | Total employment (%) | |
|---|---|---|
| Economic Activity | 2012/13 | 2016/17 |
| Agriculture, forestry, and fishing | 35.8 | 33.3 |
| Manufacturing | 7.9 | 7.6 |
| Construction | 4.6 | 4.7 |
| Trade | 22.7 | 23.0 |
| Transport and storage | 5.6 | 6.2 |
| Hotels, restaurant eating places | 3.7 | 4.2 |
| Information and communications | 0.4 | 0.5 |
| Financial and Insurance activities | 0.7 | 0.8 |
| Professional, scientific, and technical | 2.3 | 2.2 |
| Administrative and support activities | 1.6 | 1.4 |
| Public administration | 1.0 | 0.7 |
| Education | 4.4 | 4.5 |
| Human health and social work activities | 1.2 | 1.2 |
| Other service activities | 4.2 | 4.9 |
| Activities of household employers | 2.1 | 2.9 |
| Activities of extraterritorial organizations | 0.1 | 0.1 |
| Others | 1.8 | 1.9 |
| **Total** | **100** | **100** |

Source: EPRC's calculations based on UNHS surveys

in 2012/13 to 16.5 percent in 2016/17. The table also shows a significant reduction in youth in vulnerable employment from 61.1 percent in 2012/13 to 35.6 percent in 2016/17. However, more female youth (36.7 percent) are still in vulnerable employment than male youth (34.5 percent).

In Table 10, youth employment in agriculture, forestry, and fishing decreased from 35.8 percent in 2012/13 to 33.3 percent in 2016/17. On the other hand, employment in the service sectors, which include trade, transport and storage, hotels and restaurants, and information and communication, increased significantly in 2016/17.

Table 11 shows that the number of youths in informal employment (Non-agricultural activities) increased to 4.1 million in 2016/17 from 3.9 million in 2012/13 across all age groups. More males (2.3 million) than females (1.8 million) are employed in informal employment in 2016/17.

**Table 11 Informal Employment by Age and Sex (Non-agricultural Activities)**

| | 2012/13 | | | 2016/17 | | |
|---|---|---|---|---|---|---|
| Age | Female | Male | Total | Female | Male | Total |
| 15-18 | 178,248 | 222,071 | 400,320 | 151,429 | 251,821 | 403,250 |
| 19-24 | 543,911 | 498,008 | 1,041,919 | 578,466 | 630,704 | 1,209,171 |
| 25-29 | 562,139 | 526,768 | 1,088,908 | 504,321 | 704,734 | 1,209,055 |
| 30-35 | 676,337 | 707,509 | 1,383,846 | 567,557 | 734,859 | 1,302,415 |
| Total | 1,960,635 | 1,954,357 | 3,914,992 | 1,801,773 | 2,322,118 | 4,123,891 |

Source: EPRC's calculations based on UNHS surveys

**Table 12 Informal Employment by Educational Attainment (Mean Averages)**

| | No formal education | Some primary | Completed primary | Some secondary | Completed secondary | Post-secondary | Not stated | Total |
|---|---|---|---|---|---|---|---|---|
| ***Panel A: 2012/13*** | | | | | | | | |
| Age | | | | | | | | |
| 15-18 | 41.0 | 63.2 | 66.1 | 54.7 | 85.0 | 61.6 | 0.0 | 61.6 |
| 19-24 | 80.1 | 91.0 | 87.4 | 83.2 | 85.2 | 82.7 | 94.8 | 86.9 |
| 25-29 | 89.7 | 95.4 | 91.4 | 95.0 | 85.7 | 89.6 | 79.9 | 92.1 |
| 30-35 | 94.1 | 93.0 | 97.2 | 95.3 | 92.1 | 83.6 | 93.6 | 92.1 |
| **Total** | **85.7** | **86.8** | **88.2** | **85.5** | **87.1** | **85.1** | **85.4** | **86.4** |
| ***Panel B: 2016/17*** | | | | | | | | |
| Age | | | | | | | | |
| 15-18 | 75.2 | 89.5 | 81.7 | 89.3 | 85.9 | 98.4 | | 87.9 |
| 19-24 | 72.7 | 82.3 | 78.6 | 77.2 | 75.6 | 72.3 | | 78.7 |
| 25-29 | 79.9 | 80.3 | 81.8 | 76.4 | 80.1 | 81.7 | | 79.9 |
| 30-35 | 81.7 | 82.9 | 84.5 | 86.1 | 81.5 | 82.1 | | 83.4 |
| **Total** | **78.4** | **84.1** | **81.6** | **81.3** | **79.0** | **79.6** | | **82.0** |

Source: EPRC's calculations based on UNHS surveys

Table 12 highlights that most youth in informal employment still need to complete secondary education. The majority are either primary school dropouts (some primary-84.1 percent), while on average, about 81.4 had either completed primary or had some secondary education attainment.

Table 13 shows that the percentage of youth Not in Employment Education and Training (NEET) reduced significantly from 32.4 percent in 2012/13 to 13.9 percent in 2016/17. This is attributed to several projects implemented by the Government, such as the Skilling Uganda project through BTVET, the youth livelihood programme (YLP), and Uganda Women Entrepreneurship Programme (UWEP). However, it can also be observed that the percentage of NEET females is still higher (18.7 percent) than that of males (8.3 percent).

**Table 13 Mean averages of youth Not in Education, Employment, or Training (NEET)**

| | 2012/13 | | | 2016/17 | | |
|---|---|---|---|---|---|---|
| Age | Female | Male | Total | Female | Male | Total |
| 15-18 | 23.8 | 12.5 | 17.7 | 13.0 | 8.3 | 10.5 |
| 19-24 | 50.9 | 23.8 | 39.4 | 23.6 | 11.7 | 18.4 |
| 25-29 | 50.9 | 23.9 | 38.4 | 21.5 | 7.5 | 15.2 |
| 30-35 | 46.1 | 24.1 | 35.9 | 14.8 | 5.0 | 10.3 |
| Total | 43.3 | 20.3 | 32.4 | 18.7 | 8.3 | 13.9 |

Source: EPRC's calculations based on UNHS surveys

# CHAPTER 3: SUPPLY SIDE PERSPECTIVES

This Chapter analyses the supply-side perspectives of Uganda's education sector. Specifically, subsection 3.1 covers access to secondary and TVET education, while subsection 3.2 discusses the quality and relevance of the two training education systems in the country. Note that the primary data analysis in this Chapter is at the sample level and not representative of the entire education system.

## 3.1 Access to Secondary Education and Skills Training

This subsection reviews access from the perspectives of the five critical levers defined in the analytical framework: curriculum, teacher training, career guidance, physical and digital infrastructure, and life-long learning. The subsection draws on desk reviews and primary data to assess the levers' nature, content, and scope to respond to concerns about access.

### 3.1.1 Curriculum

Following subsection 2.2.3, according to the National Curriculum Development Centre (NCDC), the term curriculum consists of all aspects of learning and teaching in schools, both formal and informal. Curriculum implementation refers to the dissemination of a selected set of learning experiences. It is translating curriculum documents into action in the classroom by the teacher. It involves putting the curriculum into practice. The NCDC issues statements for learning and teaching for all schools to follow. These statements explain how teaching should be done regarding objectives, outcomes, and assessment standards. The National Curriculum Statement (NCS) comprises subject statements, each containing definition, purpose, scope, educational and career links, learning outcomes, assessment standards, subject competence descriptions per grade, content, contexts for attaining the assessment standards, and a generic section on assessment. School teachers use the NCS for guidance on what they must teach.

The curriculum development process systematically organises what will be taught, who will be taught, and how it will be taught. Each component affects and interacts with other components. For example, what will be taught is affected by who is being taught. Methods of how content is taught are affected by who is being taught, their characteristics, and the setting. Therefore, the essential considerations in experiential education are problem identification (what), characteristics and needs of learners (who), learner expected competencies, the relevant content (what is taught), methods to accomplish intended outcomes (how), evaluation strategies for methods, content, and intended outcomes.

The curriculum development and implementation process follow numerous stages, which include:

1. Establishment of a working group with experts from Ministries of Education, and from Universities, Teacher Education institutions, and other stakeholders inclusive of teacher unions, Headteacher associations, individual teachers and headteachers, as well as public/societal representations such as parents, religious groups, labour market, NGOs for revising/ developing the new curriculum and provide its Terms of Reference,
2. Determining and addressing capacity needs to develop and implement the new curriculum, including teacher education,
3. Develop the curriculum framework,
4. Develop scope and sequence for all subject areas showing the seamless development from the primary scope and sequence,
5. Develop detailed curriculum subject statements, principles governing the nature of the curriculum statements (outcome-based behavioural objectives, standard-based and subject-based),
6. Develop a timeline for implementation of the new curriculum, and structures for implementation, particularly mechanisms for initial teacher education and support,
7. Develop programmes of study that capture contract teaching and learning materials,
8. Develop an assessment system document and trial test items, and
9. Implement (roll out the revised or new curriculum).

### Stakeholders in Curriculum Development

Filed survey informants noted that the MoES, through NCDC, is directly responsible for curriculum development. At the same time, the MoGLSD develops and implements policies for employment creation and decent work, including work-based learning e.g., apprenticeship. This reveals that employment creators and skills development institutions must collaborate to develop a curriculum that responds to market needs at the highest decision-making level. Other stakeholders involved in the design and development of curricula include Agencies of the MOES such as the Directorate of Industrial Training (DIT), UNATU (teachers representing each subject), UNEB, UBTEB, Public School teacher Representatives under UNATU, private sector (parents, communities, and beneficiaries). Key informants across education sectors- secondary and vocational- indicated that the curriculum is updated based on key government reforms.

Nonetheless, for BTVET institutions, about 33 percent indicated that it is done after every five years, depending on market needs. Monitoring curricula and implementation is a mandate of the Directorate of Education Standards (DES) in the MoES for secondary schools. At the same time, for BTVET, it is mainly the guest teachers, assessors/examiners that monitor implementation specifically, according to KIIs with the MoES officials.

> *" …Education Service Commission (ESC), MoES's Teacher Instructor Education and Training (TIET) Department work closely with Kyambogo University to moderate Training of Trainers (ToT) institutions. In this regard, the ToT curriculum was developed by Kyambogo University and approved by the National Council for Higher Education (NCHE). The TIET department ensures that what is produced is in line with policy. Even so, the ToT curriculum is outdated as it was last reformed in 1993 and should be revised every five years to respond to market demand."* (Commissioner TIET, 2020)

Reforms in ICT/STEM/TVET for ToTs are ongoing to ensure curriculum alignment to market demands, but this is still being piloted. A quality assurance framework for teacher training institutions is in place and awaiting National implementation.

### 3.1.2 Teacher Training

This subsection provides an overview of the size and scope of the teacher training programs, institutions, and systems offering training in Uganda.

Teacher training is a cross-cutting function that serves the needs of all technical departments of the Ministry of Education and Sports (National Teacher's Policy). The Department is responsible for the training of teachers for primary schools, teachers for secondary schools, tutors for primary teachers' colleges, tutors for health training institutions, instructors for technical training institutions, and lecturers for specialised training institutions, including National Teachers' Colleges, Colleges of Commerce, Technical Colleges, and Agricultural Colleges (MoES). Uganda has at least one teacher training college per four (4) geographical regions to ensure access, but these are concentrated on training primary teachers.

According to the Teachers Initiative in Sub-Saharan Africa (TISSA) report (2013), Teacher training is covered by two government departments: the Teacher Instructor Education and Training Department (TIET) of MoES and Kyambogo University. TIET has three divisions, namely: (i) the Pre-primary and Primary Teacher Education (PTE) division, responsible for the training of ECD and primary teachers; (ii) the Secondary Teacher Education (STE) division, which deals with lower secondary teacher training; and (iii) the Instructor/Tutor Education (ITE) division, responsible for the training of teaching personnel for BTVET institutions. Both pre-service and in-service training are available. Kyambogo University is central in handling PTC, NTC, and some technical ITC programmes' entry requirements, admissions, registration, content, and certification processes.

Primary Teacher Colleges (PTCs) train primary and a small share of pre-primary teachers, National Teacher Colleges (NTCs) train secondary teachers and Primary teachers intending to upgrade also train at NTCs, and Instructor Training Colleges provide BTVET teacher training. The current four institutions are: Kyambogo

University, Abilonino Instructors College, Nakawa Vocational Training Institute, Jinja Vocational Training Institute, and the private institution Kampala Institute of Technical Teacher Education, Mulago Health Tutor College trains tutors for health training schools such as nursing schools and schools for medical laboratory technicians. Universities train their graduates for upper secondary school teacher posts. Primary and secondary teachers who wish to upgrade can also enrol at university in a specific study area, such as measurement and evaluation, guidance and counselling, or curriculum and learning. Following the liberalisation of the university sector, the number of public and private universities offering teaching-related degree courses has increased, the most common options being a three-year degree course (BA, BSc) followed by a one-year postgraduate qualification in teaching, a three-year degree with education, or a two-year degree course at Kyambogo University for qualified teachers already holding a Diploma in Secondary Education.

Whereas initial teacher education programmes offer the basic knowledge and skills required for the profession, teachers can specialise and upgrade later, with several in-service teacher education programmes to choose from. For instance, primary teachers might upgrade from a Grade III Teaching Certificate to a Diploma in Education -Primary, then to a Bachelor in Education or even a Master's degree. Similar options are available to teachers in the other cycles. The preferred mode of upgrade consists of a study leave with pay granted based on the relevance of the subject of specialisation chosen by the teacher (Teacher Report, 2007; National Teacher's Policy, 2019). A key informant elaborated on the issue of in-service and pointed out that:

"Government did not make it compulsory to go for in-service training. However, a policy can be passed, for example, that by 2021, there will be no more Grade III teachers at the primary level, and only Diploma holders will be retained. This has been done before when Grade II teachers were dropped, and many had to upgrade to Grade III. At the secondary level, each district has an In-service Training Education Programme, where teachers are trained on the job, especially on new syllabuses being introduced by the government. Sometimes regional or sub-regional training would be held for Headteachers during holidays to ensure they attend". KII, February 2021

NTCs also offer training for secondary teachers who wish to improve their skills in English and Kiswahili (through the Advanced Certificate of Teaching of the English Language and the Kiswahili Language). Some other initiatives to strengthen teachers' competencies include the Certificate of Proficiency in Teaching (C-PT), and the Certificate in Teacher Education Proficiency (C-TEP), two in-service training programmes designed to equip teachers and tutors with enhanced pedagogical skills. Likewise, the Secondary Science and Mathematics Teachers (SESEMAT) programme provides science and math teachers training. Continuous Professional Development (CPD) programmes train all teachers in various areas identified in consultation with head teachers and teachers. MoES often works with the cascade approach to CPD, intending those tutors pass on skills and competencies to teacher trainees. NGOs and education funding agencies also play a role in CPD, especially by supporting the entry/implementation of innovations or interventions through the teacher's college. Key informants noted that no unique programmes train teachers in ICT-related activities. Teachers who teach ICT offered such courses during their training programmes (diploma or degree) or privately attended training courses outside their teaching qualifications to add to their knowledge space.

Evidence from the field survey on Training of Trainers' perceptions/rating of ICT/STEM/TVET delivery systems are mixed. A Likert scale was used to rate the Training of Trainers (ToT) perceptions on general infrastructure regarding ICT/STEM/TEVT's existence of specific indicators on policy, access, infrastructure, skilling, and inclusiveness. The higher the score, the more in agreement the trainers are with the indicators as evaluative criteria. A five-point scale was used to measure the importance of these indicators so that a mean score could be calculated to determine trainers' knowledge and acceptance of the indicator. The results are presented in Table 14 below. From five points scale, the interval range was calculated as 5-1/5 = 0.8. Hence, the importance of the factors was categorised and considered as follows: "4.21 – 5.00: Strongly agree"; "3.41 – 4.20: Agree"; 2.61 –3.40: Neutral";

"1.81 –2.60: Disagree"; and 1.00 – 1.80: Strongly disagree".

Table 14 analysis from mean scores shows that trainers were neutral on several issues around ICT/STEM/TVET that is: on clarity and relevance of policies and their depth to allow for teachers/instructors to acquire relevant knowledge and skills for effective instruction; teacher curriculum allowed for competence in literacy, numeracy, and soft skills, including gender as preconditions for success; the planning of the curricula meets learning needs of female, male and disabled teachers and instructors. Further, physical infrastructure is appropriate for all female, male, and disabled teachers; there is in place an effective career modelling/ counselling system is in place for teachers and instructors; and a deliberate strategy to encourage female teachers to take on ICT/STEM/TVET subjects. There was also a disagreement on the issue of institutions having access to appropriate and adequate TVET equipment and teaching material, while for ICT/STEM they were neutral.

While trainers were neutral on the issue of no mismatch

**Table 14 Training of Trainers perceptions on ICT/STEM/TVET issues**

| | ICT | | | | STEM | | | | TVET | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Indicator | Obs. | Mean | Std. Dev. | Rate | Obs | Mean | Std. Dev. | Rate | Obs | Mean | Std. Dev. | Rate |
| Policies are clear and relevant | 14 | 3.357 | 0.842 | Neutral | 13 | 3.077 | 1.382 | Neutral | 8 | 3.375 | 0.518 | Neutral |
| No mismatch between the planned and the delivered curriculum | 14 | 2.857 | 1.027 | Neutral | 13 | 2.462 | 1.050 | Disagree | 8 | 2.625 | 1.061 | Neutral |
| Teacher curriculum allows for competence in literacy, numeracy, and soft skills | 14 | 3.214 | 0.802 | Neutral | 13 | 3.308 | 1.032 | Neutral | 8 | 3.000 | 0.756 | Neutral |
| Institutions have access to relevant and adequate equipment and teaching material | 14 | 2.929 | 1.072 | Neutral | 13 | 2.692 | 1.251 | Neutral | 8 | 2.500 | 1.309 | Disagree |
| Assessment is inclusive and practical | 12 | 3.333 | 1.073 | Neutral | 13 | 3.615 | 1.121 | Agree | 8 | 3.875 | 0.641 | Agree |
| Trainers are competent in designing and implement curriculum | 14 | 3.357 | 0.929 | Neutral | 13 | 3.462 | 1.127 | Agree | 8 | 3.625 | 0.744 | Agree |
| Ongoing professional training for trainers | 14 | 3.429 | 1.158 | Agree | 13 | 3.154 | 1.345 | Neutral | 8 | 2.375 | 1.188 | Disagree |
| Comprehensive stakeholder engagement in curriculum development | 14 | 2.643 | 1.082 | Neutral | 13 | 2.538 | 1.050 | Disagree | 8 | 2.625 | 1.302 | Neutral |
| Curricula meet learning needs and are inclusive | 14 | 3.143 | 1.027 | Neutral | 13 | 2.692 | 1.109 | Neutral | 8 | 2.750 | 1.165 | Neutral |
| Physical infrastructure is inclusive | 14 | 3.143 | 1.167 | Neutral | 13 | 3.077 | 1.382 | Neutral | 8 | 2.625 | 1.302 | Neutral |
| An effective career counselling system exists | 14 | 3.286 | 1.069 | Neutral | 13 | 3.077 | 1.115 | Neutral | 8 | 2.875 | 1.126 | Neutral |
| Strategy to encourage female teachers to take on subjects exist | 14 | 2.643 | 1.008 | Neutral | 13 | 2.769 | 1.235 | Neutral | 8 | 2.750 | 1.165 | Neutral |

Note: 1) where there is a space "…." Implies ICT/STEM/TVET

Source: Field survey respondents, February-March, 2020

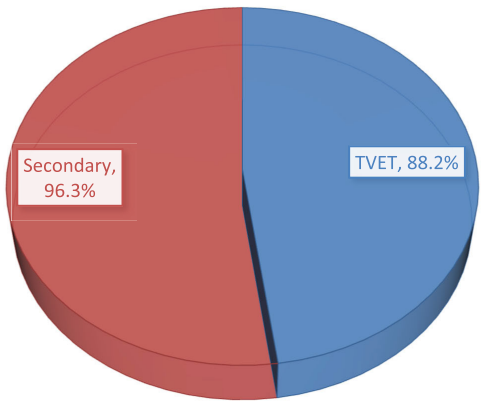
between the planned and the delivered curriculum for ICT and TVET, trainers disagreed on the same for the STEM component. There was an agreement that the assessment was inclusive and paid attention to the practice and practical delivery of subjects at STEM and TVET, but they remained neutral on the issue of ICT. Also, there needed to be comprehensive stakeholder engagement for a better understanding of the curriculum for STEM.

### 3.1.3 Career Guidance

The Ministry of Education and Sports (MoES) established a policy in 1968 on career guidance and counselling to streamline school career guidance (MOE, 2004). The Department of Guidance and Counselling became autonomous in 2008 and is instrumental in spearheading school career guidance and counselling programs (MOE, 2010). The MoES requires that all secondary schools have dedicated time throughout the year to spend on career guidance and have a full-time school counsellor. The aim is that students have a greater awareness of the world into which they are graduating and how they can fully participate in the workforce, given their skills. Career decision-making is perceived to be a key output of career guidance and counselling among students at all levels of education with support from teachers, counsellors, professionals, the private sector, old students, and other government officials (Otwine et al., 2018). The government of Uganda has invested in career guidance and counselling at all levels of education through infrastructure development, human resource, capacity building, publication and distribution of career guidance materials, and monitoring and evaluation of career guidance and counselling activities in the country.

The Department of counselling and career guidance in the MoES is mandated to ensure that all learners in institutions have access to some form of guidance. In this regard, responses from stakeholders indicated that indeed career guidance is embedded in the training systems (Figure 4); however, access to counsellors is less than 50 percent for TVETs and more than 50 percent for secondary schools. For the latter, this is because most secondary schools improvise using senior women and male teachers to fill the gap. In addition, board members and visiting counsellors who are not on full-time payroll are utilised. These plus industrial practitioners are often invited to provide career guidance to students, for example, during orientation week, at end-of-year parties, and during school clubs (debate, environment, sports, etc.). It was indicated that once invited, they attend as and when the institutions call upon them. There is even a career guidance day in affluent secondary schools (public or private) and formal BTVET institutions. Over 88 percent of respondents indicated that mentoring is often undertaken by old girls and boys who are invited back to the training facilities to discuss real-life experiences and expectations with the learners. More so, old students who have performed well before are invited to talk and encourage other students.

**Figure 4** Is career guidance is embedded within the training system? %




Source: Field survey respondents, February-March, 2020

The average student-counsellor ratio is high. For instance, in secondary schools is about 75:1 (Table 15). Again, this is because counsellors are only employed on a part-time basis. For institutions that only partially have a counsellor, using teachers already on the payroll fills this gap. In some institutions, students are attached to a foster parent (each foster parent oversees 50 students,) and these give parental guidance, which includes career guidance and psychosocial support. Sometimes, the dean of studies and the patrons guide students.

**Table 15** Average student-counsellor ratio, %

| | <5:1 | 5<15:1 | 15<35:1 | 35<50:1 | 50<75:1 | >75:1 | Other Specify | Total |
|---|---|---|---|---|---|---|---|---|
| ***Panel A: Secondary*** | | | | | | | | |
| Lower Secondary | 0.0 | 2.5 | 5.0 | 5.0 | 7.5 | 20.0 | 10.0 | 50.0 |
| Upper Secondary | 2.5 | 0.0 | 10.0 | 7.5 | 10.0 | 12.5 | 7.5 | 50.0 |
| Total | 2.5 | 2.5 | 15.0 | 12.5 | 17.5 | 32.5 | 17.5 | 100 |
| ***Panel B: TVET*** | | | | | | | | |
| Formal TVET | | | 9.7 | 6.5 | 6.5 | 3.2 | 9.7 | 35.5 |
| Non-Formal TVET | | | 0.0 | 0.0 | 0.0 | 3.2 | 6.5 | 9.7 |
| Informal TVET | | | 0.0 | 0.0 | 0.0 | 0.0 | 54.8 | 54.8 |
| Total | | | 9.7 | 6.5 | 6.5 | 6.5 | 71.0 | 100 |

Source: Field survey respondents, February-March, 2020

About 50 percent of the respondents indicated that counsellors use their own experiences (opinions) to acquire information on the job market, while 20 percent use structured seminars/sessions.

In sum, evidence from the survey reveals that the education sector generally faces many challenges which have significantly crippled the development of career guidance and counselling in schools, such as the lack of trained counsellors by most schools, capacity building in the provision of career guidance, inadequate training manuals, lack of career information and standardised assessment tools, high student, and career masters/ counsellor ratio. Otwine et al. (2018) noted that the quality of career guidance and counselling is wanting, which is exacerbated by overconcentration on curricular activities, role conflict on the part of career masters, and poor funding.

### 3.1.4 Physical and Digital Infrastructure

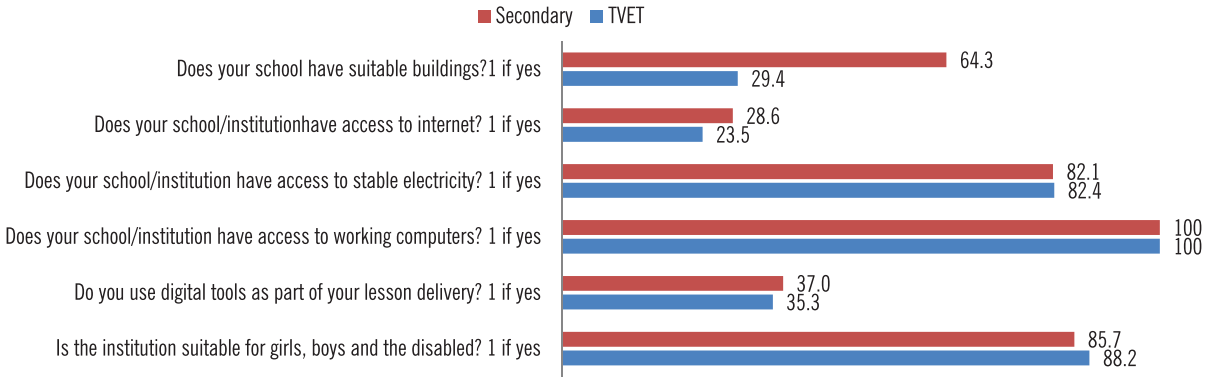
The MOES is developing a Digital Agenda strategy to mitigate E-learning challenges. Evidence from field survey findings points to the fact that learning processes are invariably affected by the quality and quantity of physical and material infrastructure and the school environment. When a learner needs a textbook to read, in a congested and dirty classroom and must go to poorly maintained toilet facilities, the morale for attending class and learning can be recovered. Given the above, Government commits reasonable resources to construct classroom blocks, teacher houses, computer and other STEM laboratories, toilet facilities and buying instructional materials (Education Abstract, 2017).

Ensuring the proximity of social services, including education, is well articulated in the decentralisation policy. In this policy, primary schools are to be located within 5km in a parish, at least one secondary school per sub-county, and at least one vocational institution per region. Nonetheless, Kampala Capital City and most other urban cities have a higher concentration of TVETs hence not redistributive. But many are private and profit driven. Key informants from MoES findings noted that:

> *" Less than 50 percent of training institutions have access to computers."* KII, 2020

However, school-level administrators at both secondary and TVET noted that they all had access to working on computers as the government has ensured that an ICT laboratory and server room is set up in each secondary school and formal TVET institutions. While there are computers in learning institutions, the use of digital tools in lesson delivery remains less than 40 percent, probably due to low internet access (less than 30 percent) (Figure 5). Most learning institutions had good access to electricity (over 80 percent) however, power shortages were rampant, resulting in the use of generators as a solution. Even when the institutions, especially the TVETs had inadequate buildings (probably from the non-formal and informal TVETs), these were suitable for all irrespective of gender or disability (Figure 5).

**Figure 5** Availability of critical infrastructure by institutional level, %




Source: Field survey respondents, February-March, 2020

**Table 16** Average computer/student ratio, %

| | <5:1 | 5<15:1 | 15<35:1 | 35<50:1 | 50<75:1 | >75:1 | Other Specify | Total |
|---|---|---|---|---|---|---|---|---|
| a) Secondary level | | | | | | | | |
| Lower Secondary | 6.3 | 6.3 | 12.5 | 4.2 | 4.2 | 4.2 | 12.5 | 50.0 |
| Upper Secondary | 20.8 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 8.3 | 50.0 |
| *Total* | *27.1* | *10.4* | *16.7* | *8.3* | *8.3* | *8.3* | *20.8* | *100* |
| b) Vocational level | | | | | | | | |
| Formal BTVET | 23.5 | 5.9 | 17.6 | 11.8 | 5.9 | 17.6 | 5.9 | 88.2 |
| Non-formal BTVET | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 11.8 | 0.0 | 11.8 |
| *Total* | *23.5* | *5.9* | *17.6* | *11.8* | *5.9* | *29.4* | *5.9* | *100* |

Source: Field survey respondents, February-March, 2020

The average computer-student ratio varies across schools; however, many respondents indicate that its <5:1 and <75:1 for secondary and TVET institutions, respectively (Table 16). The Korean Government has also provided computers to some TVETs to narrow the computer-student ratio.

### 3.1.5 COVID-19 effects on access to education and the role of digital infrastructure

The significant impact of COVID-19 on education was the indefinite closure of learning institutions. Box 1 indicates overwhelming evidence that the longer children are out of school, the greater the risks of violence, rape, child marriages, child labour, prostitution, and other life-threatening activities.

## Box 1: Impact of COVID-19 on the education system

As the COVID-19 pandemic snowballs, the day-to-day reality has created a nightmarish situation in developed and developing economies. The impact of the pandemic is taking a toll on communities already vulnerable or marginalised – the poor, the rural, the illiterate, women, and girls. Furthermore, similarly to the Ebola epidemic in West Africa, education has been one of the first causalities. His Excellency the President of the Republic of Uganda, on Wednesday, 18th March 2020, addressed the nation on coronavirus. In his address, he noted that zero registered cases in Uganda at the time, notwithstanding the virus's volatility, and demanded that we take preventive measures to avoid acquiring and spreading it.

To this effect, all Primary and Secondary Schools, as well as all Universities and Tertiary Institutions, were to close by mid-day on 20th March 2020. According to the Ministry of Education, more than 73,000 learning institutions closed; consequently, 15 million and 600,000 refugee learners are out of school. Without a vaccine for the virus, the end of social distancing measures is uncertain, affecting the reopening of schools and could lead to a disruptive stop-go period during recovery, with schools reopening and closing. With children out of school indefinitely, COVID-19 threatens to reverse years of educational progress in Uganda, where daunting challenges remain, and the country's education system is still confronting three key challenges: access to, quality of, and relevance of.

There is an urgent need to provide visionary solutions to mitigate the looming social and economic challenges. Exacerbated socio-economic hardships imposed on households by the health crisis will have ripple effects as families consider the financial and opportunity cost of education. Dwindling incomes due to prolonged lockdown could mean that many children will never return to the classroom. There is overwhelming evidence that the longer children are out of school, the greater the risk of violence, rape, child marriages, child labour, prostitution, and other life-threatening, often criminal activities.

Source: Tumwesigye, 2020

In November 2020, the Government of Uganda reopened schools for candidate classes after 7-months of closure due to the COVID-19 pandemic. These included Primary 7; in Secondary, it was Form 4 and 6. In addition, all students in their final year of training in tertiary institutions, plus all medical and nursing schools, were reopened. Nonetheless, COVID-19 brought a digital revolution in the use of technologies to foster continued learning in all education sectors in Uganda (see subsection 3.1.4 on the effects of the pandemic on digital infrastructure).

Since its outbreak, the COVID-19 Pandemic has changed the landscape of uptake of physical and digital technologies, especially in the education sector. In recognition of the pandemic's impact on Uganda's education system, the MoES constituted a sector Response Task Force to strengthen the education sector preparedness and generate response measures to mitigate the impact of outbreak's COVID-19 on Uganda's education system. Consequently, the Sector developed a Preparedness and Response plan focusing on two main areas: Ensuring continuity of learning while learners are at home and preparing for resumption and managing to school once the COVID-19 lockdown is lifted.

To facilitate continuity of learning for all learners, especially in Primary and Secondary schools, the MoES worked with NCDC to produce harmonised learning packages/materials for use in the continuity of learning while children are at home. These are being delivered on Radios, Televisions, and self-study print materials.

Learning technologies such as print media, radio, television, video, audio, telephone, computers, and the internet offers an answer for continued learning amidst such crises and opportunities for overcoming geographical access and rigidities of the traditional

education system. However, with over 80 percent of Uganda's school-age children and youth living in rural areas needing more essential resources and supporting infrastructure, accessing learning technologies is challenging and widening the digital education gap. Box 2 illustrates the measure by the government to harness the use of digital technologies during the COVID-19 pandemic.

## Box 2: Effectiveness of digital measures taken to ensure continuous learning during COVID-19

The uptake of digital technologies and their effects on learning are analysed by modality.

- **Radios**: According to the Uganda Communication Commission (UCC) Broadcasting and telecommunication industry Q2 report, 2018, 292 licensed FM radio stations spread nationwide. Listenership figures also show that radio is the most popular medium in Uganda than television due to poverty and electricity. Radio can enable the continuation of education through live and recorded broadcast sessions for many learners. However, subjects that require visual illustration, especially science subjects, are challenging to broadcast. Radio-broadcasted education also limits the participation of disabled learners, especially people who are deaf or hard of hearing.
- **Television:** According to UCC, 39 operational television stations and seven pay-tv service providers exist. Despite the growth in television stations and service providers, TV access still needs to improve and varies significantly across regions. Although television programming is being used to teach students, it is inequitable, with huge disparities between the rich and the poor.
- **Phones**: Following the closure of schools, teachers have extensively used mobile phone applications like WhatsApp, Facebook, and google hangouts to continue engaging students by forwarding lesson packages to parents. Phones are also used to listen to the radio and call or text during radio educational programmes by learners to ask questions and receive lesson content and individual feedback. However, mobile phone use is limited by the cost and affordability of mobile internet, access to electricity for charging, and lack of digital literacy.
- **Internet**: The internet and the web help overcome the barriers of time and space in teaching and learning. However, with low internet coverage, high costs of access, unreliable and poor connections and electricity services, and inaccessibility to appropriate software, a technology-illiterate user group in Uganda means a few individuals can afford this learning mode. Amidst these constraints, e-learning has been recommended by the Ministry of Education and Sports for tertiary institutions.

*Source: Authors' compilation from Tumwesigye, 2020*

In sum, while measures in Box 2 are supposed to be parallel for all children, those from well-to-do families have access to all these resources, and their parents have also put in the necessary support system to ensure their children study. On the other hand, children from poorer homes have many restraints, from a lack of access to various learning materials to a lack of space and support from parents who do not value education or are illiterate. To- date, inequality in education access during the pandemic has been observed, which has been further exacerbated with the use of digital platforms to continue teaching. A key informant (2021) said that:

> *"University has continued teaching the first-year and second-year continuing students online. However, I have not attended a single class since this happened. This is because my phone is not compliant with internet use, nor do I have the capacity to purchase the internet bundles/data required to attend class. I have missed out on exams and tests, and I do not*

*know what I will do."* KII, University student, 2021

## 3.2 Quality and Relevance of Supply-Side Levers

In this subsection, the arguments are mainly hinged on field survey findings on whether the curriculum (extensively discussed under section 2.2.2) developed and delivery mechanisms, teacher training modalities, and career guidance and counselling approaches are quality and relevant to the target groups. More attention is drawn to secondary and tertiary education levels (TVET/BTVET and university).

### 3.2.1 Curriculum

Good quality secondary education is a prerequisite for the successful integration of young people into the modern economy and for the ability of a country to benefit from the ICT and knowledge revolution and compete successfully in the new globalised knowledge-based economy (World Bank, 2002). The quality of education is determined by the quality of its curriculum, and the welfare of the curriculum depends on adequate funding for retooling teachers, provision of teaching resources and facilities, and regular monitoring.

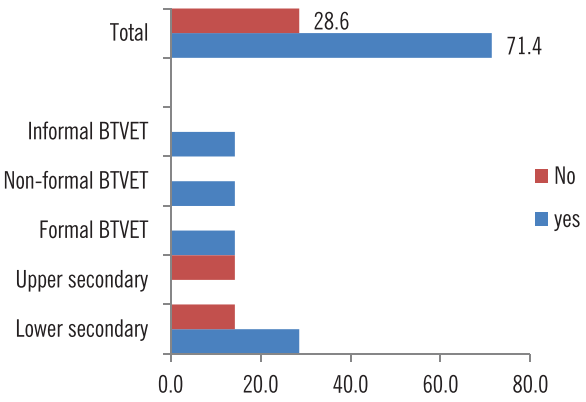
According to the BTVET strategic plan 2011-2020, the BTVET current curriculum still needs to produce the appropriately skilled workforce that Uganda needs to increase incomes and employment and to compete in the East African and international markets. Indeed, less than 40 percent of large and medium firms regard courses offered by BTVET institutions as relevant. There needs to be more influence and engagement of employers in the BTVET system. The formal BTVET supply provider system is rigid, is not informed by a systematic labour market information system, and thus does not adequately respond to market needs.

Field survey findings revealed that 71.4 percent of the stakeholders indicated that at the vocational level, irrespective of the nature of BTVET, the current curriculum is well aligned with the current and future job market needs. In contrast, at the secondary level, the alignment is now observed at the lower secondary, which has yet to transcend to the upper level (Figure 6). The secondary level curriculum, according to respondents, is still exam-oriented. It creates job seekers. One must first undergo further practical training before joining the job market.

In this regard, the lower-level secondary curriculum was revised based on skills gaps in the market to enable students to acquire skills that will ensure employment (see section 2.2.2). According to the MoGLSD:

*"... there is now a clear connection between the curriculum and work environment, especially for BTVETs and the new curriculum rolled out at lower secondary level."* (KIIs, 2020).

**Figure 6 Alignment of the current curriculum to the current and future job market**




Source: Field survey respondents, February-March, 2020

### Curriculum delivery

For most learning institutions (Secondary and BTVET), about 85 percent indicated that much of the curriculum was being taught, and they could get through the syllabi within the prescribed time. They argued that this was the case because:

*"...teacher's lesson schemes were prepared based on the curriculum, and they created extra classes where necessary. Some schools cover the syllabi in advance to create more time for students to prepare for exams. While for those who were unable, it was because the syllabus was overloaded with too much content for the school's human resource capacity to run it. Good planning made it easy for highly*

*practical-oriented institutions, such as BTVETs, to complete the syllabus. Furthermore, while soft skills such as teamwork and problem-solving were being taught as part of the formal BTVET curriculum, this was not the same for the secondary level until the reforms took place for the lower secondary.*

*Nonetheless, some secondary schools teach soft skills, especially the affluent ones. However, these are never examined. Soft skills like communication and programming were identified as necessary for inclusion in the curriculum."* Summary of learning institutions KIIs, 2020

Regarding contact hours per week dedicated to ICT literacy, STEM, and non-STEM subjects, these differed at various levels other than ICT, which was the same. Findings from secondary school administrators show that most activities take 5-10 hours per week irrespective of secondary level and are mostly spent on literacy. At the same time, STEM subjects tend to take 11-20 hours per week, and upper-level non-STEM subjects take about 21-21-30 hours of contact per week (Table 17).

**Table 17 Contact hours per week dedicated to subjects by secondary level type, %**

| | Hours | | | |
|---|---|---|---|---|
| Subjects by level type | 5-10 | 11-20 | 21-30 | Total |
| *a) Lower Secondary* | | | | |
| ICT Literacy | 25.9 | 0.0 | 0.0 | 25.9 |
| STEM | 14.8 | 24.1 | 0.0 | 38.9 |
| Non-STEM | 14.8 | 18.5 | 1.9 | 35.2 |
| **Total** | **55.6** | **42.6** | **1.9** | **100** |
| *b) Upper Secondary* | | | | |
| ICT Literacy | 31.6 | 0.0 | 0.0 | 31.6 |
| STEM | 14.0 | 8.8 | 12.3 | 35.1 |
| Non-STEM | 14.0 | 1.8 | 17.5 | 33.3 |
| **Total** | **59.6** | **10.5** | **29.8** | **100** |

Source: Field survey respondents, February-March, 2020

Regarding practical and theory sessions, 34.6 percent of the respondents indicated that at least 5-10 hours were dedicated to practical sessions per week for formal BTVET institutions. In comparison, 42.9 percent indicated that the same hours were also dedicated to theory (Table 18). Generally, equal time is dedicated between practical and theory sessions at the formal BTVET level, while non-formal TVET spends more time in practice than theory. Most respondents needed clarification on how informal TVET institutions spend their practical and theory sessions.

**Table 18 Contact hours dedicated to practical vs theory sessions by level type, %**

| | Contact hours | | | | |
|---|---|---|---|---|---|
| Session by level type | 5-10 | 11-20 | 21-30 | Not sure | Total |
| **Panel A: Secondary** | | | | | |
| *a) Practical* | | | | | |
| *Lower Secondary* | 19.0 | 7.1 | 0.0 | 26.2 | 52.4 |
| *Upper Secondary* | 21.4 | 2.4 | 2.4 | 21.4 | 47.6 |
| Total | 40.5 | 9.5 | 2.4 | 47.6 | 100 |
| *b) Theory* | | | | | |
| *Lower Secondary* | 20.5 | 2.3 | 4.5 | 25.0 | 52.3 |
| *Upper Secondary* | 20.5 | 4.5 | 2.3 | 20.5 | 47.7 |
| Total | 40.9 | 6.8 | 6.8 | 45.5 | 100 |
| **Panel B: TVET** | | | | | |
| *a) Practical* | | | | | |
| Formal TVET | 34.6 | 11.5 | 19.2 | 0.0 | 65.4 |
| Non-Formal TVET | 7.7 | 3.8 | 3.8 | 7.7 | 23.1 |
| Informal TVET | 0.0 | 0.0 | 0.0 | 11.5 | 11.5 |
| Total | 42.3 | 15.4 | 23.1 | 19.2 | 100 |
| *b) Theory* | | | | | |
| Formal TVET | 42.9 | 14.3 | 9.5 | 0.0 | 66.7 |
| Non-Formal TVET | 0.0 | 4.8 | 4.8 | 9.5 | 19 |
| Informal TVET | 0.0 | 0.0 | 0.0 | 14.3 | 14.3 |
| Total | 42.9 | 19.0 | 14.3 | 23.8 | 100 |

Source: Field survey respondents, February-March, 2020

**Table 19 When and method of assessing learners by sector level**

| Education sector | When | Method(s) | Qualification |
|---|---|---|---|
| Lower Secondary | BOT, MOT, EOT, after four years | Tests, Exams, UNEB exams | UCE |
| Upper Secondary | BOT, MOT, EOT, after two years | Tests, Exams, UNEB exams | UACE |
| Formal BTVET | BOT, MOT, EOT & Continuous assessment depending. on competence levels | DIT exams, UBTEB exams, coursework | DIT certificate, UBTEB certificate |
| Non-formal BTVET | Anytime not determined | on job | Introductory letters |

Notes: Beginning of Term (BOT); Middle of Term (MOT), End of Term (EOT); Directorate of Industrial Training (DIT); Uganda Business and Technical Examinations Board (UBTEB); Uganda National Examinations Board (UNEB), Uganda Certificate of Education (UCE); Uganda Advanced Certificate of Education (UACE).

Source: Field survey respondents, February-March, 2020

Using digital tools in lesson delivery, such as PPTs and video/video projections, is rare in most institutions other than affluent secondary schools. When and how the assessment of learners is carried out is summarised in Table 19, as this depends on each education subsector.

The BTVET and secondary levels indicated that they dedicated 40min to 1 hour per day, twice a week, to building foundational and life skills. Some of the foundational skills are given through debate sessions (which provide avenues to harness communication skills), behavioural change, school clubs, games, Music, Dance, and Drama (MDD), leaders (prefects), etc. Note that some activities were being undertaken daily after class sessions end for the day.

COVID-19 has impacted curriculum delivery in Uganda, especially regarding the time and sitting of exams to progress to the next level. The effects have been felt in the entire education system from pre-primary to tertiary level.

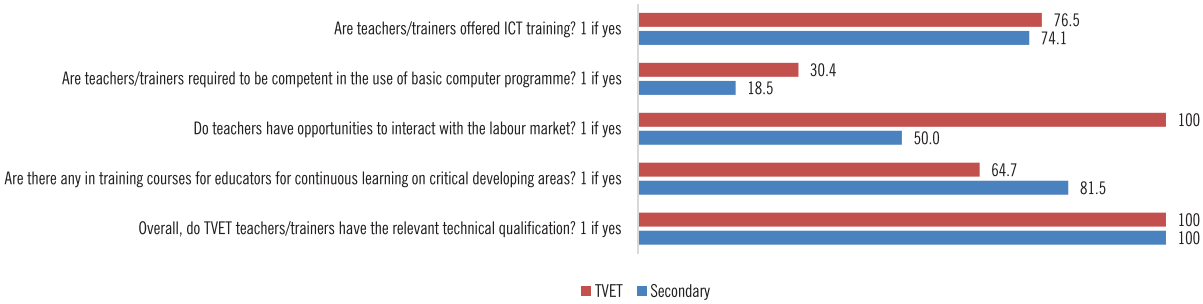
### 3.2.3 Teacher training

According to the State of Education in Africa Report (2015), no country can have a better quality of education than the quality of its teachers, as teachers are moulders of tomorrow's generation that should be prepared to live in a complex global world. Teachers can have life-transforming effects on learners that are difficult to assess and value. Teachers can enrich a young generation of children so that the future is a safe, secure, and great place to live for every person in society.

The NPA (2018) report pointed out that to enhance the quality of teacher education, the MoES revised the requirements for admission into the primary teacher training college. Hitherto, besides the requirement to have attained an O-level certificate, it is also a requirement to have obtained a credit in Mathematics and English and a pass in any two science subjects at O-level. Also, the TIET department increased the qualification requirements for one to teach in a Primary Teachers College (PTC). Currently, the minimum qualification for a tutor is a Bachelor's Degree in a relevant field (Scheme of Service, 2013). To improve the teaching of science at PTCs, the Secondary Science and Mathematics Teachers (SESEMAT) programme, which was initially created to support secondary school science teachers, was later extended to support science and maths tutors/lecturers in PTCs and NTCs, (MoES, 2014). This programme promotes learner-centred teaching methods, enabling teacher trainees to adopt such methods and teach mathematics and science in primary and secondary schools.

The Curriculum Review Report (2016) asserts that teacher Education in Uganda has suffered from failing to recognise and acknowledge that the quality chain in education begins and ends with the teacher educators. The quality of the teacher educators impacts the quality of the teachers, which in turn impacts the quality of the learners who graduate from the schools (ibid). The report emphasises that poor quality Teacher Education

**Figure 7** Teacher capabilities and quality, %




Source: Field survey respondents, February-March, 2020

is among the most critical factors influencing the quality in/of the educational process. The requirements for eligibility to join the teaching profession, whether at the Teachers College or the University, need to be sufficiently firm to attract only those with a calling to the teaching profession. There are also recruitment, incentives, and professional progression issues, which have yet to receive much attention. The Ministry of Education and Sports has made some strides to improve the quality of education by upgrading the status of the teaching profession and improving the terms and conditions of service of teachers through teacher training.

Requisite skills in teachers and trainers are essential in motivating learners and delivering the proper labour force that industries demand. The findings of this study reveal that overall, trainers have the relevant technical qualifications (for those under Public Service, they are only recruited to teach in formal education when they meet the criteria/have the necessary qualifications to either be a primary (hold Grade III certificate as a minimum), secondary (Diploma or degree holders) or tertiary teacher/instructor (holds a diploma or degree and above). However, continuous retooling, especially for BTVET trainers, needs to be stepped up as the quality of teachers still needs to be improved, and training institutions need to budget for the capacity-building initiatives of its teachers. Figure 7, however, highlights that 64.7 percent of the respondents indicated continuous training for educators in TVET institutions and interaction with the labour market compared to their secondary school counterparts. Some of the trainers are proprietors and people in business, and women. It was also noted that competence requirements for trainers using basic computer programmes such as PPT, Word, and Excel were very low, much lower in TVET trainers compared to secondary teachers (18.5 percent vs 30.4 percent respectively-Figure 7). Competence is not an area that is assessed or monitored for adherence or a requirement, but trainers can be trained on the job if interested.

From Table 20, about 80 percent and 54.5 percent of the respondents said that upskilling of trainers at secondary and TVET levels, respectively, was done at least once a year (during holidays). To confirm what was noted under access, respondents intimated that now, opportunities to upskill by the government are through SESEMAT workshops funded by the government for science teachers to upskill every year, partnerships with other agencies like the Korean government where scholarships are granted, free training for teachers and sometimes paid leave with financial support when one goes for retooling. There are also refresher pieces of training organised for teachers, especially when there is an update or change in curriculum, and through ATL and STAR (School Teacher Innovations for Results), which are all government upskilling programmes for trainers.

**Table 20 Duration of upskilling teachers/trainers, %**

| | At least once a year | Every 2-5 years | As and when curricula are updated | Do not know | Total |
|---|---|---|---|---|---|
| **Panel A: Secondary** | | | | | |
| Lower Secondary | 42.0 | 8.0 | 2.0 | 0.0 | 52.0 |
| Upper Secondary | 38.0 | 8.0 | 2.0 | 0.0 | 48.0 |
| Total | 80.0 | 16.0 | 4.0 | 0.0 | 100 |
| **Panel B: TVET** | | | | | |
| Formal TVET | 50.0 | 4.5 | 9.1 | 4.5 | 68.2 |
| Non-Formal TVET | 4.5 | 9.1 | 4.5 | 4.5 | 22.7 |
| Informal TVET | 0.0 | 0.0 | 0.0 | 9.1 | 9.1 |
| Total | 54.5 | 13.6 | 13.6 | 18.2 | 100 |

Source: Field survey respondents, February-March, 2020

### 3.2.4 Career Guidance

In resonance with what was discussed in subsection 3.1.3 and aspects of policy implementation on career guidance and counselling, the lack of structures and capacity to implement career guidance programmes in school affects its quality. Without a doubt, as mentioned by the respondents, it was relevant. However, it needs to be more streamlined in many institutional programmes. Nonetheless, two significant challenges were highlighted during the survey as affecting career guidance initiatives. These were social-cultural norms and attitudes about choices and the future world of work.

Specifically on social-cultural norms, trainers indicated that learners find it hard to link academics with daily life and accept indigenous knowledge as part of learning. Socio-cultural values provide better opportunities to male than female learners. Traditional stereotypes assign certain occupations to males and females. In adolescence, cultural beliefs are that boys are superior, girls are shy to express themselves, and girls feel inferior doing specific courses.

### 3.2.5 Physical and Digital Infrastructure

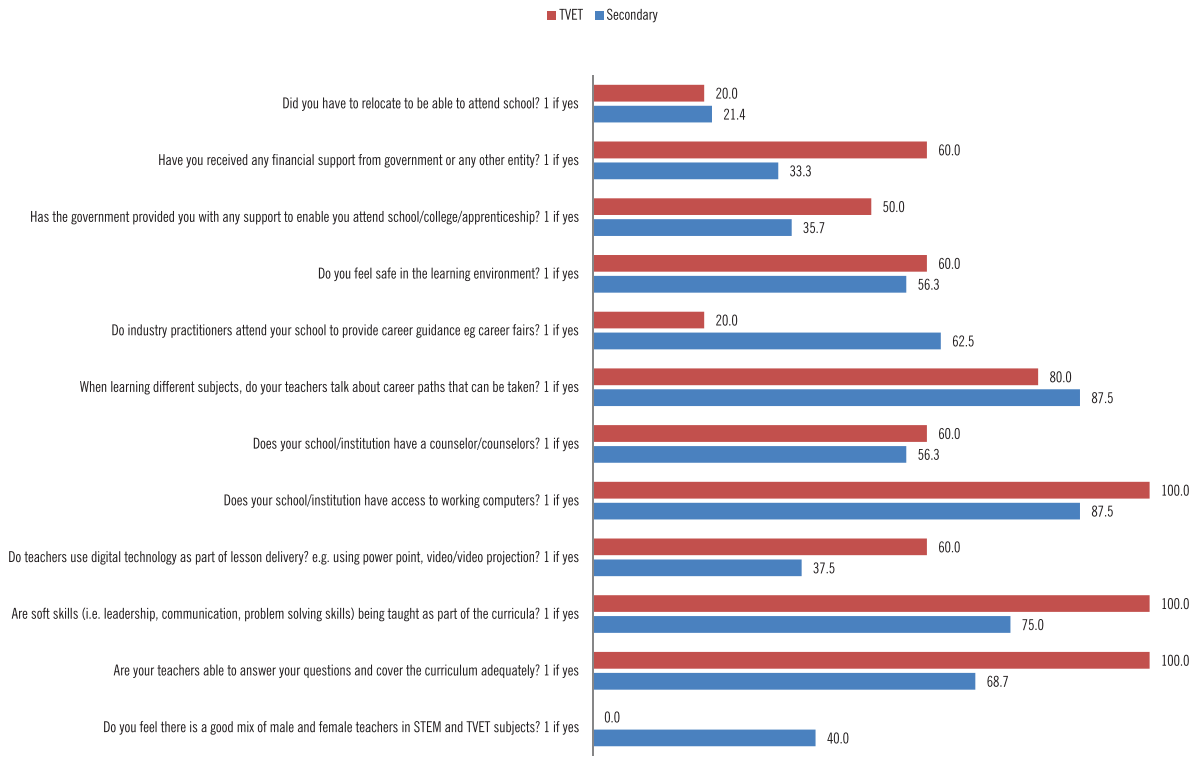
Figure 8 presents shares of these perceptions on issues related to adequacy in curriculum delivery, teacher abilities, school environment, and use of digital technologies, among others, from Focus Group Discussions (FGDs). About 20 percent of learners indicated that they had relocated to attend school (Figure 8). The relocation was because of the long distance and general interest in school as there were no higher learning and good institutions with good teachers near the home area. It was also noted that for TVET formal learning, most institutions were boarding (which necessitated learners to stay within the institutional location).

Regarding safety, about 60 percent of learners felt safe at school as they were fenced off and with security guards. In addition, the teachers provided parental love and were approachable; teasing or bullying was not tolerated in school. However, the feeling of lack of safety mainly arose in schools with; dirty toilets as this may result in health risks, no fencing, which resulted in thefts from intruders, and poor roofing infrastructure. While institutions/schools in the urban centers suffered from the consequences of political rallies.

Most learners liked school for various reasons ranging from the good classroom environment, well-aligned curricula, networking with fellow students, extra curricula activities, well-equipped library, good meals, fair fees structure, equal recognition of every student, stable electricity, entertainment, and the freedom to interact with trainers/teachers.

Using digital tools in lesson delivery, such as PPTs and video/video projections, is rare in most institutions

**Figure 8** Secondary and TVET learners' perceptions of a school environment




Source: Field survey respondents, February-March, 2020

other than affluent secondary schools. Regarding ICT, learners indicated that they spent 1-2 hours learning ICT skills per week. The use of digital technologies in lesson delivery was less than 40 percent in secondary (Figure 8), which was attributed to the fact that mainly ICT students benefit. Yet, they too, need more computers despite access being high. But recognition was given to physics and ICT teachers who sometimes use their phones and projectors for demonstration in teaching. Nonetheless, all these efforts are rare and are subject-specific (geography, ICT, physics, chemistry).

To sum up, stakeholders face several challenges, ranging from financial, educational materials, infrastructure, cultural norms, and the mindset of communities and families. Specifically:

- Limited finances to run the schools and motivate the teachers/trainers: Lack of finances, very little pay, and sometimes even delayed, which demotivates teachers and trainers. The money collected by schools in the form of school fees is usually insufficient to effectively cover the expenses of preparing learners for the labour market. They further stressed that the government should give more facilitation, even USE schools. Teachers still need accommodation, yet some need to be provided with the necessary transport to and from school to conduct their activities. Teachers also pointed out that they are poor and cannot motivate students because they do not see them as role models.
- Lack of scholastic materials and infrastructure. In some schools, few are working on computers, and due to the large population, these have been put aside for ICT students, denying the rest of the students' access. Power shortages and lack of internet are also indicated to affect lesson delivery. In addition, poor toilets, which pose a health risk and lack of sanitary pads also affect learners.
- Limited skilling taking place: there is no system for continuous professional development (CPD). In addition, there is minimal interaction between

teachers and industry, so the right skills set needs to be passed over; hence, a big gap needs to be addressed to balance the demand and supply of labour. New technologies are coming, and teachers need more ICT skills and the equipment to up-skill, yet the new curriculum emphasises ICT. 85.7 percent of ToT indicated that there were barriers that could deny potential teachers from accessing Training institutions.

- Teachers are currently facing difficulties in lack of training for sign language and other disabilities, leadership training, and health issues. Most of the things are done theoretically; the practical element needs to be improved. The nature of the curriculum (more exam-oriented) is hard to relate it to the job market.
- The significant barriers to learning, from the learner's point of view were: poor toilets facilities especially for female learners, lack of sanitary materials for females who cannot afford the high end sanitary pad hence teased by fellow students, poor supply of water, especially among rural schools, religion (in which some students reported that they were forced to pray in religious beliefs they did not belong to), congestion in classes and dormitories, mismanagement of school funds which leads to strike among teachers, inadequate learning materials and equipment for practical lessons. Besides, the high unemployment rate among youth was reported to discourage one from studying, given that education was even expensive.

### 3.2.6 Life-long Learning

Concerning lifelong learning, respondents noted that they had undergone training in different fields to deliver on their current engagements. They indicated training in computer lessons, professionalism, and tailoring, training on handling customers, and training in marketing.

Findings from the field survey further revealed the availability of opportunities to upskill. These are provided by government through: Secondary Science (Biology, Chemistry, and Physics) and Mathematics (SESEMAT as discussed in subsection 3.1.2 and 3.2.3) programme[11] workshops.

Nonetheless, some challenges limit upskilling. Major among those put forward by most of the stakeholders interviewed were financial constraints. The lack of finances has even led to dropouts by some who tried to upskill. Others mentioned corruption (this manifested in bureaucratic delays in registration, and hence one pays a fee not stipulated to get help) and family engagements (such as being committed to paying fees for young siblings, looking after one's parents, working in a family business).

Trainers report limited skilling, especially in new technologies coming on board. Teachers need to gain ICT skills and the equipment to up-skill, yet the new curriculum emphasises ICT. 85.7 percent of ToT indicated that there were barriers that could deny potential teachers from accessing Training institutions. In addition, there is minimal interaction between teachers and industry, so a suitable skill set needs to be passed over; hence, a big gap needs to be addressed to balance the demand and supply of labour.

## 3.3 Summary

Government policies and interventions such as the Gender in Education Policy, UPE, USE, and Skilling Uganda programmes have successfully ensured equality and inclusion in education in access, irrespective of gender and disability. Although not ideal, the school environment and infrastructure are also suitable and inclusive. For example, less than 50 percent of training institutions have access to computers, and in most cases, these are designated for ICT students, denying other learners an opportunity.

Career guidance is well embedded in the curriculum system. However, there needs to be more counsellors and schools have resorted to using senior teachers and nurses to perform the tasks of the counsellor. Nonetheless, there is a need to step up career guidance by employing a counsellor in each training institution who is well versed in what is happening in the labour

11 The SESEMAT programme was introduced in 2005 to improve the teaching ability of science and mathematics teachers at secondary level; improve performance in those subjects. SESEMAT is a joint venture between the Uganda government through Ministry of Education and Sports, and the Government of Japan through the Japan International Cooperation Agency (JICA). It is offered through the In-Service Training (INSET) of serving teachers in mathematics and sciences.

market to aid students in taking appropriate career paths depending on their interests.

There is also a need to provide adequate infrastructure, such as bigger classrooms, more computers, and internet connections, to achieve learning outcomes.

# CHAPTER 4: DEMAND-SIDE OPPORTUNITIES AND CONSTRAINTS

Using field survey findings, this Chapter highlights how the demand-side actors are involved in designing and developing education and skills training systems. It assesses the current interaction between the supply and demand side and identifies challenges and opportunities.

## 4.1 Engagement in curriculum development and career guidance

Private sector involvement in curriculum development has been more observed at the vocational level (BTVET) as they dictate labour market requirements. However, at the secondary level, this has not been the practice until the recent reforms for lower secondary that took effect in 2020. According to informants;

> *"The reforms were intended to make the curriculum more practical, competence-based and responsive to technological changes. As private sector stakeholders, we are now involved in designing, evaluating, refining, and implementing programs that enhance uptake for the 4IR through workshops and seminars. This is more so at BTVET the level than secondary".* KIIs (2020)

Regarding career guidance, industrial practitioners are often invited to provide career guidance to students, for example, during orientation week, at end-of-year parties, and during school clubs (debate, environment, sports, etc.). It was indicated that once invited, they attend as and when the institutions call upon them. Nonetheless, this needs to be more systematic as it is left to the discretion of the school administration to include this activity in its annual programme. However, this career guidance must be formalised and varies depending on the school administration.

## 4.2 Participation in shaping labour market needs

Uganda's labour market information system (LMIS) is

based on the labour module in the National Household survey. The LMIS was designed to meet the labour market's critical needs, and the system is under the internal and external employment department of the MoGLSD. The system supports the Ministry in proper mentorship training and apprenticeships and conducts regular job matching for selected job seekers. According to the Key informant:

> *" The major industries that offer formal jobs in Uganda are Agro-based (production and processing), banking, manufacturing, mining, services and telecommunication. Nonetheless, the same sectors employ informally young people and beyond these, informality is high in farming (agriculture), Media, public transport, technology development and trade sectors. There is no clear tracking employer and employment surveys in Uganda, and as such most industries meet their labour demand needs through various avenues such as The Kampala Capital city employment Bureau, out-sourcing mainly through private employment agencies, talent register, advertising, direct recruitment, headhunting and use of free government platforms such as the National Job Matching Platform located in the MoGLSD."*
> Director Labour and Employment, MoGLSD (2020)

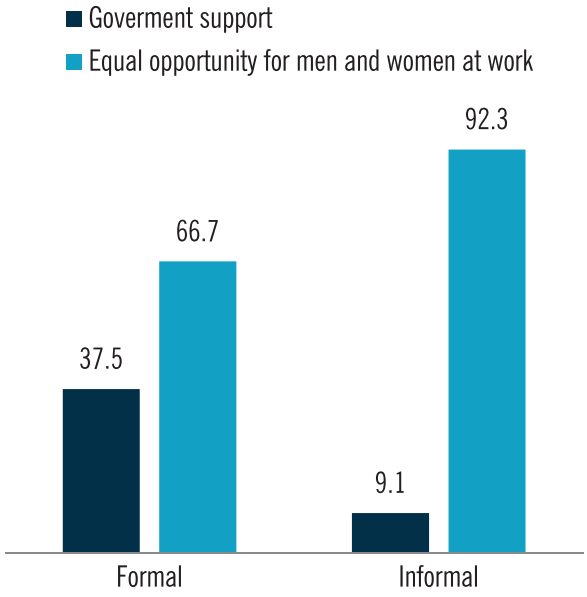
Young people join the informal sector only because they have lost hope in getting white-collar jobs. However, most become pretty creative and are more resilient, hence growing businesses. The job market requires basic computer knowledge and soft interpersonal and communication skills. Many youths in the informal sector have some of these unique trends. At least 64.7 percent of the responses from MoGLSD thought that men and women joining the labour market had the required skills (if BTVET is factored in) demanded by the industry. However, 92 percent of administrators in secondary indicated otherwise. The interactions in identifying such skills for the industry are mainly through partnerships with some training institutions (MTAC with UMA), internship and attachment opportunities of learners to speciality industries, industries sponsoring some students, and orientation week. These have proven effective in creating the necessary interactions between industry and trainers.

### 4.3 Working environment

The formal work environment offers equal opportunities for young men and women to thrive. About 67.5 percent had a gender policy in their companies (i.e., anyone willing to learn is offered training; if you are good, you get a job, and the Human resource manual protects ladies from sexual harassment (Figure 9). Gender job stereotypes existed in some jobs as men tend to advance and get easy selection. Nonetheless, this could be due to their skills, as most jobs are labour-intensive.

Regarding whether there is government support to help the sector adapt to technological advancements, e.g., tax incentives, 37.5 percent, compared to 9.1 percent of formal and informal sector respondents respectively indicated to receive some form of government support. This indicates that formality has some advantages. Only 7.7 percent of informal businesses thought they would be doing the same businesses in the next 5-10 years showing high death rate of informal businesses.

**Figure 9** Support and work environment, %




Source: Field survey respondents, February-March, 2020

About qualifications for hiring, the lowest qualification in formal businesses is secondary education. In addition, there needed to be more connection between the work environment and secondary-level curriculum as it was highly theoretical, which is different for TVET learners. According to the Focus Group discussions held with learners:

> *"University learners had internship programmes; however, these were very short periods for good impact. In Uganda, formal firms are obligated under the National Employment Policy of 2011 to provide student internships for 1-3 months. This makes it easy for students to access these opportunities for hands-on experience to gain employable skills."* University learners KII, (2020)

Noteworthy is that the government of Uganda recognises the unemployment problem especially for the youth resulting from lack of employable skills. In this regard, the government, through MoGLSD, has developed the apprenticeship programme to help youth acquire employable skills. Through MOES, final-year students are identified and attached to formal firms with a clear contract (including wage and insurance). Although this programme is good, firms are not willing to incur the cost in the wages paid to apprentices; thus, this has failed to take off. Livingstone and Kemigisha (1995)[12] argue that the apprenticeship system within the so-called informal sector in East and Central Africa is generally considered more limited than in West Africa. Further, they find that 40 percent of all persons engaged in trade (such as metal-working and woodworking), including family workers are apprentices, but this is highly informal. In addition, in Uganda, most apprentices did not pay for their training. However, they received a daily subsistence allowance in cash: this varied from business to business depending on the economic environment at that time (ibid). Discussions with field respondents suggested that the absence of clearly laid-down arrangements and content on apprenticeship has made this form of training less understood among Ugandans. Worse still, it informally provided no statistics on the extent of the activity, such that a substantial portion of apprentices in Uganda were being employed but disguised as cheap labour.

This limited understanding of apprenticeship has made employers in the formal sector note that employees needed to gain Technical, Communication and literacy skills, yet this was expected to be an on-job training service. Nonetheless, teamwork helps to bring them on board once employed. Failure to get jobs in the formal sector pushed most respondents into the informal sector. In contrast, others indicated they were making more money informally than formally, as they would earn more than $2 per day.

Respondents indicated that the significant barriers to businesses were infrastructural related: unstable electricity supply and yet some businesses in the informal were selling perishable products that need to be refrigerated all the time, poor road networks, especially during rainy seasons in which trucks of produce get stuck in villages when collecting goods such as milk and vegetables. Also, financial constraints, yet the rents need to be lowered, and Uganda Revenue Authority (URA) taxes are high leading to a high cost of doing business and the collapse of many businesses.

Skills gap and corruption: Employees are not recruited on merit; one must know someone in the organisation to get a job. Regarding the effectiveness of government incentives in promoting youth employment, respondents argued that these have not been effective mainly because of the conditions attached, such as accessing credit as a group in the case of YLP. In addition, they pointed out corruption as a significant hindrance and reported that these incentives benefited only those youth with connections in government. They also indicated poor information flow as another reason the incentives have not created employment for young women and men. In addition, they need to gain the necessary communication skills, confidence, customer care, networking abilities and patience. Others have a negative attitude and lack practical skills even though they are educated.

12 Livingstone I., and S. Kemigisha (1995). Some evidence on informal sector apprenticeship in Uganda). The Journal of Modern African Studies, 33, 2 (1995), 339-432. Cambridge University Press

### 4.4 Summary

The formal and informal sector businesses were engaged in this survey to provide their opinion on the demand and supply of learner quality and its implication for the labour market.

From the discussion, it is noted that formal businesses need to be consulted about the curriculum, especially for secondary institutions. Hence, they hear there was a change despite being knowledgeable and experienced in what exactly happens in the labour market. Therefore, there is a need to step up the involvement of industry practitioners in the curriculum development process to align it with the work environment. Teachers/trainers should engage with industry players to know what is demanded and teach based on what is demanded.

They also revealed that most employees joining the labour market needed more technical, communication and ICT skills. This, therefore, calls for learning institutions to focus on building students in soft and practical skills. ICT/ computer studies should be integrated into all subjects at all levels to ensure that learners meet the working environment needs of the 4IR.

## CHAPTER 5: CONCLUSIONS: EMERGING ISSUES AND POLICY ACTIONS

This study is part of a six-country project that the African Center for Economic Transformation (ACET) coordinates on Youth, Employment and Skills (YES) in Cote d'Ivoire, Ghana, Ethiopia, Niger, Rwanda, and Uganda. The objective of the Uganda study was to examine how education and training systems in Uganda are adjusting to meet the evolving labour demand considering the fast-evolving digital innovations under the fourth industrial revolution (4IR) and the changing nature of work. More specifically, the study: Undertook an in-depth review of the structure and composition (demographic, education, and skills) of the workforce, reviewed policies, regulations, and institutional arrangements aimed at boosting employment opportunities for youth and ways to implement innovative education and training initiatives and examined the impact of digital technologies on job creation and explored the nature of skills needed to create jobs and grow the economy.

The study adopted a mixed approach involving desk reviews and quantitative and qualitative analysis. The analysis was based on the triangulation of information from desk reviews of various documents (government and non-government) in relation to Youth, Employment and Skills and primary data collected. In addition, the study adopts an analytical framework based on five levers that drive supply and demand, i.e., curricula, teacher training, career guidance, physical and digital infrastructure, and lifelong learning.

### 5.1 Emerging issues

- Government policies and interventions such as Gender in education policy UPE, USE and upskilling Uganda have successfully ensured equality in access and inclusion of gender and people with disabilities in education. In addition, such policies have increased access to free and compulsory education, uptake into BTVET and enrollment of girls in STEM subjects.
- The study, however, reveals that despite increased access to education, more girls enroll in school at lower levels; their completion rate

and enrolment at higher levels of education could be higher due to high dropout rates. In addition, enrolment of girls in BTVET and STEM disciplines has remained low.

- Vocational courses were found to be relevant and well aligned to the current and future job market needs because it is competence-based to address the government policy of skilling Uganda. On the other hand, the secondary curriculum is exam-oriented and highly theoretical. It is accused of being overloaded, needing more key characteristics of the 21st-century skills, needing more flexibility to absorb new knowledge and using teaching methodologies that do not allow active learning and acquisition of skills.
- The arguments mentioned above have resulted in revising the lower secondary curriculum. The new curriculum for lower secondary rolled in 2020 was considered timely, competence-based, and relevant by stakeholders.
- The study finds that Uganda has very good BTVETs with good infrastructure. Although private BTVETS operate at full capacity, government BTVETs with good facilities are empty. This disturbing irony is attributed to higher government entry requirements than private institutions.
- COVID-19 is a crisis and a challenge but also an opportunity. On one side, COVID-19 has heightened the need for digital technology, thus the need to embrace it and take it forward.
- The school environment and infrastructure have also been indicated to be suitable, although more is needed in most cases. For example, less than 50 percent of training institutions have access to computers, which in most cases are designated for ICT students, denying other learners an opportunity.
- Career guidance is well embedded in the curriculum system, and the Ministry of Education and Sports requires that all secondary schools have a full-time school counsellor; however, it is not well formalised, and there is a lack of counsellors thus, schools have resorted to using senior teachers and nurses to perform the tasks of counsellor.
- Little engagement of industrial practitioners in curriculum development and reform. The demand side analysis indicates that industry practitioners need to be consulted about the curriculum despite their being knowledgeable and experienced in what exactly happens in the labour market.
- The study also revealed that most employees joining the labour market needed more technical, communication and ICT skills, which are highly demanded to meet the working environment needs of the 4IR. To respond to technological changes, ICT is now a subject in secondary schools, and teachers are being retooled to integrate it in their lesson delivery.
- COVID-19 is a crisis and a challenge but also an opportunity. On one side COVID-19 has heightened the need for digital technology thus the need to embrace the technology and take it forward.
- The analysis further indicated that from the supply side, challenges such as limited financing for upskilling, inadequate infrastructure, and congestion in classes are some of the challenges faced, while from the demand side, lack of ICT skills among graduates, high cost of doing business and lack of government support are affecting their operations.

## 5.2 Policy actions

Based on our findings, the study makes the following recommendations:

- Skilling in new technologies: Government can support people in accessing learning opportunities by easing access to the internet for people to undertake online courses and making it mandatory for teachers to up their skills after every two years. Government can also offer support for continuous learning to trainers through annual conferences and seminars, refresher training on career/ lifelong learning, and short courses. Given the current technical skills requirements in the job market, the government should employ ICT instructors in learning institutions to teach basic computer knowledge, communication skills and lifelong

skills/interpersonal skills, which are vital.

- Increase and update learning equipment: Equip TVET workshops with necessary tools (training equipment, i.e., electrical and hand-sowing machines), as well as increase the time given for practical sessions. Vocational skills and ICT should be implemented at all levels of education and in every subject. In addition, internship periods for TVET and University students should be longer so they can learn enough. To ensure leavers meet market demands, school learning institutions should get information from employers on what they require in the labour market, such as skills and training.
- KIIs recommended that there should be an increase in the number of teachers, especially for STEM subjects, to create more time for beneficial learning; integration of practical sessions in teaching and learning (Knitting, games and sports, woodwork). Balancing/ Uplifting the proportion of practical sessions to 70 percent and then theory 30 percent for BTVET institutions.
- Focus on soft skills and behavioural competencies: Learning institutions should focus on building confidence in students through soft skills and emphasis on practical skills, such as computer studies, because of digitalisation. For example, TVET institutions should focus on practical because they are teaching more theory which should be different.
- The curriculum should focus on consumer needs and match learners' skills and talents to needed skills. Teachers/trainers should engage with industry players to know what is demanded and teach based on what is demanded. For example, Carpentry should be made compulsory at all secondary schools—training in Business skills (entrepreneurship); hands-on machinery training to improve skills.
- Workshops and career guidance sessions should be fostered and included in all school curriculums to be taught at all levels.
- BTVET: Ministry of Education should create a one-stop centre for training and skilling Ugandans to stop the scattered programmes and projects on skilling that are spread across the government's different ministries, departments, and agencies.
- The TVET Council should prioritise disseminating and popularising the TVET policy to all stakeholders. This will cure the public's negative attitude towards BVET and technical subjects.

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# ANNEXES

## Annex Table A1: Summary of Key Informant Interviews and Focus Group Discussions in Gulu, Lira/Kole and Kiryandongo

| Tool | Institution | District | Type of interview | No. of respondents/FGDs |
|---|---|---|---|---|
| Teachers and administrators secondary | Aculbanya Secondary school | Lira/Kole | KIIS | 3 |
| | Lira Town College | Lira/Kole | KIIS | 3 |
| | Gulu College | Gulu | KIIS | 3 |
| | Gulu Secondary school | Gulu | KIIS | 3 |
| **Total** | | | | **12** |
| Secondary learners' questionnaire | Aculbanya Secondary school | Lira/Kole | FGDs | 2 |
| | Lira Town College | Lira/Kole | FGDs | 2 |
| | Gulu College | Gulu | FGDs | 2 |
| | Gulu Secondary school | Gulu | FGDs | 2 |
| **Total** | | | | 8 |
| Teachers and administrators TVET | St.Josephs Technical school | Gulu | KIIS | 3 |
| | Kiryandongo Technical institute | Kiryandongo | KIIS | 3 |
| Total | | | | 6 |
| TVET Learners | St.Josephs Technical school | Gulu | FGDs | 1 |
| | Kiryandongo Technical institute | Kiryandongo | FGDs | 1 |
| **Total** | | | | 2 |
| Training of Trainers questionnaire | National Instructors College -Abilonino | Lira/Kole | KIIS | 3 |
| | National Teachers' College-Unyama | Gulu | KIIS | 4 |
| Total | | | | 7 |
| Formal sector questionnaire | | Gulu | KIIS | 2 |
| | | Lira/Kole | KIIS | 3 |
| **Total** | | | | **5** |
| Transition/ Leavers questionnaire | | Gulu | KIIS | 3 |
| | | Lira/Kole | KIIS | 3 |
| Total | | | | 6 |
| Graduates | | Gulu | KIIS | 4 |
| | | Lira/Kole | KIIS | 4 |
| **Total** | | | | **8** |
| Informal sector questionnaire | | Gulu | KIIS | 3 |
| | | Lira/Kole | KIIS | 3 |
| **Total** | | | | **6** |
| **Grand Total** | | | | **10 FGDS & 50 KIIS** |

## Annex Table A2: Summary of Key Informant Interviews and Focus Group Discussions in Iganda, Kaliro and Mubende districts

| Tool | Institution | District | Type of interview | No. of respondents/ FGDs |
|---|---|---|---|---|
| Teachers and administrators secondary | Kasenyi secondary school | Mubende | KIIS | 3 |
| | Kaliro College | Kaliro | KIIS | 4 |
| | Kaliro High School | Kaliro | KIIS | 4 |
| | Mubende light Secondary school | Mubende | KIIS | 4 |
| **Total** | | | | **15** |
| Secondary learners' questionnaire | Kasenyi secondary school | Mubende | FGDs | 2 |
| | Kaliro College | Kaliro | FGDs | 2 |
| | Kaliro High School | Kaliro | FGDs | 2 |
| | Mubende light Secondary school | Mubende | FGDs | 2 |
| **Total** | | | | **8** |
| Teachers and administrators TVET | Mubende community polytechnic | Mubende | KIIS | 3 |
| | Kakira Technical | Karilo | KIIS | 3 |
| | Iganga Technical institute | Iganga/Kaliro | KIIS | 3 |
| **Total** | | | | **9** |
| TVET Learners | Mubende community polytechnic | Mubende | FGDs | 1 |
| | Kakira Technical | Karilo | FGDs | 1 |
| | Iganga Technical institute | Iganga | FGDs | 1 |
| **Total** | | | | **3** |
| Training of Trainers questionnaire | Kaliro NTC | Kaliro | KIIS | 4 |
| | Mubende NTC | Mubende | KIIS | 4 |
| **Total** | | | | **8** |
| Formal sector questionnaire | | Kaliro | KIIS | 2 |
| | | Mubende | KIIS | 2 |
| **Total** | | | | 4 |
| Transition/ Leavers questionnaire | | Kaliro | KIIS | 2 |
| | | Mubende | KIIS | 3 |
| **Total** | | | | **5** |
| Graduates | | Kaliro | KIIS | 4 |
| | | Mubende | KIIS | 3 |
| **Total** | | | | **7** |
| Informal sector questionnaire | | Kaliro | KIIS | 3 |
| | | Mubende | KIIS | 3 |
| **Total** | | | | **6** |
| Grand Total | | | | **11 FGDs & 54 KIIS** |

## Annex Table A3: Education indicators by facility level: 2010-2016

| Indicators | Source | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|
| **Panel A: Primary** | | | | | | | | |
| *Total enrolment* | EMIS | 8,374,648 | 8,098,177 | 8,328,640 | 8,459,720 | 8,326,155 | 8,264,317 | 8,655,924 |
| Boys | EMIS | 4,179,248 | 4,039,734 | 4,157,932 | 4,219,523 | 4,157,517 | 4,122,663 | 4,294,473 |
| Girls | EMIS | 4,195,400 | 4,058,443 | 4,170,708 | 4,240,197 | 4,168,638 | 4,141,654 | 4,361,451 |
| *%of girls to total enrolment* | EMIS | 50.0 | 50.0 | 50.1 | 50.1 | 50.1 | 50.1 | 50.3 |
| *GER* | EMIS | 128.0% | 117.7% | 115.4% | 111.8% | 117.0% | 109.0% | 110.0% |
| Boys | EMIS | 128.3% | 117.9% | 115.6% | 111.7% | 117.0% | 107.0% | 107.7% |
| Girls | EMIS | 127.6% | 117.6% | 115.2% | 112.0% | 118.0% | 111.0% | 112.4% |
| *NER* | EMIS | 96.0% | 97.5% | 95.7% | 95.3% | 97.0% | 91.0% | 92.1% |
| Boys | EMIS | 95.6% | 97.1% | 95.2% | 94.6% | 96.0% | 89.0% | 89.6% |
| Girls | EMIS | 96.4% | 97.9% | 96.1% | 96.0% | 98.0% | 93.0% | 94.6% |
| *PTR (All schools)* | EMIS | 49 | 48 | 45 | 46 | 46 | 43 | 43 |
| *PCR (All schools)* | EMIS | 58 | 57 | 57 | 57 | 59 | 63 | 56 |
| *P7 Completion rate* | UNEB | 54.0% | 64.0% | 67.0% | 67.4% | 72.0% | 61.6% | 61.5% |
| Boys | UNEB | 56.0% | 65.0% | 68.0% | 68.0% | 72.0% | 59.8% | 59.7% |
| Girls | UNEB | 51.0% | 63.0% | 66.0% | 67.0% | 72.0% | 63.3% | 63.4% |
| *Literacy rates* | | | | | | | | |
| P3 | NAPE/UNEB | 57.6% | 47.9% | 53.8% | 56.2% | 64.2% | 60.2% | N/A |
| Male | NAPE/UNEB | 57.9% | 47.3% | 53.9% | 53.9% | 62.0% | 59.0% | N/A |
| Female | NAPE/UNEB | 57.3% | 48.5% | 55.6% | 56.4% | 66.5% | 61.3% | N/A |
| **Panel B: Secondary** | | | | | | | | |
| *Enrolment in all schools* | EMIS | 1,225,692 | 1,258,084 | 1,251,507 | 1,362,739 | 1,391,250 | 1,284,008 | 1,457,277 |
| Boys | EMIS | 654,971 | 662,003 | 671,347 | 727,212 | 738,391 | 675,163 | 765,406 |
| Girls | EMIS | 570,721 | 596,081 | 580,160 | 635,527 | 652,859 | 608,845 | 691,871 |
| *GER* | UBOS/EMIS | 28.3% | 28.0% | 27.2% | 26.8% | 30.0% | 24.5% | 27.1% |

| Indicators | Source | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|
| Boys | UBOS/EMIS | 30.7% | 31.0% | 29.9% | 28.8% | 32.0% | 25.5% | 29.0% |
| Girls | UBOS/EMIS | 26.0% | 27.0% | 25.4% | 24.8% | 28.0% | 23.4% | 25.2% |
| *NER* | UBOS/EMIS | 24.6% | 25.0% | 23.7% | 24.7% | 26.0% | 21.8% | 24.0% |
| Boys | UBOS/EMIS | 25.7% | 26.0% | 24.6% | 25.9% | 27.0% | 22.1% | 25.0% |
| Girls | UBOS/EMIS | 23.5% | 25.0% | 22.7% | 23.6% | 25.0% | 21.4% | 23.0% |
| *STR* | EMIS | 19 | 19 | 22 | 21 | 22 | 22 | 22 |
| *SCR* | EMIS | 45 | 44 | 49 | 46 | 50 | 52 | 53 |
| *Transition rate to Senior 1* | EMIS | 64.8% | 65.0% | 66.0% | 72.2% | 70.5% | 63.2% | 69.2% |
| Boys | EMIS | 66.7% | 67.0% | 68.0% | 72.3% | 70.5% | 62.8% | 70.5% |
| Girls | EMIS | 63.0% | 64.2% | 65.0% | 72.0% | 70.5% | 63.6% | 67.8% |
| *Completion rate Senior 4* | EMIS | 39.0% | 33.0% | 35.5% | 35.3% | 35.8% | 36.2% | 37.8% |
| Boys | EMIS | 45.0% | 35.1% | 37.6% | 36.7% | 36.4% | 36.4% | 39.6% |
| Girls | EMIS | 32.0% | 30.8% | 33.5% | 33.8% | 33.9% | 35.9% | 36.0% |
| *Transition rate to Senior 5* | EMIS/UNEB | 50.7% | 53.6% | 34.0% | 32.0% | 30.0% | 25.0% | 29.2% |
| Boys | EMIS/UNEB | 40.0% | 41.0% | 39.0% | 37.0% | 33.6% | 28.1% | 33.9% |
| Girls | EMIS/UNEB | 45.8% | 47.7% | 29.0% | 27.0% | 25.9% | 21.4% | 24.2% |
| **Panel C: Post-primary** | | | | | | | | |
| *Total inst responded* | EMIS | 144 | 194 | 212 | 265 | 251 | 167 | 292 |
| *Total enrolment* | EMIS | 39,250 | 43,178 | 45,989 | 58,798 | 69,319 | 53,578 | 63,285 |
| Male | EMIS | 27,562 | 28,601 | 26,906 | 35,415 | 40,014 | 22,265 | 37,107 |
| Female | EMIS | 11,688 | 14,577 | 19,083 | 23,383 | 29,305 | 14,662 | 26,178 |
| *BTVET All* | EMIS | 23536 | 34226 | 34380 | 42674 | 51979 | 40830 | 45242 |
| Male | EMIS | 13604 | 23794 | 21499 | 28024 | 32953 | 26338 | 29567 |
| Female | EMIS | 9933 | 10432 | 12881 | 14650 | 19026 | 14492 | 15675 |
| **Panel D: Tertiary** | | | | | | | | |
| *Total enrolment* | NCHE/EMIS | 174,375 | 179,569 | 198,066 | 201,376 | 249,049 | 257,855 | 258,866 |

| Indicators | Source | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|
| Male | NCHE/EMIS | 98,062 | 100,831 | 111,831 | 113,688 | 139,092 | 143,212 | 144,314 |
| Female | NCHE/EMIS | 76,313 | 78,738 | 86,235 | 87,572 | 109,957 | 114,643 | 114,552 |
| *Enrolment at universities* | NCHE/EMIS | 120,646 | 136,541 | 140,096 | 140,403 | 180,360 | 185,315 | 186,412 |
| Male | NCHE/EMIS | 78,420 | 93,808 | 78,817 | 79,709 | 100,525 | 103,280 | 104,432 |
| Female | NCHE/EMIS | 42,226 | 42,733 | 61,270 | 60,398 | 79,835 | 82,035 | 81,980 |
| *Enrolment in other Tertiary instit* | NCHE/EMIS | 53,729 | 55,343 | 56,474 | 60,973 | 68,689 | 72,540 | 74,682 |
| Male | NCHE/EMIS | 19,642 | 19,726 | 31,438 | 33,979 | 38,567 | 39,932 | 42,845 |
| Female | NCHE/EMIS | 34,087 | 35,617 | 24,865 | 27,174 | 30,119 | 32,608 | 31,837 |

Source: Statistical Abstract, Ministry of Education, 2018

## Annex Table A4: Net and Gross Enrolment Rates in primary and secondary schools, 2016/17

| | Nets enrolment rate | | | | Gross enrolment rate | | |
|---|---|---|---|---|---|---|---|
| | Male | Female | Total | | Male | Female | Total |
| Panel A: Primary (6-12 years) | | | | | | | |
| Residence Area | | | | | | | |
| Rural | 76.3 | 78.4 | 77.4 | | 117.8 | 114.4 | 116.1 |
| Urban | 84.2 | 84.7 | 84.5 | | 110.2 | 113.3 | 111.7 |
| Region | | | | | | | |
| Central | 80.9 | 82.4 | 81.6 | | 106.5 | 105.2 | 105.8 |
| Eastern | 82.9 | 85.0 | 84.0 | | 129.8 | 125.6 | 127.7 |
| Northern | 72.7 | 70.9 | 71.8 | | 121.1 | 108.1 | 114.5 |
| Western | 74.1 | 79.1 | 76.6 | | 107.1 | 115.8 | 111.4 |
| | | | | | | | |
| Total | 77.9 | 79.8 | 78.9 | | 116.2 | 114.2 | 115.2 |
| Panel B: Secondary (13-18 years) | | | | | | | |
| Residence Area | | | | | | | |
| Urban | 15.7 | 17.5 | 16.5 | | 23.2 | 21.7 | 22.5 |
| Rural | 38.7 | 31.2 | 34.7 | | 50.2 | 37.8 | 43.7 |
| Region | | | | | | | |
| Central | 35.0 | 34.0 | 34.5 | | 43.3 | 39.3 | 41.4 |
| Eastern | 18.8 | 20.9 | 19.8 | | 30.7 | 28.3 | 29.5 |
| Northern | 6.2 | 4.5 | 5.4 | | 10.4 | 6.2 | 8.4 |
| Western | 19.8 | 20.7 | 20.3 | | 28.0 | 24.8 | 26.3 |
| | | | | | | | |
| Total | 20.2 | 20.6 | 20.4 | | 28.5 | 25.4 | 27.0 |

Source: EPRC's calculations based on UNHS 2016/17 survey

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