TRANSFORMING EDUCATION IN AFRICA

An evidence-based overview and recommendations for long-term improvements

African Union

A Report by UNICEF and the African Union Commission

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Foreword

This report is the result of a successful collaboration between UNICEF and the African Union Commission. The report intends to contribute to the facilitation of high-level policy discussions between national education authorities, regional and continental bodies on possible strategic shifts and interventions to boost access to education and improve the quality of teaching and learning in Africa. The report provides evidence-based analysis of the situation of education in Africa while putting into perspective the Sustainable Development Goals and the objectives of the Continental Education Strategy for Africa (CESA 16–25) in line with the African Union Agenda 2063. It highlights the progress made in the continent's education sector over the past decade (2010–2020) while pointing out the challenges that remain, particularly in the area of equity.

This report comes at a time when the global context (health, education, financial systems) is severely challenged by the COVID-19 pandemic, from which Africa is not exempted. While much of the data presented in the report predates the pandemic, it also describes how some African countries have responded to the COVID-19 crisis in innovative ways, such as by offering distance education to children, combining high-tech and low-cost solutions to ensure the safe continuity of learning while schools were closed. The pandemic can be seen as an opportunity to reimagine education in Africa, including

safe, healthy and inclusive schools, greater use of digital technologies, and teachers who are well trained to bring these technologies to life to help children learn.

With such a young population (3 out of 5 Africans are under 25 years old), it is now time for African governments to boost their investment in education in order not to miss the current window of opportunity. Harnessing the continent's demographic dividend and investing in human capital can deliver huge impact and results in and for Africa.

UNICEF and the African Union Commission hope that all African governments can act now to improve their education systems by allocating funds more fairly and efficiently despite the additional fiscal pressure that the COVID-19 pandemic has created. Eliue Kipchoge, the Kenyan Marathon world record holder, once said, "The best time to plant a tree was 25 years ago. The second-best time to plant a tree is today."

UNICEF and the African Union Commission appeal to all African governments to seize the opportunity and renew their commitments to enhance the governance and efficiency of education services through digital transformation, reimagining education systems and skills acquisition to meet the needs of a growing digital economy.

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Acknowledgements

Notes on the data used in this report

The report relies primarily on the most recent data from the UNESCO Institute for Statistics (UIS) and household surveys such as the Multiple Indicator Cluster Surveys (MICS) and Demographic Health Surveys (DHS). The report is based on robust statistical analysis, with additional calculations being made by the authors to illustrate the progress and challenges of education in Africa. Continental and Regional Economic Communities (REC) averages are calculated if at least one third of the countries belonging to those geographic entities have data for the specific period of interest for the study.

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Acronyms and abbreviations

AUC	African Union Commission
CBC	Competency Based Curriculum
CESA	Continental Education Strategy for Africa
CONFEMEN	Conference of the Ministers of Education of French-speaking countries
COVID-19	Coronavirus disease, first identified in 2019
DHS	Demographic and Health Surveys
ECE	Early Childhood Education
EMIS	Education Management Information System
FCUBE	Free Compulsory Universal Basic Education
GDP	Gross Domestic Product
ICT	Information and Communications Technology
IMF	International Monetary Fund
IIEP-UNESCO	International Institute for Educational Planning of UNESCO
IPED	Pan-African Institute of Education for Development
KICD	Kenya Institute of Curriculum Development
MENA	Middle East and North Africa
MENARO	UNICEF Middle East and North Africa Regional Office
MICS	Multiple Indicator Cluster Surveys
MHM	Menstrual Hygiene Management
MOOC	Massive Open Online Course
MSL	Multisensory Structured Language
PASEC	CONFEMEN Programme for the Analysis of Education Systems
PPP	Purchasing Power Parity
REC	Regional Economic Communities
SDG	Sustainable Development Goals
TVET	Technical and Vocational Education and Training
UNESCO	United Nations Education, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UIS	UNESCO Institute for Statistics
WASH	Water, Sanitation and Hygiene
WEF	World Economic Forum

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INTRODUCTION

Evidence and Practical Ideas

This report, which has been developed through a partnership between the African Union Commission and UNICEF, aims to:

✔ **track the progress** that African nations have made in education, especially in relation to Sustainable Development Goal 4 (SDG4) and the Continental Education Strategy for Africa (CESA) goals,

✔ **identify the challenges** that African leaders and decision makers face in providing inclusive quality education, especially those related to the COVID-19 pandemic, and

✔ **make recommendations** that could help accelerate progress in education, and prevent the COVID-19 pandemic from eroding the gains that have been made to date.

The report is based on the work of technical teams of UNICEF and the African Union, which have collected and analysed quantitative data from across the continent of Africa. The report relies primarily on data from the UNESCO Institute for Statistics (UIS) and household surveys such as the Multiple Indicator Cluster Surveys (MICS) and Demographic Health Surveys (DHS). The report is based on robust statistical analysis to illustrate the progress and challenges of education in Africa. The goal is to offer African leaders and decision makers a valuable, evidence-based snapshot of the state of education across the continent of Africa, and practical ideas that they can implement in their particular countries.

Education in Africa: Recent Progress, but Disparities Remain

Children are central to Africa's future. By the middle of this century, Africa will be home to a billion children

and adolescents under 18 years of age.[1] This will make up almost 40 per cent of all children and adolescents, worldwide.[2] With the increasing importance of this young population, African countries need to ensure that this demographic growth will not be a burden, but a benefit; they have a chance to expand the opportunities available to young people, and build on the vital human capital that they represent.

Education enables people to survive and thrive and is the most effective investment in the fight against poverty, helping to improve socioeconomic development. Education prevents the transmission of poverty between generations by providing greater opportunities to earn, as well as helping to move other socioeconomic indicators in a positive direction. Education is also associated with more peaceful communities, greater civic engagement and stronger democracies.[3]

Increasing efforts towards achieving universal quality basic education is an important way of building resilience in populations and actively transforming what could be a demographic burden into a valuable demographic dividend by building citizenship and creating a qualified and employable workforce that can match the needs of the labour market for particular skills and competencies. Education is recognized as a critical development priority by the Africa Union,[4] while the Kigali Statement of Outcomes[5] sets out equitable and inclusive access to education for all, education for sustainable development and global citizenship, and youth and adult literacies, skills and competencies among the regional priorities for sub-Saharan countries, as they move toward the Education 2030 goals. African countries have committed themselves to the goal of ensuring that human capital is fully developed through universal access to early childhood development and basic education, and sustained investments in higher education, science, technology, research and innovation.[6]

However, despite the substantial progress that has been made in terms of access, completion and quality of basic education, disparities persist within and between countries, and learning achievement remains low in many parts of Africa. Girls, children from the poorest backgrounds, children with disabilities and children on the move face particular difficulties in realizing their right to education.

Education and COVID-19: Exacerbating the Learning Crisis

Even prior to the COVID-19 pandemic, the world was already grappling with a learning crisis. Millions of children and young people were not on track to develop the relevant skills they need to learn effectively, transition smoothly into getting a job or starting a business, or otherwise contribute to their communities. Inequities (including those associated with poverty, gender, disability, migration status, ethno-linguistic status, and other socioeconomic conditions) that have long kept millions of children from accessing equitable and inclusive quality education further intensified and became exposed by the pandemic. Millions more children missed out on services that are often provided through schools, such as school meals, immunization, mental health and psychosocial support, and protection from violence.

In 2019, the World Bank[7] introduced the concept of 'Learning Poverty' – the inability to read and understand a simple text by the age of 10. It had estimated that 48 per cent of children worldwide and 87 per cent of children in sub-Saharan Africa are 'learning poor' in these terms. While some of these children have never been to school or were taken out of school early, for others the poor quality of learning outcomes needs more explanation.

The disruption in learning caused by the COVID-19 pandemic – in which over 1 billion students globally stopped going to school at some point – has only exacerbated the global learning crisis. In sub-Saharan Africa, with an overall learning poverty rate of 87 per cent, unless improvement accelerates dramatically from pre-COVID patterns, the region will fall well short of eliminating learning poverty by 2030. At the current rate of improvement, in 2030 about 43 per cent of children globally will still be learning-poor.[8] Without swift, well-coordinated remedial action, the effects of the COVID-19 pandemic on education in Africa will mean that targets for reducing learning poverty will not be met, and progress towards targets could be significantly delayed by more than two decades. Should this projection become reality, the consequences for children and society will be devastating, with long-term negative effects on children's life outcomes, including their learning, health (physical and mental), nutrition and socioeconomic development.

For the most marginalized vulnerable children, there is an increased risk of being left even further behind[9], especially in conflict-affected countries where half of all out-of-school children live. The World Bank estimates that loss of learning will cost this cohort of students nearly US$10 trillion in earnings, equivalent to 10 per cent of global GDP. In sub-Saharan Africa lifetime learning loss is estimated to be US$300 million, or 7 per cent of GDP in 2019.[10]

Responses to COVID-19

At the peak of the COVID-19-related school closures in Africa, more than 90 per cent of learners experienced disruption of learning. Despite governments' best efforts across the continent to reach children through remote learning policies and programmes and provide safe continuity of learning, one out of two students, from pre-primary to upper secondary education, could not be reached.[11]

In response to the COVID-19 pandemic, many governments in Africa have adopted alternatives to face-to-face learning, such as digital or hybrid learning methods. These new teaching and learning methods, however, present numerous challenges – such as providing widespread access to information and communications technology (ICT) infrastructure, addressing inequities in digital learning, and ensuring that there is sufficient teaching capacity in managing these more complex ways of working.

The disruption caused by the pandemic has significantly widened the already deep gaps in access to inclusive quality education. According to a recent UNICEF report,[12] geographic and gender disparities also exist within countries and across regions: school-age children in sub-Saharan Africa are the most significantly affected, with nearly 9 in 10 children lacking online access at home.[13] 300 million fewer women than men access the internet through mobile phones, representing a gender gap of 20 per cent. This digital gender divide is expected to have worsened as a result of the COVID-19 pandemic.

But at the same time, moving more to digital or hybrid teaching methods represents not just a temporary response to the COVID-19 pandemic, but something that could be considered as part of long-term plans to weather future learning crises, and expand inclusive learning to help prepare young people to successfully enter the knowledge economy.

THE STATUS OF EDUCATION IN AFRICA

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1.1   A young and fast-growing population

With three out of five people under the age of 25, and half of its population between 3 and 24 years old, Africa has the youngest population of any continent. In 2020, the population under the age of 25 was nearly 800 million, and 677 million were between 3 and 24 years old (*see Figure 1.1*). Africa's population is not only young but also growing fast. Compared to 2000, the 3- to 24-year-old population has increased by 58 per cent, and it is estimated to further increase by 22 per cent over the next decade.

Africa (+21 per cent) and Oceania (+9 per cent) are the only regions of the world where the population of young people (those under 25)[14] is expected to grow over the next decade. According to the population projections of the United Nations, in 2030 Africa will be home to 28 per cent of the world's population aged from 3 to 24, compared to 17 per cent in 2000 and 25 per cent in 2020 (*see Figure 1.2*).

Across the continent, Central Africa and Western Africa are recording the highest growth in their populations of young people. Between 2000 and 2020 the under-25

FIGURE 1.1: Composition and evolution of the African population *(in millions)*

Legend: 0-2 YEARS | 3-5 YEARS | 6-11 YEARS | 12-14 YEARS | 15-18 YEARS | 19-24 YEARS | 25+ YEARS
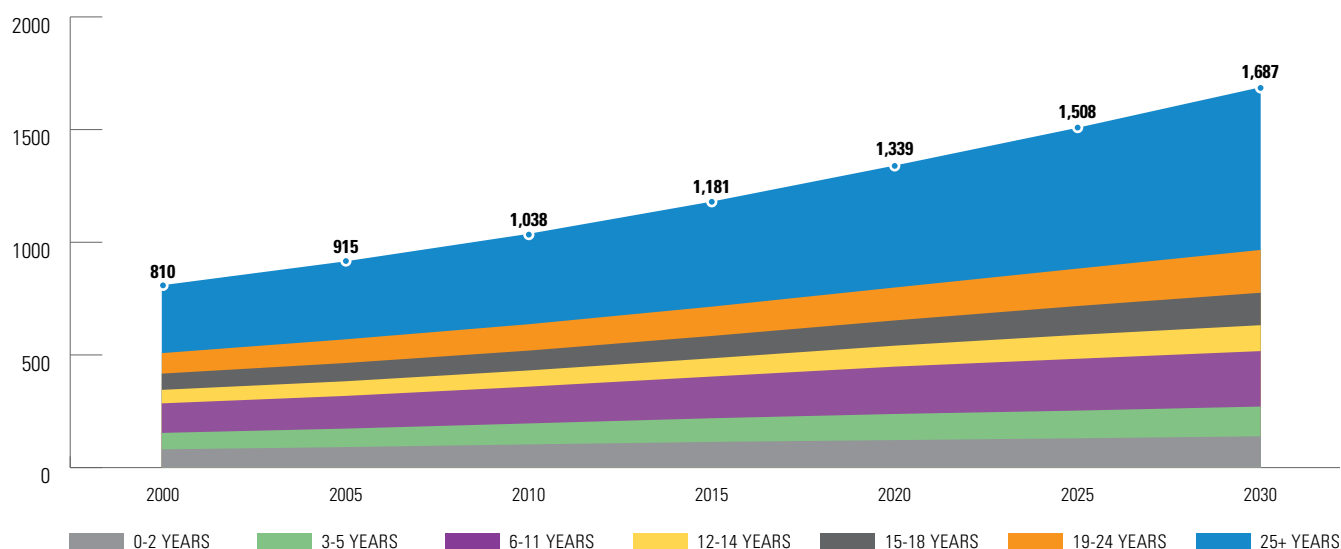
Source: UN World Population Prospect, 2019 revision

FIGURE 1.2: Africa's share of the world's population aged 3 to 24, 2000 to 2030
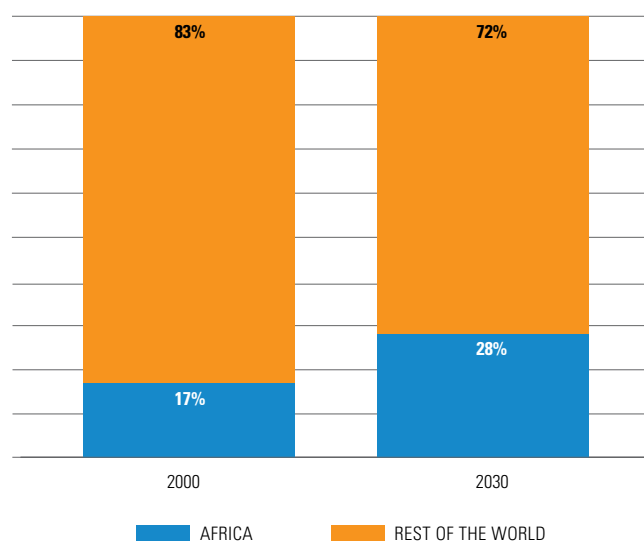
Source: Calculations based on UN World Population Prospect, 2019 revision

population increased by 82 per cent in Central Africa and by 68 per cent in Western Africa, compared to 18 per cent in Northern Africa. This population in Western and Central Africa is expected to increase by a quarter over the next decade.

The large population of young people in Africa, and its high growth rate, presents both a risk and an opportunity. The pressure that it places on education and training systems is enormous. African countries that already have some of the highest out-of-school rates in the world, and some of the lowest learning outcomes, must also deal with growing demand for education.

Yet these young people can become an engine of economic growth and development, if they are given the skills and competencies they need. The transformative power of education is well established.[15] The knowledge and skills provided by quality education helps to develop human capital, increasing not only the productivity and employability of individuals, but also improving the overall development of the countries in which they live. Equally critical is the effect of education in many areas of human development: from better health and women's empowerment, to civic engagement and social cohesion. By accelerating investment in education and training to meet the sustained growth in the numbers of young people, African countries can take full advantage of a demographic dividend.

It is estimated that if investment in human capital in Africa remains unchanged, GDP per capita will increase by 39 per cent by 2050.[16] If countries in Africa increase their investments in the health and education of their young people, this could trigger an 88 per cent increase in GDP per capita by 2050.

1.2 High levels of adult illiteracy hindering the schooling of children

Despite significant progress in literacy on the continent, a large portion of the African population remains illiterate. In 2018, about one in three people aged between 25 and 64, and one in five young people aged between 15 and 24, were illiterate (*see Figure 1.3*).

Across the continent (*see Table 1.1*), the average adult literacy rate varies from 52 per cent in Western Africa to 79 per cent in Southern Africa. With almost one adult in two being illiterate, Western Africa has nearly a third of Africa's illiterate adult population. Adult illiteracy is also acute in Central Africa, where one in three adults is illiterate.

Parent or caregiver literacy level and/ or education level as a predictor of a child's schooling and learning trajectory. Parental illiteracy is one of the factors hindering the schooling of children, especially among the most marginalized groups. It is also one of

FIGURE 1.3: Literacy rate by age group and gender in Africa, 2018
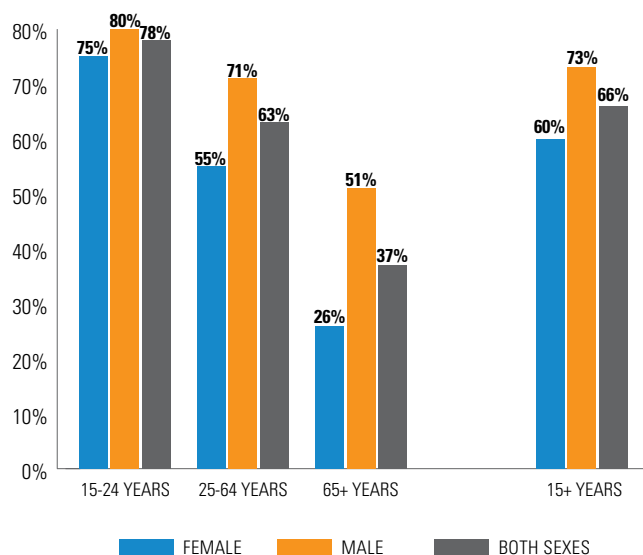
Source: Calculations based on data from the UNESCO Institute for Statistics

FIGURE 1.4: Share of out-of-school children in Africa, by age group
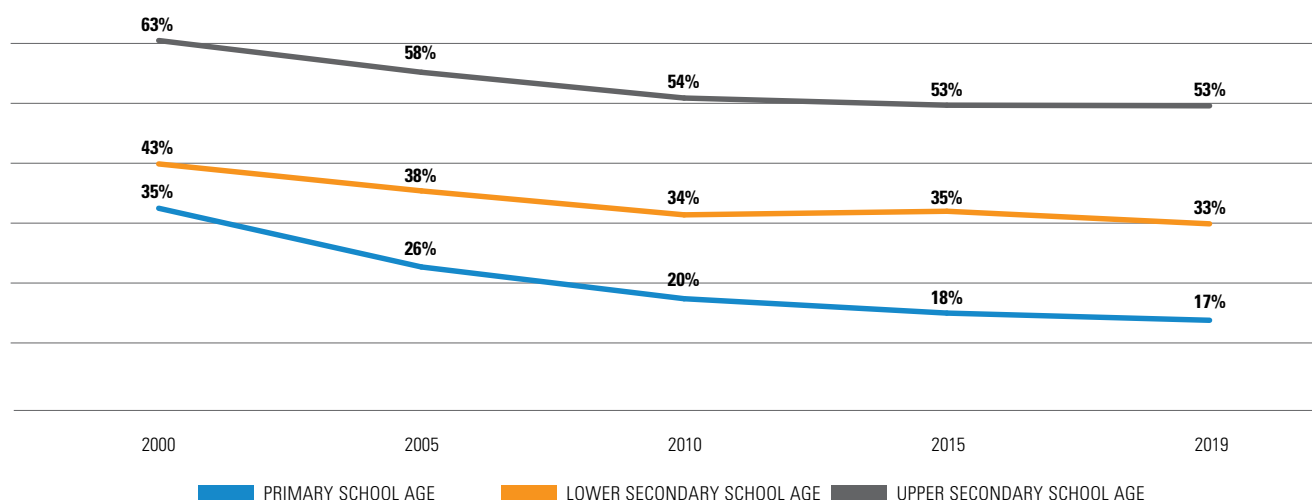
Source: Calculations based on data from the UNESCO Institute for Statistics

the factors that limits the effect of parental support in improving the quality of learning.[17] It has been observed in several contexts around the world that the education of the head of the household, or of a child's parents/ caregivers, has a positive effect on a child's schooling. Most studies conducted in sub-Saharan Africa[18] show that the higher the education level of the head of the household, or of a child's parents/ caregivers, the lower the risk of the child being out of school. Educated parents are more competent in mentoring their children in their studies, and they have higher academic and professional ambitions for them.[19] This is a factor to be taken into consideration when it comes to understanding the challenges facing countries in the development of their education systems, and planning education with a view to reducing inequality and reaching the most marginalized populations.

Another key factor to consider in this context is the pressure of rapid urbanization on education systems. The proportion of the population living in rural areas has declined gradually from an average of 62 per cent by country in 2000 to 54 per cent in 2019. Despite this rapid urbanization, which has its downside in terms of increased urban poverty, more than half of the population still lives in rural areas, often in hard-to-reach settings.

Across the continent the percentage of the population in rural areas varies from 64 per cent in Eastern Africa to 36 per cent in Northern Africa.

In order to develop more inclusive and equitable education policies, it is critical to take this urbanization dynamic into consideration. Targeting and reaching excluded and disadvantaged children in urban and suburban areas implies a change in the planning methods that have prevailed until the present. At the same time, the challenge for African countries lies in making sure that access to education is available for a population that is still predominantly rural.

1.3   Africa has made substantial progress in getting children into school

Africa has made important progress in increasing school participation in the past two decades (*see Figure 1.4*). In 2000, nearly a third of primary school age children, two fifths of lower secondary school age children, and three fifths of upper secondary school age children were out of school.

TABLE 1.1: Literacy rate and rural population in Africa, by region

REGION	% RURAL POPULATION, 2019	ADULT LITERACY RATE (%), 2018
Central Africa	46.2	67.5
Eastern Africa	64.0	71.1
Northern Africa	36.2	71.8
Southern Africa	56.3	78.7
Western Africa	54.1	51.5
Africa	**53.6**	**66.0**

Source: Calculations based on data from the UNESCO Institute for Statistics

These proportions have decreased over the years: in 2019, the new estimates were 17 per cent, 33 per cent and 53 per cent respectively.

1.4 Despite progress, the proportion of out-of-school children remains high

Despite the substantial progress made in getting children into school, the proportion of children who are out of school is still high. Given the high rates of population growth, this still corresponds to a very large number of children. It is estimated that the number of out-of-school children has been increasing since 2010. In 2019 there were 105 million children of primary and secondary school age who were not enrolled in school – more than in 2000. This growing trend is mainly due to the increasing number of out-of-school children among adolescents and young people of secondary school age. Their number has increased by 12 million over the past two decades, while the number of out-of-school children

of primary school age has decreased by 11 million over the same period (*see Figure 1.6*).

Projections show that a drastic change is needed to address the number and proportion of children who are on the margins of education. If trends in out-of-school rates were to remain unchanged, it would take 100 years to achieve full school attendance for all children of primary school age, and 235 and 280 years, respectively, to achieve zero out-of-school rates among lower and upper secondary school age children.[20]

Across the continent, the situation with regard to out-of-school children varies significantly. With nearly 42 million children of primary and secondary school age not enrolled in school in 2019, Western Africa remains the region with the highest number of out-of-school children in Africa: two out-of-school children out of five are living in Western Africa. This is followed by the Eastern African region, which is home to one third of Africa's out-of-school children of primary and secondary school

FIGURE 1.5: Numbers of out-of-school children in Africa, 2019
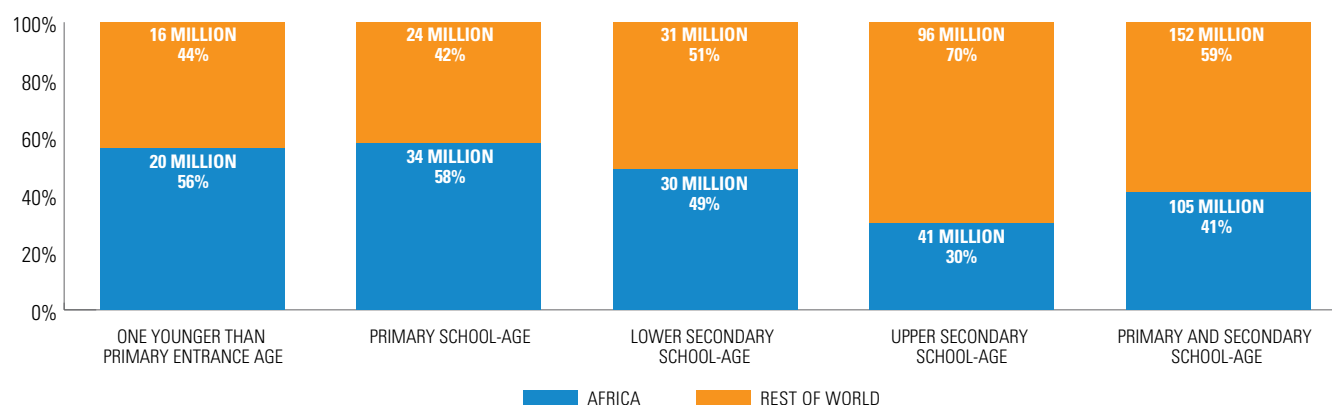
Source: Calculations based on data from the UNESCO Institute for Statistics

FIGURE 1.6: Numbers of out-of-school children in Africa, 2000 - 2019
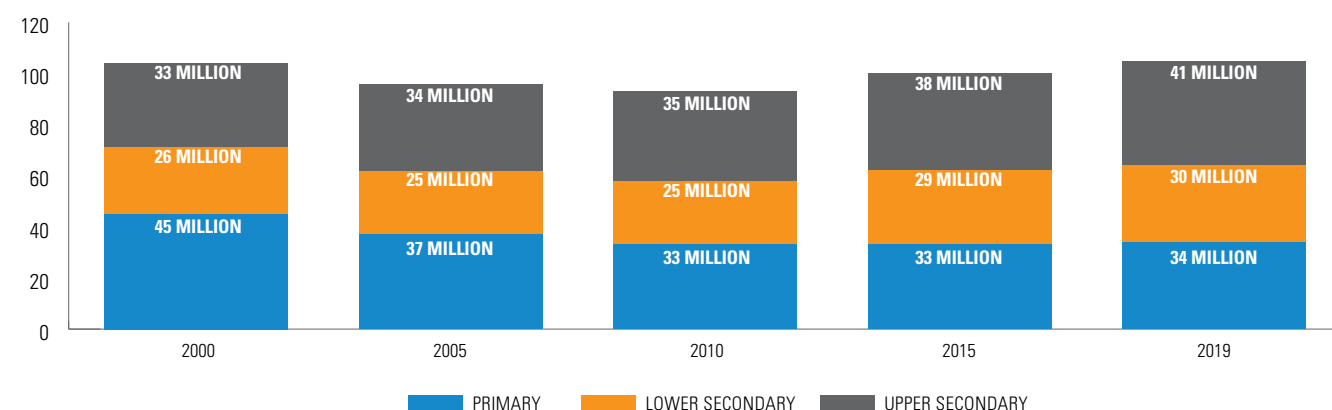
Source: Calculations based on data from the UNESCO Institute for Statistics

TABLE 1.2: Share of out-of-school children by age group and by region in Africa, 2019

REGION	ONE YEAR BEFORE PRIMARY ENTRY AGE	PRIMARY SCHOOL AGE	LOWER SECONDARY SCHOOL AGE	UPPER SECONDARY SCHOOL AGE	PRIMARY AND SECONDARY SCHOOL AGE
Central Africa	55%	19%	33%	45%	28%
Eastern Africa	56%	15%	42%	61%	31%
Northern Africa	48%	1%	6%	27%	8%
Southern Africa	46%	9%	24%	58%	22%
Western Africa	60%	27%	37%	56%	36%
Africa	**55%**	**17%**	**33%**	**53%**	**28%**

Source: Calculations based on data from the UNESCO Institute for Statistics

age. In Western Africa, more than a quarter (27 per cent) of primary school age children, more than a third (37 per cent) of lower secondary school age children, and more than half (56 per cent) of upper secondary school age children were not enrolled in school in 2019. In Eastern Africa these percentages are respectively 15, 42 and 61.

In all regions of the continent, a considerable proportion of young people who are at the right age to attend upper secondary school are not enrolled in school. This is true of 53 per cent on average, varying from 27 per cent in Northern Africa to 61 per cent in Eastern Africa. While a portion of these young people (who are at least 15 years old) could be in employment, training or apprenticeships, many are NEET – not in education, employment or training. According to the International Labour Organization,[21] in 2019 20.7 per cent of young people aged 15 to 24 in Africa were NEET.

1.5 School completion remains a key challenge

It is important that national education systems in Africa continue to provide access to education to as many children as possible, and that those children complete the educational levels in which they are enrolled, particularly primary and lower secondary, which constitute a basic education in many contexts.

FIGURE 1.7: Distribution of out-of-school children of primary and secondary school age in Africa by region
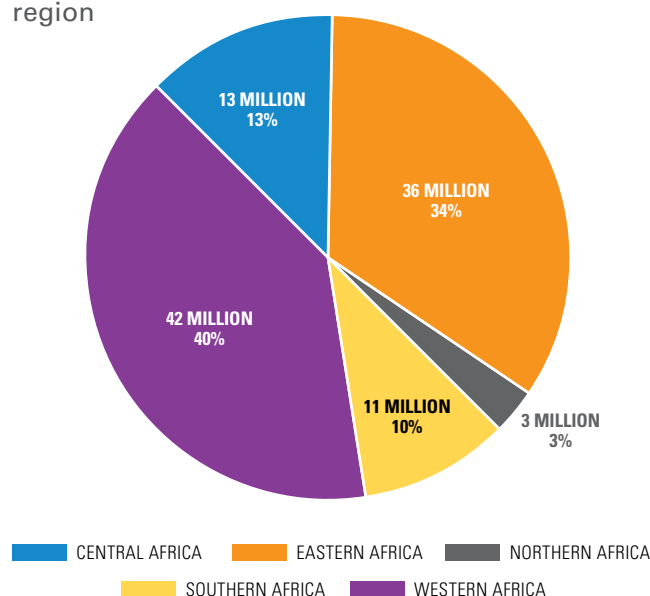
Source: Calculations based on data from the UNESCO Institute for Statistics

The need to guarantee at least 9 to 10 years of education to all children is widely accepted. The international community has made the completion of a quality secondary education by all children a Sustainable Development Goal, to be reached by 2030. Governments committed themselves at Incheon to a framework of action for implementing SDG 4, to ensure that all children

Incheon Declaration and Framework for Action for the Implementation of Sustainable Development Goal 4.

"Ensure access to and completion of quality education for all children and youth to at least 12 years of free, publicly funded, inclusive and equitable quality primary and secondary education, of which at least nine years are compulsory, as well as access to quality education for out-of-school children and youth through a range of modalities. Ensure the provision of learning opportunities so that all youth and adults acquire functional literacy and numeracy and so as to foster their full participation as active citizens. The provision of at least one year of free and compulsory pre-primary education of good quality should also be encouraged."

FIGURE 1.8: Number of years of compulsory primary and secondary education guaranteed in legal frameworks in Africa, 2019
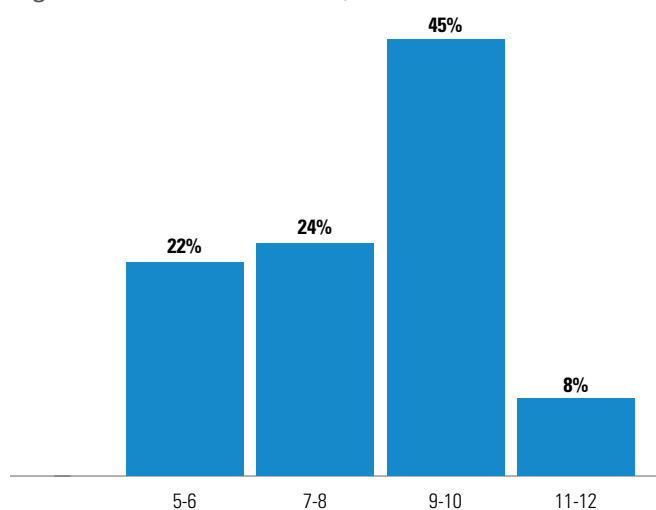
Source: Calculations based on data from the UNESCO Institute for Statistics

FIGURE 1.9: Number of years of free primary and secondary education guaranteed in legal frameworks in Africa, 2019

in the world complete 12 years of free, publicly funded, inclusive and equitable quality primary and secondary education, of which at least 9 years are compulsory.

African countries have committed to creating an enabling environment and legal framework for free and compulsory basic education of at least nine years, and secondary education completion for all. When education authorities from 15 African countries met in Kigali in September 2007, they committed to create the necessary policy environment that will enable the introduction and/or scaling-up of existing good practices in offering basic education through a clear understanding, articulation of visions and shared conviction among all stakeholders on

FIGURE 1.10: Gross intake ratio at the last grade in Africa

PRIMARY SCHOOL AGE   LOWER SECONDARY SCHOOL AGE

Source: Calculations based on data from the UNESCO Institute for Statistics

the importance of a free and compulsory basic education, of at least nine years, which allows an uninterrupted period of learning from early childhood to the end of the basic education cycle.[22]

Today, over half (53 per cent) of countries in Africa have a legal framework that establishes at least nine years of compulsory schooling (*see Figure 1.8*). Similarly, 57 per cent of countries have incorporated free schooling of at least nine years into their legal frameworks (*see Figure 1.9*).

Despite all these efforts, completion rates are struggling to reach expected levels. Although they are only crude measures of completion, the gross intake ratios for the last grades of primary and lower secondary education are still far from 100 per cent for the continent as a whole. After steady increases between 2000 and 2010, during which time they increased by an average of one percentage point per year, these rates have progressed very slowly. In 2019, the continental gross intake ratio for the last grade of primary education was 73 per cent, two percentage points higher than in 2010. The gross intake ratio for the last grade of lower secondary education was 48 per cent in 2019, four percentage points higher than the 2010 value. It may be useful to recall that a gross intake ratio of 48 per cent for the last grade of lower secondary education means that the number of children entering this grade, regardless of their age, represents only about half of those who are of legal age for the grade, and who should have been in that grade.

TABLE 1.3: Completion rates in Africa, 2019 or nearest

REGION	PRIMARY	LOWER SECONDARY	UPPER SECONDARY
Central Africa	65	37	17
Eastern Africa	64	37	22
Northern Africa	83	64	36
Southern Africa	73	50	29
Western Africa	53	33	18
Africa	**65**	**41**	**23**

Source: Calculations based on data from the UNESCO Institute for Statistics

A more precise measure of the proportion of children in a cohort who complete primary and both levels of secondary education, based on household surveys, shows an even more worrying picture. The average completion rate by country is 65 per cent at the primary education level, 41 per cent at the lower secondary level, and only 23 per cent at the upper secondary level.

The situation varies greatly from country to country and from region to region. Northern Africa followed by Southern Africa stand out, with much higher rates, while Western Africa lags behind. In Western Africa the average primary completion rate is only 53 per cent, as against 83 per cent in Northern Africa.

1.6 Limited access to and participation in technical and vocational education and training

At the global level, the expansion of quality technical and vocational education and training (TVET) has been prioritized through SDG 4.3 ("By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university") and 4.4 ("By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship").

At the continental level, the African Union's Continental Education Strategy for Africa includes the expansion of TVET provision as its eighth strategic objective: "expand TVET opportunities at both secondary and tertiary levels and strengthen linkages between the world of work and education and training systems."

Notwithstanding these various commitments and the importance of TVET for the continent, TVET coverage remains low in Africa. In 2019, there were about 10 million adolescents and young people enrolled in technical and vocational secondary education – a ratio

FIGURE 1.11: Distribution of upper secondary education students by programme orientation in Africa, 2019 or nearest.
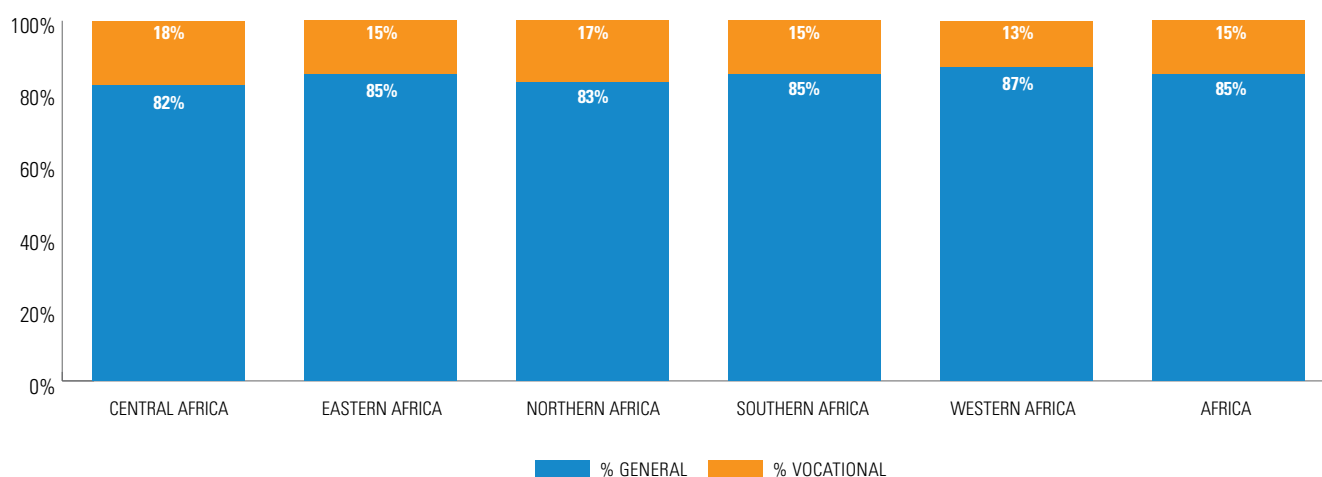
Source: Calculations based on data from the UNESCO Institute for Statistics

FIGURE 1.12: 5-24-year-olds enrolled in vocational education in Africa

	MALE	FEMALE
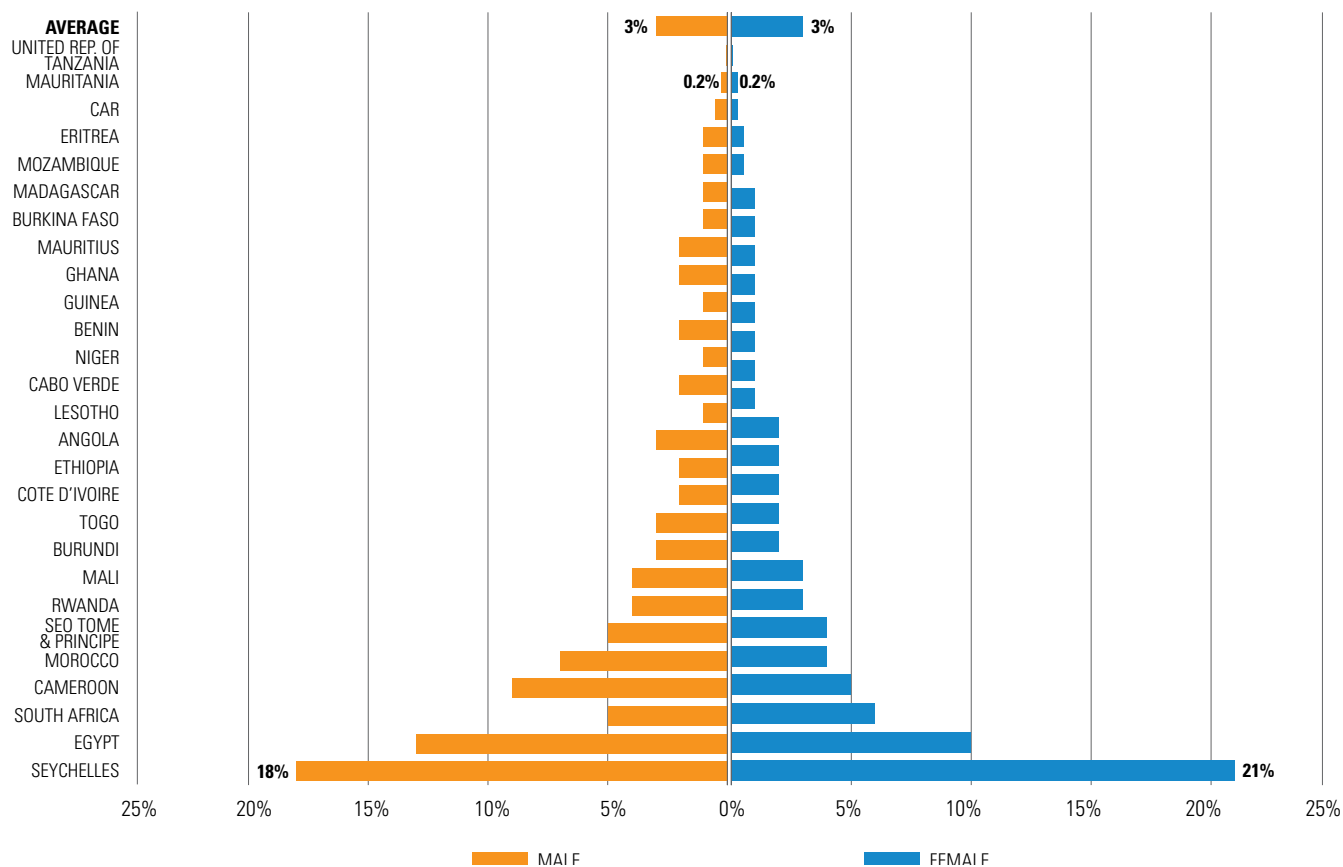
Source: Calculations based on data from the UNESCO Institute for Statistics

of 762 learners per 100,000 inhabitants, compared to a global average of 801 learners per 100,000 inhabitants. On average, the percentage of young people between 15 and 24 years old who are enrolled in vocational education is 3 per cent.

Provision of technical and vocational education and training is almost non-existent at the lower secondary level. Enrolment in lower secondary technical and vocational education averages only 1.6 per cent of total lower secondary enrolment. At the upper secondary level, the average is 15 per cent.

Across the continent, the situation varies from country to country but remains, on average, quite similar from one region to another. In 2019, the share of TVET across upper secondary education ranged on average from 13 per cent in Western Africa to 18 per cent in Central Africa.

Depending on the countries involved, the share of TVET in upper secondary education varies widely. For example it is less than 1 per cent in Comoros while it is 53 per cent in Uganda. Countries that are leading in developing

TVET at upper secondary level include Angola (53 per cent), Egypt (47 per cent), Ethiopia (44 per cent), Mali (37 per cent), Rwanda (37 per cent), Democratic Republic of Congo (33 per cent) and Niger (32 per cent).

In addition, the participation of African adolescents and young people in TVET remains very low: as shown in Figure 1.12, on average only 3 per cent of 15 to 24-year-olds are enrolled in TVET. This situation varies significantly from one country to another, with no major gender disparities.

Factors explaining the low level of TVET development include a lack of adequate funding and the challenges involved in managing the subsector, which inherently requires a cross-sectoral approach, not falling obviously to any one government department.

1.7 Learning outcomes a cause for concern

Discussing the quality of learning in Africa is a challenging exercise because of the difficulty in

FIGURE 1.13: Percentage of students achieving the minimum level of proficiency in Africa, 2019 or nearest

| | LOWEST VALUE | | LARGEST VALUE | | AVERAGE |
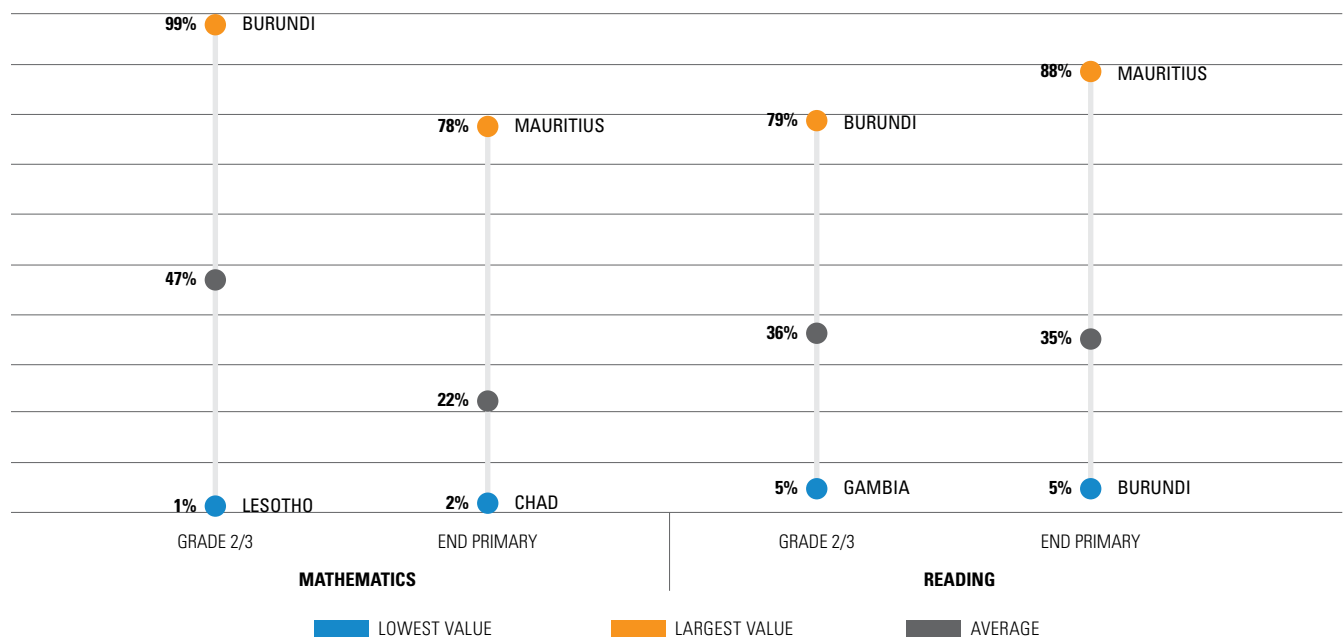
Source: UNESCO Institute for Statistics, CONFEMEN

gathering information on students' levels of proficiency. Even when such information is available and accessible, it is not always comparable and comprehensive enough to paint a robust, clear picture of the continent.

The World Bank has raised concerns that global progress in reducing learning poverty is far too slow to meet the aspirations of the SDGs. According to estimates, at the current rate of improvement, by 2030 about 43 per cent of children worldwide will still be learning poor: this equates to 78 per cent for sub-Saharan Africa. In the 2018 World Development Report[23] the World Bank describes the learning crisis in Africa: "37 million African children will learn so little in school that they will not be much better off than kids who never attend school." According to the World Bank's estimates, even if countries were to maintain their fastest rates of progress observed in recent decades, learning poverty will not be eliminated by 2030.[24] This requires a major rethinking of education to ensure that it is fit for purpose for the proposed African Transformative Agenda of 2063.

In Africa, the proportion of children in the early grades of primary education who achieve the minimum proficiency level is on average 47 per cent in mathematics and 36 per cent in reading.[25] The situation is more grim by the time students reach the end of primary education, with only an average of 22 per cent achieving the minimum

level of proficiency in mathematics, while 35 per cent do so in reading.

There are significant disparities between countries. For example, the proportion of children reaching the minimum proficiency level in reading at the beginning of primary school ranges from 5 per cent in Gambia to 79 per cent in Burundi, while in mathematics it ranges from 1 per cent in Lesotho to 99 per cent in Burundi. The case of Burundi stands out, with the use of the mother tongue as the language of instruction in the early grades of primary education followed by a shift to "French as language of instruction" towards the end of primary school.[26] At the end of primary school, the proportion of children reaching the minimum level of proficiency varies from 5 per cent in Burundi to 88 per cent in Mauritius in reading, and from 2 per cent in Chad to 78 per cent in Mauritius in mathematics.

Information on the quality of learning at the post-primary level is almost non-existent, and when it does exist it is fragmented or outdated. The information that is available for a few countries shows a situation that is no better than that of primary education. In these countries, at most half of all students at the end of lower secondary school achieve the minimum proficiency level in either mathematics or reading. In mathematics, in most countries, less than one in four students achieve

FIGURE 1.14: Percentage of students at the end of lower secondary reaching the minimum level of proficiency in mathematics and reading in Africa; most recent value
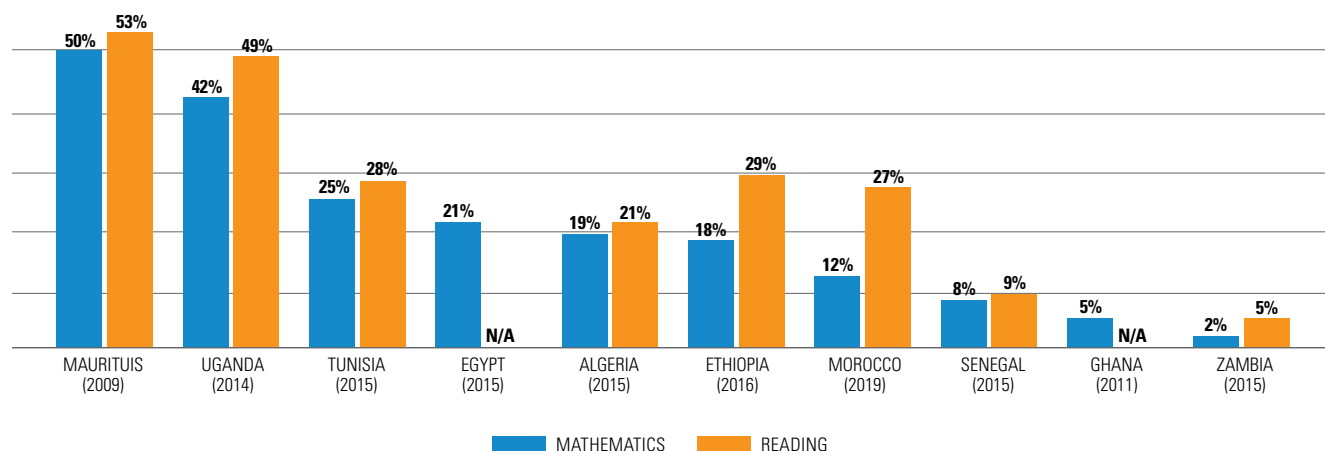
Source: UNESCO Institute for Statistics

the minimum proficiency level by the end of lower secondary school.

The factors that explain the poor quality of learning are numerous and can be found both on the students' side (in their family and community environment, etc.) and on the side of the educational system (organizational and pedagogical practices, lack of human and material resources, poor administrative and pedagogical management, etc.). According to the PASEC 2019[27] report, in all countries that participated in the assessment except Burundi and Gabon, more than 50 per cent of the variance in language scores is explained by school-related differences. These differences include those related to school infrastructure and classroom equipment. Other factors identified by the PASEC 2019 report as determinants of learning outcomes include preschool attendance, parental literacy and availability of reading materials at home.

1.8 Africa will need 17 million teachers to achieve universal primary and secondary education by 2030

1.8.1 A SHORTAGE OF QUALIFIED TEACHERS

Clearly, teachers play a crucial role in children's learning and skills development, especially in the early grades. According to Steve Bissonnette et al. (2005), the teacher is a highly influential actor in the learning process of students. Research findings have sometimes reported mixed results in terms of the effect of pre-service teacher education on student achievement.[28] However, it is often

more the type and content of training that has been questioned, rather than the principle of training itself (IIEP/UNESCO). The need for a sufficient supply of trained and qualified teachers is not debated, and has been enshrined in SDG target 4.c ("By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States").

Countries in Africa face a teacher deficit that is not fully reflected in the average pupil–teacher ratio on the continent. On average, the pupil–teacher ratios are 29,

FIGURE 1.15: Distribution of countries by average number of students per tearcher in Africa, 2019 or nearest
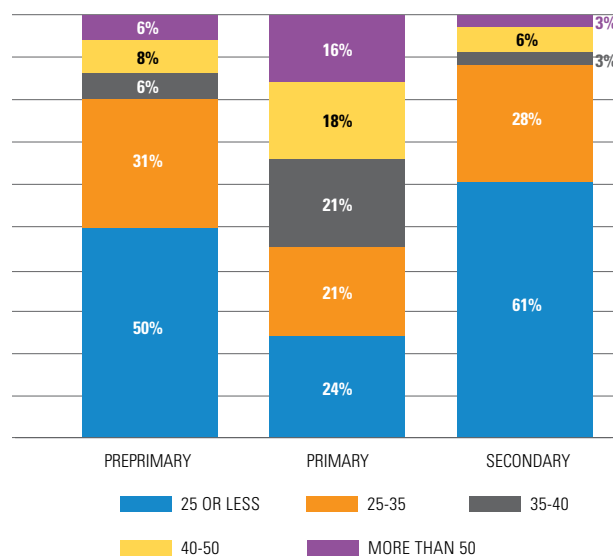
Source: Calculations based on data from the UNESCO Institute for Statistics

37 and 24 at the preschool, primary and secondary levels respectively. At the preschool and secondary levels, only a few countries have average ratios above 35 pupils per teacher (19 per cent at the preschool level, 12 per cent at the secondary level), but at the primary level, more than half of all countries (55 per cent) have a ratio above 35 pupils per teacher.

Various strategies, including the use of civil servants, contract staff and volunteers, teachers being paid by parents, and use of untrained and/ or unqualified teachers, are employed in different countries to obtain a reasonable number of teachers while keeping the corresponding wage bill under control. For example, in the Central African Republic, up to three in five teachers in public primary schools are paid by parents.[29] In Chad, the proportion of community teachers reaches 76 per cent in primary education, 44 per cent per cent in lower secondary education and 22 per cent in upper secondary education.[30]

TABLE 1.4: Pupil–teacher ratio, pupil–qualified teacher ratio and percentage of qualified teachers in Africa, by region, 2019 or nearest

	CENTRAL AFRICA	EASTERN AFRICA	NORTHERN AFRICA	SOUTHERN AFRICA	WESTERN AFRICA	AFRICA	REST OF THE WORLD
Pupil–qualified teacher ratio							
Pre-primary	35	44	20	58	41	43	23
Primary	54	39	22	41	46	42	21
Secondary	41	28	17	49	29	34	16
Pupil–teacher ratio							
Pre-primary	29	32	20	32	26	29	17
Primary	47	37	22	38	36	37	18
Secondary	21	23	17	33	20	24	15
Percentage of qualified teachers*							
Pre-primary	87%	81%	100%	71%	72%	78%	85%
Primary	86%	94%	100%	89%	84%	89%	92%
Secondary	66%	87%	100%	72%	81%	80%	92%

*Source: Calculations based on data from the UNESCO Institute for Statistics *According to national standards*

FIGURE 1.16: Pupil-qualified teacher ratio, primary education, 2019 or nearest

	CENTRAL AFRICA	EASTERN AFRICA	NORTHERN AFRICA	SOUTHERN AFRICA	WESTERN AFRICA	AFRICA

LOWEST VALUE   LARGEST VALUE   AVERAGE
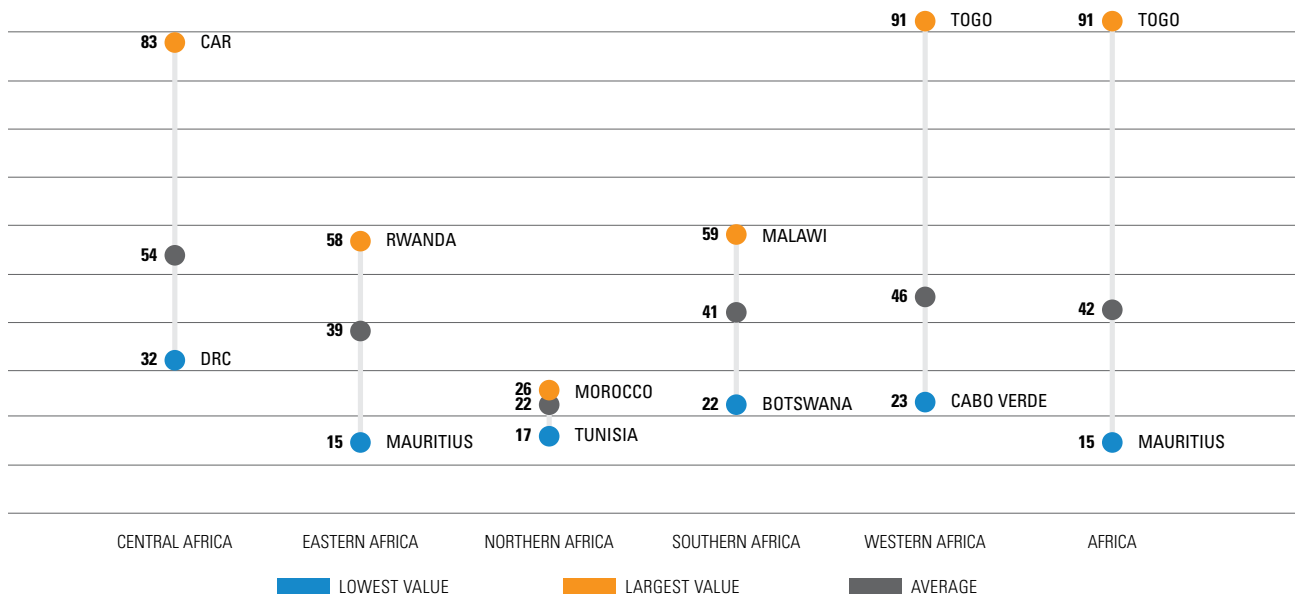
Source: Calculations based on data from the UNESCO Institute for Statistics

With respect to qualified teachers, the average proportion of qualified teachers per country in Africa is 78 per cent at the pre-primary level, 89 per cent at the primary level, and 80 per cent at the secondary level. Disparities can be significant between countries. For example, at the primary level the proportion of qualified teachers is only 43 per cent in Togo and around 60 per cent in Angola, Equatorial Guinea, Ghana and Sierra Leone. In Cape Verde (30 per cent), Comoros (44 per cent), Togo (39 per cent), Uganda (40 per cent), and Zimbabwe (25 per cent), more than half of all pre-primary teachers are unqualified.

The differences can be significant, depending on the country. For example in Togo, the inclusion of unqualified teachers reduces the pupil–teacher ratio dramatically at the primary level, bringing the ratio down to 43 students per teacher, whereas it would have been 91 if only qualified teachers were taken into account.

Across the continent of Africa, the average number of students per qualified primary school teacher ranges from 15 in Mauritius to 91 in Togo. At this level, Northern African countries have the lowest ratio with an average of 22, while Central Africa has the highest regional average of 54 (*see Figure 1.16*).

By way of comparison, the pupil–qualified teacher ratio outside of Africa averages 23 in preschool, 21 in primary and 16 in secondary (UIS).

All of this shows that, regardless of varying teacher/student ratios, there is a pressing need for more qualified teachers in African schools. The critical teacher shortage in sub-Saharan Africa has already been identified by the UIS (2016). According to the UIS's estimates, the demand for teachers who are needed to achieve universal primary and secondary education by 2030 stands at about 17 million; about 6.3 million teachers for primary school (to fill new posts and replace teachers who are expected to leave) and 10.8 million for secondary schools.

1.8.2 INADEQUATE TEACHER MANAGEMENT

In addition to the challenges related to the number of teachers, their qualifications and training, there are also challenges related to teacher management. Various studies, including sectoral analyses, have shown that in several African countries, both the administrative and pedagogical management of teachers suffers from serious shortcomings. Inadequate management can lead teachers and teacher managers to behave in a way that has negative effects on the effectiveness and quality of education systems.[31]

Management issues include, but are not limited to, teacher deployment, career management, teacher training, professional development including pedagogical support and supervision, remuneration and other incentives, and accountability.

FIGURE 1.17: Share of teacher deployment in schools not explained by the number of students, 2015 or nearest
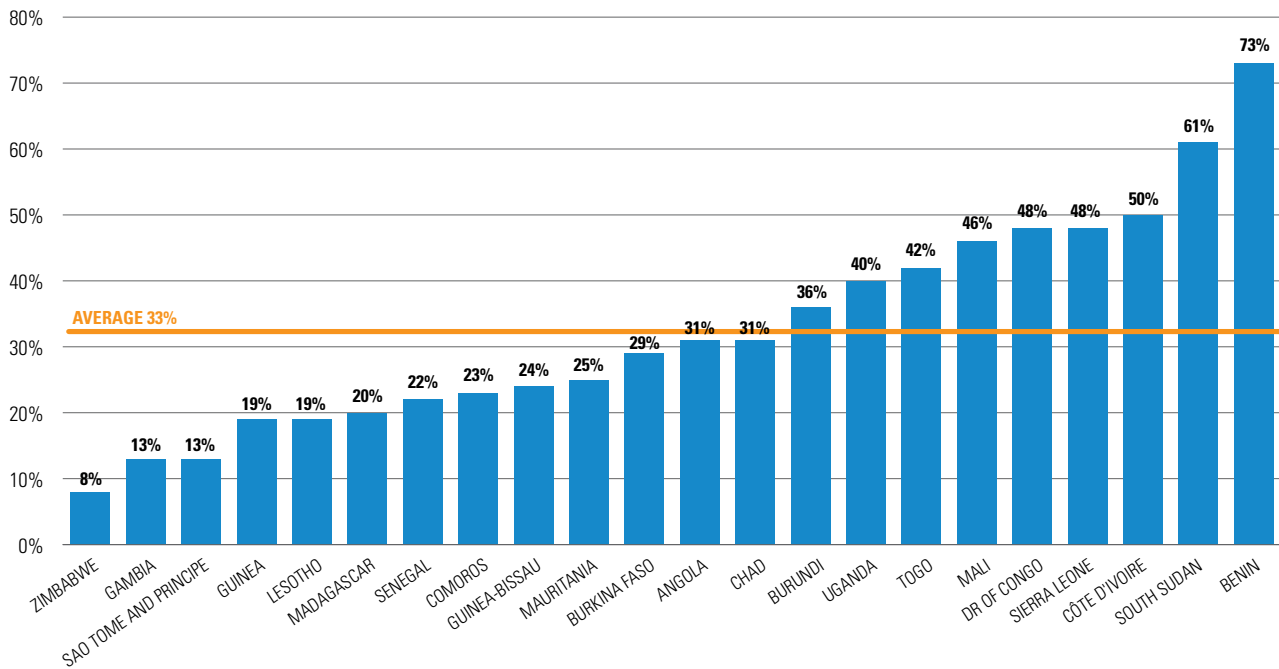
Source: IIPE-UNESCO Dakar

IIEP-UNESCO Dakar, through various sectoral analyses conducted in African countries, has reported that the deployment of teachers in public schools is often determined by factors other than student numbers. By estimating the proportion of teacher deployments that are not explained by the number of students, it is possible to assess the degree of coherence in the posting of teachers. Among the 22 countries for which there is a measure for primary education dating from 2010 or later, this share varies from 8 per cent in Zimbabwe to 73 per cent in Benin, with an average of 33 per cent (*see Figure 1.17*). These shortcomings negatively affect the effectiveness of public spending on education, and undermine efforts to address the teacher deficit in schools.

1.9   Public funding of education: now is the time to invest

1.9.1   EDUCATION NEEDS TO BE A TOP PRIORITY FOR GOVERNMENTS

A significant increase in financing is required if many African countries are to achieve SDG 4.[32] The Framework for Action on Sustainable Development Goal 4 recognizes the diversity of national contexts, but recommends the following benchmarks for national education funding:[33]

✔ allocating at least 4 per cent of gross domestic product (GDP) to education and/ or

✔ allocating at least 15 to 20 per cent of public expenditure to education.

African countries would benefit from contextualizing these benchmarks to take account of their specific circumstances, and moving towards a commitment by governments to converge towards them. Contextual benchmarks should take into account the level of wealth of African nations, the continent's lag in education and training, and especially the large proportion of young people.

On average, an African government spends 4.1 per cent of the country's gross domestic product on education, just above the lower end of the benchmark. This average is close to the global average of 4.3 per cent. Across the regions of the continent, the figure varies from 3.1 per cent in Central Africa to 5.9 per cent in Southern Africa (*see Figure 1.18*). According to country-level data, though, huge disparities exist. Government expenditure as a percentage of GDP ranges from about 1 per cent in the Central African Republic to 8 per cent in Sierra Leone. In more than half of all African countries, the percentage is below 4 per cent.

It is important to note here that, even for those countries that have reached the benchmark of 4 per cent of GDP, the volume of public financing remains quite moderate or low. Indeed, the large proportion of the school-age population, and the accumulated backlog in terms of access to inclusive quality education, mean that African countries still need to make huge investments firstly to improve the learning conditions of children already in school, and secondly to meet the ever-increasing demand. In addition to this, because the GDPs of African countries are relatively small, the corresponding funding volumes are generally low. For example, in 2019 the average GDP per country in Africa was the equivalent of PPP US$123 billion, compared to PPP US$915 billion for countries outside Africa (*see Figure 1.19*). As a result, the amount of government spending per student is the lowest in the world: US$533 for primary and US$925 for secondary school (in terms of purchasing power parity).[34] According to the African Development Bank's calculations,[35] at the primary school level, African countries devote on average a quarter of the resources per student that Latin American countries do, and a fifth compared with Asian countries. At the secondary school level, African countries devote less than half the resources per student that Latin American countries do, and about a fifth of Asian countries.

Government expenditure on education as a percentage of GDP is the product of two factors: first, a government's ability to mobilize domestic resources and second, the budgetary priority given by the government to the education sector.

For some countries such as Liberia, the low allocation of national wealth to public financing of education is explained by a low capacity for internal resource mobilization, reflected in low fiscal pressure; for others like Madagascar, it is more related to the low priority given to education in the government budget. In many cases, there is a combination of both factors.

In terms of the priority given to education in public spending, some 15 countries across the continent allocate less than 15 per cent of their public spending to education. The situation is aggravated in the Central African Republic, Democratic Republic of Congo, Comoros, Guinea, Mauritania and Uganda, where public spending is less than 20 per cent of GDP.

FIGURE 1.18: Government expenditure on education as % of GDP in Africa, 2018

CENTRAL AFRICA	3.1%
EASTERN AFRICA	3.5%
WESTERN AFRICA	4.0%
NORTHERN AFRICA	4.2%
SOUTHERN AFRICA	5.9%
AFRICA	4.1%
REST OF WORLD	4.4%
WORLD	4.3%

Source: Calculations based on data from the UNESCO Institute for Statistics

FIGURE 1.19: Average GDP (purchasing power parity, billions international dollars) in Africa, 2019

CENTRAL AFRICA	39
EASTERN AFRICA	79
WESTERN AFRICA	113
NORTHERN AFRICA	124
SOUTHERN AFRICA	382
AFRICA	123
REST OF WORLD	915
WORLD	695

Source: Calculations based on data from the IMF

FIGURE 1.20: Share of education in government expenditure in Africa, 2018 or nearest

Region	Values
	35% ● SIERRA LEONE 35% ● SIERRA LEONE
	27% ● ETHIOPIA
	23% ● TUNISIA 25% ● ESWATINI
	20% ● SAO TOME & PRINCIPE
	15% ●
	16% ● 16% ● 18% ● 18% ● 17% ●
	11% ● RWANDA 10% ● MAURITANIA 14% ● LESOTHO
	8% ● CAR 8% ● LIBERIA 8% ● CAR

CENTRAL AFRICA   EASTERN AFRICA   NORTHERN AFRICA*   SOUTHERN AFRICA   WESTERN AFRICA   AFRICA

■ LOWEST VALUE   ■ LARGEST VALUE   ■ AVERAGE
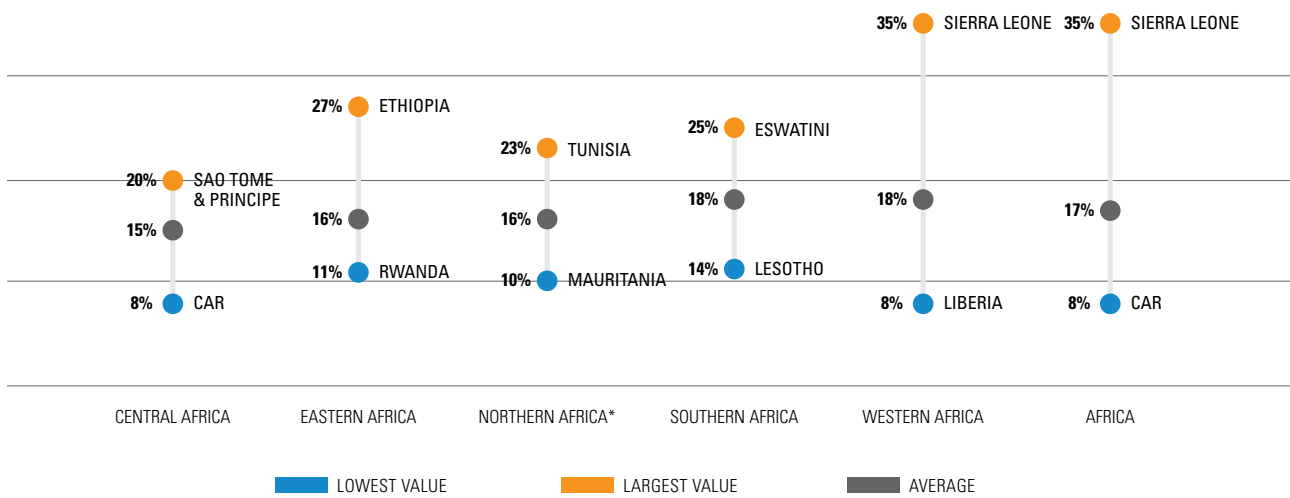
Source: Calculations based on data from the UNESCO Institute for Statistics and the IMF

Disparities between countries are significant, even within the same geographic region. On average, governments in the Central African region spend the least on education relative to their total expenditure (15 per cent), while Western and Southern African governments spend the most (18 per cent on average) (*see Figure 1.20*). Many African countries remain insufficiently financed despite increased public spending on education. Households are also heavily involved in financing education, covering one third of expenditure on average.[36]

Table 1.5 categorizes countries according to the share of public expenditure allocated to education and public expenditure as a percentage of GDP. This categorization makes it possible to identify the room to manoeuvre as countries have to increase public resources for education as a percentage of GDP. For example, the countries in the first box have both a low capacity for internal resource mobilization and a low allocation of public expenditure to education. For these countries (Central African Republic, Democratic Republic of Congo, Comoros, Guinea, Mauritania and Uganda) public spending on education does not exceed 3 per cent of GDP. These countries have room to increase both the government budget through improved tax collection efficiency and the share of the national budget devoted to education. In contrast, the countries in the bottom right-hand boxes of the table have much less room to manoeuvre.

Looking specifically at the two boxes at the top right of the table and at the bottom left of the table:

✔ Ethiopia, Togo and Tanzania devote more than 20 per cent of their public spending to education, yet government spending is less than 20 per cent of GDP. For these countries, the scope for increasing public resources for education lies in improving the government's mobilization of domestic resources.

✔ For Liberia, Lesotho, South Sudan, Seychelles and Zimbabwe, the margins are more likely to be found in intersectoral trade-offs. Indeed, government spending in these countries already represents more than 30 per cent of GDP, while education's share of public spending is less than 15 per cent, and could be greatly increased.

1.1.1   IN-SECTOR TRADE-OFFS: SOME LEVELS OF EDUCATION LOSE OUT TO OTHERS

Figure 1.21 shows the share of public education expenditure by level of education for Africa as a whole, and for a selection of countries. On average countries

TABLE 1.5: Share of education in government expenditure and government spending as % of GDP, 2018 or nearest

SHARE OF EDUCATION IN GOVERNMENT EXPENDITURE

GOVERNMENT EXPENDITURE AS PERCENTAGE OF GDP	LESS THAN 15 PER CENT	15 PER CENT TO 20 PER CENT	MORE THAN 20 PER CENT
LESS THAN 20 PER CENT	Central African Republic, Democratic Republic of Congo, Comoros, Guinea, Mauritania, Uganda	Benin, Cote D'Ivoire, Cameroon, Guinea-Bissau, Madagascar, Chad	Ethiopia, Togo, Tanzania
20 PER CENT TO 30 PER CENT	Djibouti, Gabon, Gambia, Rwanda	Burundi, Congo, Ghana, Kenya, Mali, Mauritius, Malawi, Niger, Zambia	Burkina Faso, Senegal, Sierra Leone, Sao Tome & Principe, Eswatini, Tunisia
MORE THAN 30 PER CENT	Liberia, Lesotho, South Sudan, Seychelles, Zimbabwe	Cabo Verde, Mozambique, South Africa	

Source: Calculations based on data from the UNESCO Institute for Statistics and the IMF

dedicate 43 per cent of their public expenditure on education to primary education. Tertiary education, with an average of one fifth of public spending, continues to be the priority in public funding, while preschool education remains almost non-existent in terms of public funding, with only 3 per cent.

Country-level data on the breakdown of public expenditure on education by level shows that many African governments still do not prioritize the allocation of resources to early childhood education (ECE). Of the 17 countries with data, only Comoros (7 per cent) and Seychelles (10 per cent) allocate more than 5 per cent of public expenditure on education to ECE. Many countries allocate education funding disproportionately to higher-level education. Given that children from poor backgrounds are more likely to be excluded from the higher levels of the education system, the current funding mechanism ultimately benefits the children of wealthy households, who are already privileged.

Looking at the nature of public spending on education, it appears that the largest part of education expenditure is

taken up by recurrent expenditure, such as the paying of salaries. On average, countries devote less than 13 per cent of their education spending to capital expenditure. This figure is less than 10 per cent at the pre-primary, primary and secondary levels.

In Comoros, South Sudan, Lesotho, Togo, Namibia, Cabo Verde, Democratic Republic of Congo and Côte d'Ivoire, among other African countries, more than 80 per cent of expenditure in educational public institutions goes to staff compensation (UIS).

A real change in the structure of education spending is needed to meet the challenges posed by the large number of out-of-school children, the sustained growth of school-age populations, and the demands of reimagining education in line with the requirements of the twenty-first century in a post pandemic world.

In countries such as Niger, Mali, Senegal, Guinea, Benin and Chad, where more than 30 per cent of primary school age children are out of school, less than 10 per cent of public expenditure on education is devoted to

FIGURE 1.21: Distribution of government expenditure on education by education level in Africa, 2018 or nearest

PRE-PRIMARY   PRIMARY   SECONDARY   TERTIARY   NOT SPECIFIED BY LEVEL
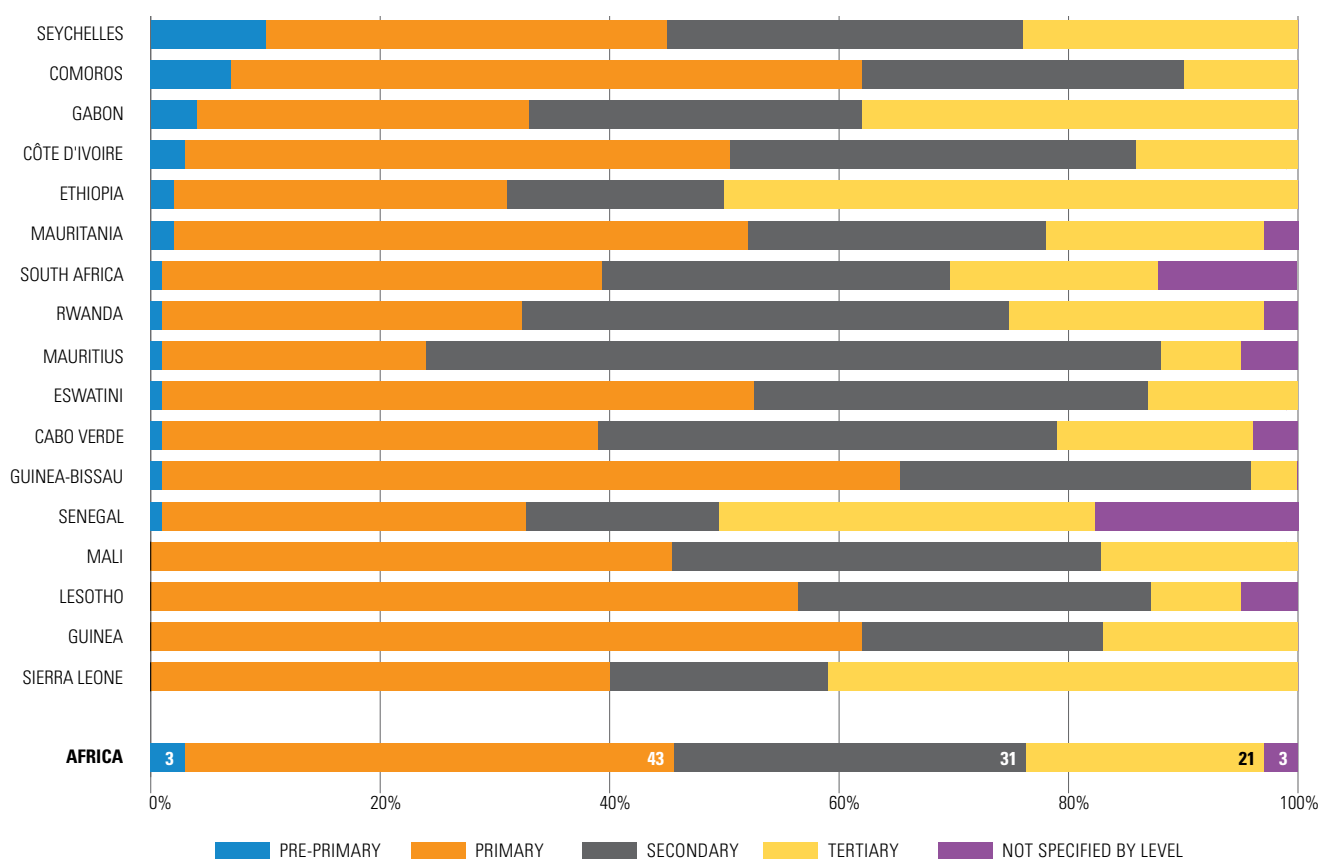
Source: Unesco Institute for Statistics

FIGURE 1.22: Percentage of capital expenditure in government expenditure on education in Africa, 2018 or nearest

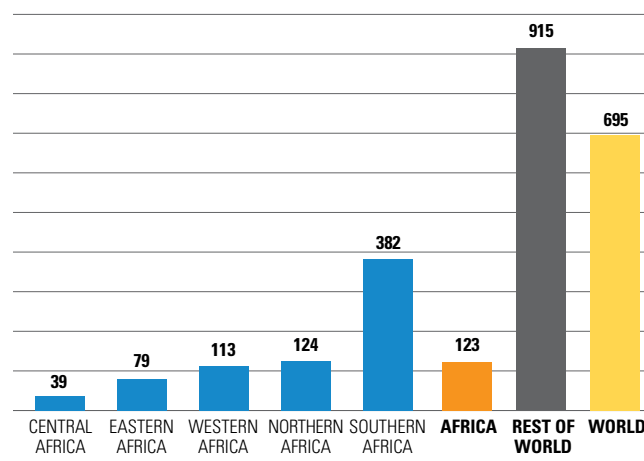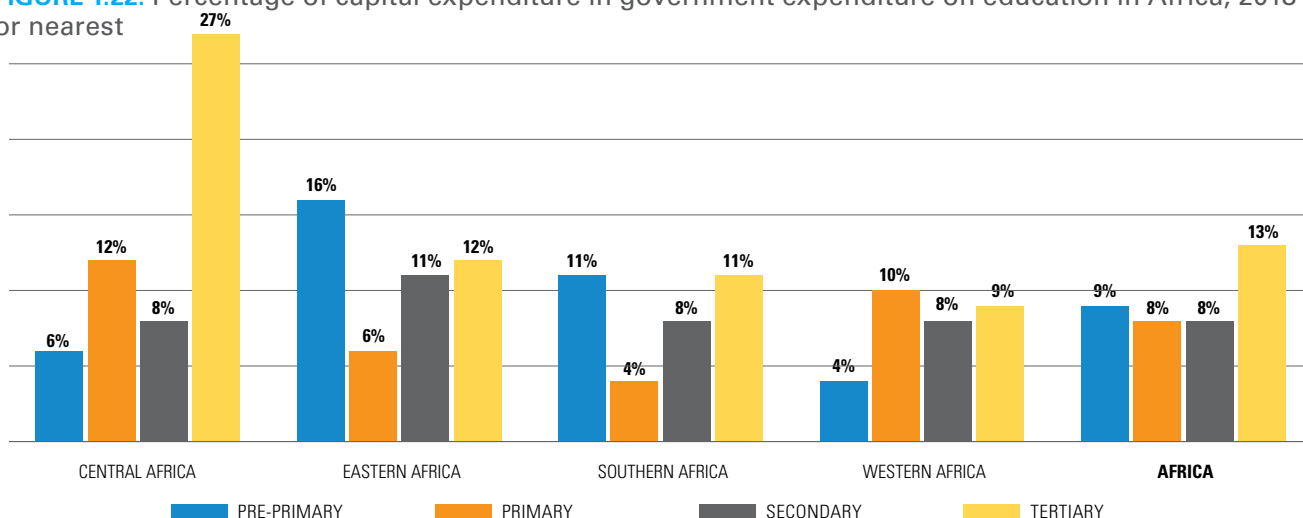*Source: Calculations based on data from the UNESCO Institute for Statistics*

capital expenditure such as building classrooms and other educational infrastructure. Similarly these same countries, with the addition of Madagascar and Côte d'Ivoire, have more than 30 per cent out-of-school children of lower secondary school age, but dedicate less than 10 per cent of their secondary education budget to capital expenditure.[37]

1.9.3 THE INEFFICIENCY OF GOVERNMENT SPENDING ON EDUCATION

Africa remains the world's least efficient region in using education funding, with a 58 per cent efficiency score at the primary school level, which implies that African countries could improve their primary education by 42 per cent just with their current levels of spending, by

improving the efficiency of education financing.[38] In terms of secondary education, it could be improved by 41 per cent.

The causes of this lack of efficiency are mainly the high repetition rates seen in many African countries, as well as the high dropout rates. Across the continent, the average repetition rate is 10 per cent at the primary level and 13 per cent at the junior general secondary level, compared to 2 per cent and 3 per cent respectively elsewhere. Central Africa has the highest repetition rates, averaging 18 per cent at the primary and lower secondary levels. The negative effect of repetition on the efficiency of the education system is clear, as it leads to additional expenses for repeating students. Teacher absenteeism

FIGURE 1.23: Average repetition rate by region in Africa, 2018 or nearest
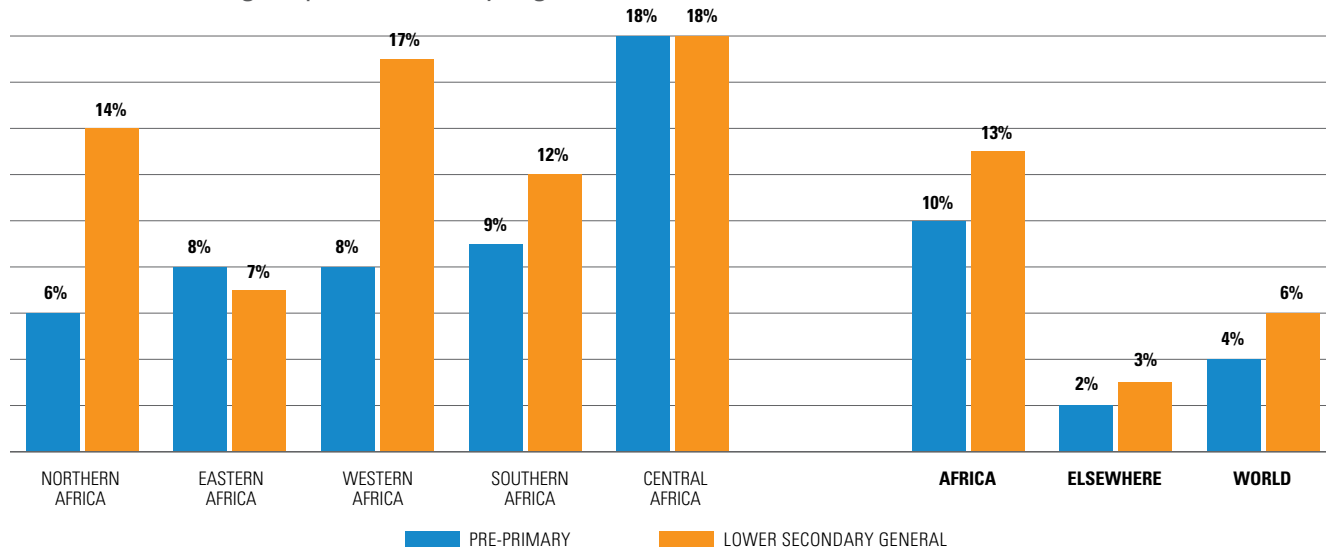
Source: Calculations based on data from the UNESCO Institute for Statistics

is another bottleneck leading to inefficiency in education spending. For example, recent 'Time to Teach' studies[39] conducted in Africa have shown that countries in Western and Central Africa are losing about 1.5 per cent of GDP annually due to teacher absenteeism.

According to an African Development Bank analysis,[40] if efficiency levels in Africa met those in Asia or Latin America, the completion rate of primary education could rise from 79 per cent in 2016 to 98 per cent, suggesting that many African countries could achieve universal primary enrolment by improving the efficiency of their education spending.

1.10 Bottlenecks and barriers to improving education

Policy and legal framework: Basic education is compulsory across Africa, yet legal measures for effective implementation are often lacking. Compared to the global average of 9.6 years, African countries guarantee compulsory education for 8.3 years under their legal frameworks.[41] Progress has been made across the continent to promote equal opportunities for all school-age children and adolescents through development and implementation of inclusive education policies. The aim of these policies is to close gaps in equity and efficiency, in terms of access to education, by profiling the most vulnerable children, who are excluded from education and not given the resources that they need to complete their education cycle.

However, in some countries greater attention is still required to enhance the existing legal and policy frameworks for education, to promote greater equity. For instance, despite Ghana's Free Compulsory Universal Basic Education (FCUBE) policy, it has been shown that the most vulnerable children benefit least, because of the indirect costs, fees and opportunity costs that they face when attending school.[42]

In addition to these challenges, and the related issues of weak institutional frameworks and lack of proper information-sharing channels around available alternative pathways, education planning processes are still experiencing efficiency issues, despite recent improvements. These issues relate to a disconnection between expected learning outcomes and the effective implementation of cost-effective interventions.

Demand-side barriers: a number of factors continue to affect children's participation in schooling. These include the direct and indirect costs involved, as well as the opportunity costs – these are linked to child labour, the mismatch between education systems and labour market needs, the perception among parents of the relevance of education for future life prospects, cultural beliefs (relevance of education, social norms), the education level of the heads of households, whether children live in a rural or urban environment, and household wealth.

For instance, 72 per cent of parents in Kenya reported that their children dropped out of school because of the high cost of education. In Ethiopia and Mozambique, the main reason for dropping out of school is the perceived quality of education, as children there have benefited from the abolition of fees.[43] In Ghana also financial burdens have been lifted: the fee-free secondary education programme, which began in 2017, has been credited with a surge in school enrolment and completion rates – from 308,000 in 2016 to 430,000 in 2018. This seems to show that fee-free policies have played a key role in removing critical barriers to secondary education for disadvantaged children in Ghana.[44]

Gender and social cultural norms remain significant barriers to girls, and in some cases boys, in continuing their education. Sociocultural and economic factors can prevent girls from continuing their education once they reach adolescence.[45] In Benin and Mali, for instance, the rate of transition to secondary school remains low for girls, because low-income families, particularly in rural areas, often require girls to do domestic work.[46]

Early marriage and violence against children in schools and communities continue to be seen as 'normal' in local communities.[47] The sociocultural environment is still a major barrier to girls' education, particularly in countries where harmful social norms such as child marriage, early pregnancy and/ or violence against girls prevent girls from going to school. Early marriage, in particular, can prevent girls from transitioning to lower secondary school. Unmarried girls have the same opportunities to attend and complete primary school as boys, but once they complete primary schooling, the likelihood of their transitioning to secondary school is reduced for those who are married. Gender disparities tend to be wider among young people from poor backgrounds than among the

affluent, wider in rural areas than in urban areas, and wider in slums than in non-slum areas. A 2019 study[48] by UNICEF showed that there is a practice of actively hiding children with disabilities. The practice is related to social norms of overprotection, a mind-your-own-business demeanour, and avoidance of quick decisions by fathers. The findings underscore a need for attention to working across sectors in addressing disability, rather than single-issue organizing, particularly when it comes to the combination of disability, culture, gender violence and poverty.

Supply-side barriers: The quality of education is affected in many African countries by a **lack of teachers, especially qualified teachers and/ or specialized preschool teachers.** In addition, there is limited use of innovative teaching and learning approaches – such as child-centred learning – that address the learning needs of individual learners. While many countries have made progress in reducing class sizes, large class sizes remain a concern in several contexts, especially in early grades and poorer areas. This makes child-centred teaching and learning even more difficult. The shortage of teachers at primary level is mainly due to budgetary limitations on the part of governments, while at secondary level it is largely a result of lack of supply, especially where science and IT teachers are concerned.[49]

In filling the gap in the teaching workforce, it is particularly helpful if more female teachers can be employed. Female educators have a positive impact on girls' education and therefore their recruitment and retention are of great importance in many African countries. At present there are more men than women teaching in primary schools in sub-Saharan Africa.[50] The percentage of female primary school teachers ranges from 89 per cent in the Seychelles to 13 per cent in Liberia, but in most countries women are in the minority. For example in South Sudan (15 per cent), Togo (16 per cent), Central African Republic (19 per cent), Benin (24 per cent) and Djibouti (27 per cent) (UIS, 2016). In many countries it is difficult to increase the number of female teachers, because many girls do not complete their schooling. This vicious cycle is one of many contributors to Africa's teaching crisis.[51]

The recruitment and retention of teachers, female and male, is further complicated by low teacher morale and declining motivation. Regarding the professional development of the teacher workforce, in Togo only 43 per cent of primary school teachers have received training to help them become qualified. The situation is especially acute in pre-primary education, where more than half of all teachers are unqualified in Cape Verde, Comoros, Togo, Uganda and Zimbabwe. Insufficient provision of schools, long distances to school and associated risks to girls on the road to school: these all

generate additional risks that adolescent girls will drop out. Educational discontinuity in incomplete schools also puts some children at risk of dropping out, if their school does not provide all the grades of primary education. Lack of critical commodities, such as furniture, textbooks and exercise books, may also lead to children dropping out. The lack of national policies on schoolbooks in most countries in Western and Central Africa limits children's access to and use of books, especially in rural areas and among poor families. This situation has an impact on the quality of education, leading to repetition, dropout and poor learning outcomes. Looking at the private sector, several countries in the region are experiencing an expansion of low-fee private schools, which poses its own challenges. Alternative education programmes and non-formal learning opportunities often lack premises and facilities, even when they are officially recognized by national authorities. WASH in school remains generally poorly developed, with poor provision of separate latrines and water points, and little consideration of menstrual hygiene management, which affects girls' welfare, attendance and learning achievement. On average, nearly two African primary schools in five do not have access to basic drinking water, and as many do not have single-sex basic sanitation facilities. The situation varies across the continent: while in countries such as Egypt, Tunisia, Cabo Verde and Djibouti almost all primary school schools have access to basic WASH facilities, in Chad and Niger the proportion does not exceed 20 per cent. More generally in Western African countries, on average, less than half of all primary schools have access to basic drinking water or basic handwashing facilities.

Conflict and insecurity: in situations of armed conflict and insecurity, deliberate attacks on/ threats against learners, academics, teachers and education facilities represent both a barrier to the education of children and a serious protection issue.[52] The African continent, like others, is currently facing issues of conflict, political instability and population growth, which has led to an escalation in security issues in several countries. Subsequently, the focus in terms of funding has shifted away from the education sector towards competing priorities linked to peace and security.

The effects of conflict and violence on access to education are indisputable: poverty is compounded, discrimination is enhanced, curricula are politicized, and quality and pedagogy become secondary to the goal of restoring normality. In addition, the physical destruction of educational infrastructure, and the pervasive nature of violence and insecurity for children, act as systemic barriers to education. In DRC, children have often seen soldiers burning benches and other school furniture for firewood. Years of conflict and insecurity have resulted in a lack of training for new teachers, as well as lack of access to education for parents.[53] A surge in deliberate attacks against students, teachers and schools in Western and Central Africa[54] led to a tripling in school closures towards the end of December 2020, affecting nearly 9,600 schools, and leaving almost two million student without access to education (*see Figure 1.24*).[55] The commitments that the international community has made, under Education 2030, are threatened by such attacks wherever they occur, and in particular in Africa. Building resilient education systems remains a high priority across the continent, and this is translated into the Continental Education Strategy for Africa (CESA) 2016–2025 strategic objective 10: to "promote peace education and conflict prevention and resolution at all levels of education and for all age groups" (AUC, n.d., p. 8).

Finally, there is a need for national policies to better articulate strategies and effective education programmes and interventions, to address issues around: (i) teacher quality and management; (ii) mother tongue instruction especially in early grades, and (iii) systematic assessment of learning outcomes or use of national learning assessments for foundational skills, to provide formative learning assessment data that can inform the development of prioritized education policies, which could better support educational quality and sustainability.

FIGURE 1.24: Number of students affected by school closure because of insecurity, Western and Central Africa
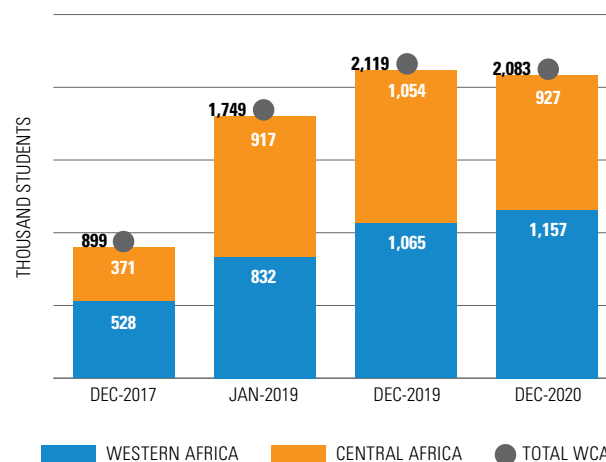
Source: UNICEF

EQUITY ANALYSIS: MANY CHILDREN REMAIN EXCLUDED FROM EDUCATION

Through Sustainable Development Goal 4, the international community as a whole has reaffirmed the right to education for all children, and committed itself to ensuring that every child has access to inclusive and equitable quality education. Beyond the fact that it is a human right for all children to benefit from inclusive quality education, the social and economic benefits of a fully educated population are well documented.[56] It is in the interests of all national authorities to ensure that no child is excluded, especially at the basic level, from learning opportunities. However, many children are still excluded from these opportunities for reasons for which they are not responsible: either because they are girls, or because they come from low-income families, or because they have a disability or they live with their parents in rural areas or in an area affected by conflict.

2.1 Disparities in education between boys and girls, rich and poor, urban and rural

For some children in Africa, attending school remains a dream that still seems unattainable. Nearly one in five children of primary school age are not in school (*see Figure 1.4*). While overall gender inequality in school attendance has declined sharply, and has almost disappeared on average for children of lower secondary school age or younger, inequalities due to children's economic background, as well as their place of residence, are still prevalent. Children from poor families and those living in rural areas still experience inequality. **For instance, a child from the richest quintile of households is eight times more likely to complete primary school, and 12 times more likely to complete upper secondary level, than a child from the poorest quintile** (*see Figure*

2.1). Indeed, if we consider their economic background, on average two in five African children from the poorest families complete primary school, compared to four in five from the richest families. At the secondary level, only 6 per cent of the poorest children complete upper secondary school, compared to 46 per cent of the richest. By location, only 12 per cent of children living in rural areas complete upper secondary education, compared to 34 per cent living in urban areas (*see Table 2.1*).

An aggregate measure of inequity in these three dimensions (gender, wealth and location) allows us to compare regions and countries in terms of inequity. The equity index, calculated on the basis of the lower secondary completion rate, **reveals that Western Africa, followed by Central Africa, are the most unequal regions, while Northern Africa is the most equal.** On a country-by-country basis, Chad, Ethiopia, Angola and Niger are among the most unequal in Africa.

Regarding learning outcomes, the 2019 PASEC assessment identifies huge disparities in reading and mathematics by students' economic background. In Madagascar, the proportion of children achieving the minimum proficiency level at the end of primary education in reading is 50 times higher among children from the richest families than among children from the poorest families. In Côte d'Ivoire, the ratio reaches almost 70 in mathematics. Unfortunately, this means that almost no child from the poorest quintile achieves this level of proficiency.

FIGURE 2.1: Odds ratios on completion rates in Africa
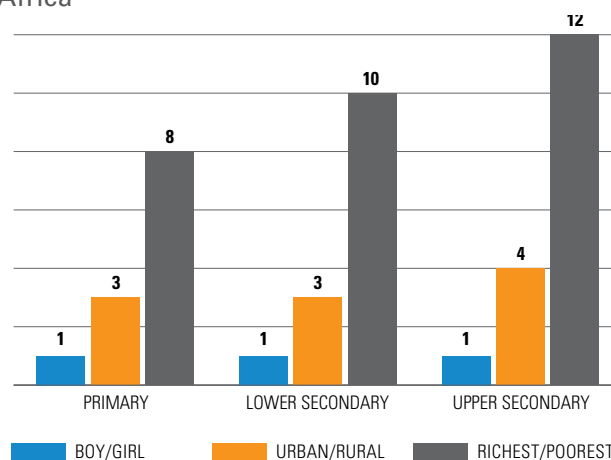
Source: Calculations based on data from the UNESCO Institute for Statistics

Clearly, measures are urgently needed to ensure that the most disadvantaged children not only have access to education, but are effectively learning.

2.2 Structural inequities: children from wealthy families benefit more from education spending

There is a strong association between equity of resource allocation in education and universal access to basic education. According to UNICEF's global estimate, **an increase of 1 per cent in public education spending for the poorest 20 per cent of households is associated with a 0.4 percentage point increase in the primary completion rate.**[57]

TABLE 2.1: Completion rates by gender, location and wealth quintile in Africa, 2019 or nearest

	PRIMARY	LOWER SECONDARY	UPPER SECONDARY
Gender			
Female	66	41	22
Male	64	42	24
Quintile			
Poorest quintile	41	17	6
Second quintile	53	26	11
Middle quintile	62	35	16
Fourth quintile	73	48	24
Richest quintile	84	67	46
Location			
Rural	53	28	12
Urban	78	56	34
Africa	**65**	**41**	**23**

Source: Calculations based on data from the UNESCO Institute for Statistics

FIGURE 2.2: Lower secondary completion aggregated equity index, by region in Africa, 2018 or nearest
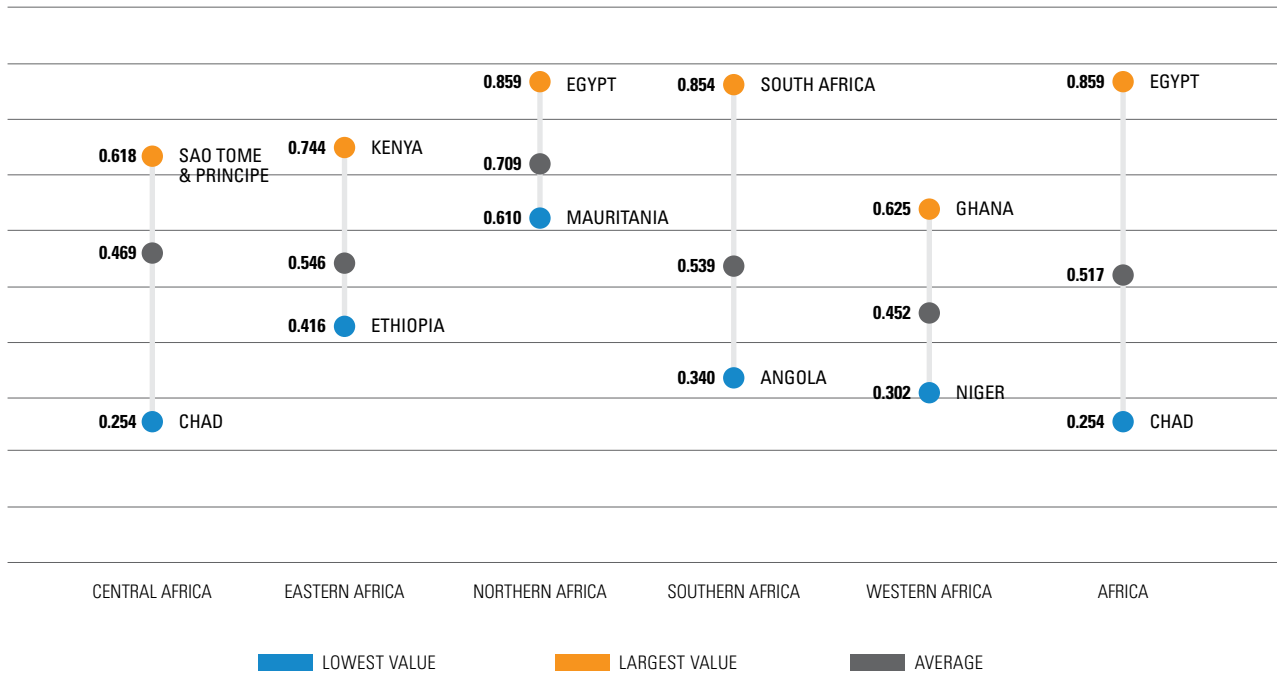
Source: Calculations based on data from the UNESCO Institute for Statistics

In many African countries, the distribution resulting from the structure of government expenditure by level of education, and the schooling profiles of different categories of the population, is so inequitable that children from the poorest households are allocated as little as 10 per cent of public education spending, or less. In Guinea and Central African Republic, the poorest quintile of children benefits from only 5 per cent and 8 per cent of public education spending respectively: in Senegal and Cameroon the figure is 9 per cent. By contrast, children from the richest 20 per cent of households are getting 37 per cent of the public education spending, almost four times that of their poorest peers.

As shown in Figure 2.4, the by-wealth disparity in public education resources in Africa (10 per cent vs. 37 per cent) is much larger than the global average (16 per cent vs. 26 per cent).

FIGURE 2.3: Percentage of students achieving minimum level of proficiency (PASEC level 4) at the end of primary: richest quintile/ poorest quintile, 2019
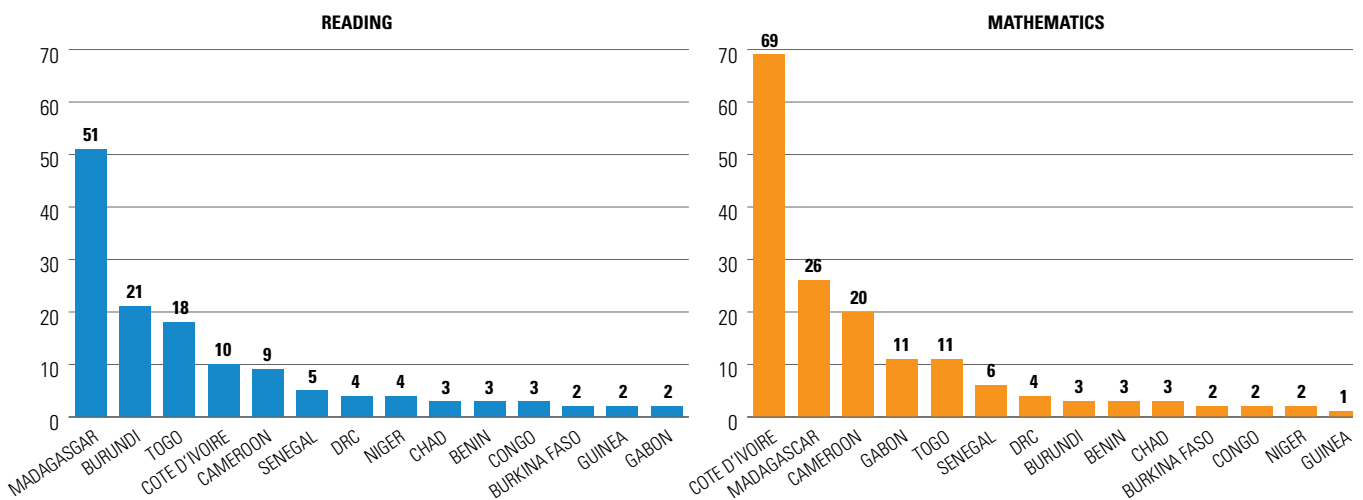
Source: Calculations based on data from the CONFEMEN

At a country level, the 10 African countries for which data is available are also the top 10 in terms of inequitable education financing (*see Figure 2.5*). In Guinea, children from the richest households receive 8.9 times the amount of public education spending that children from the poorest households receive; this figure is 6.2 times in Central African Republic, and 4.6 in Senegal. It might seem as inevitable that this would be the case in lower-income countries, but there are countries outside of Africa of similar GDP per capita that have much more equitable education financing, including Bangladesh (with GDP per capita close to Senegal's) and Indonesia (whose GDP per capita is close to that of Tunisia) where the richest/ poorest ratios are 1.8 and 1.4 respectively.

FIGURE 2.4: Average share of public education resources for children from the poorest and richest quintiles, 2019

	% OF EDUCATION RESOURCES REACHING THE 20% POOREST CHILDREN	**% OF EDUCATION RESOURCES REACHING THE 20% RICHEST CHILDREN**
GLOBAL	16	26
AFRICA	10	37
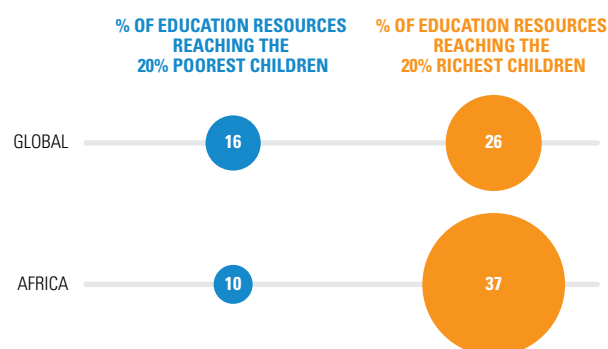
Source: Calculations based on data from the World Inequality Database on Education and the UNESCO Institute for Statistics

FIGURE 2.5: Percentage of public education resources going to children from the poorest households versus that spent on children from the richest households, 2019 or nearest

% SPENDING ON 20% POOREST   % SPENDING ON 20% RICHEST
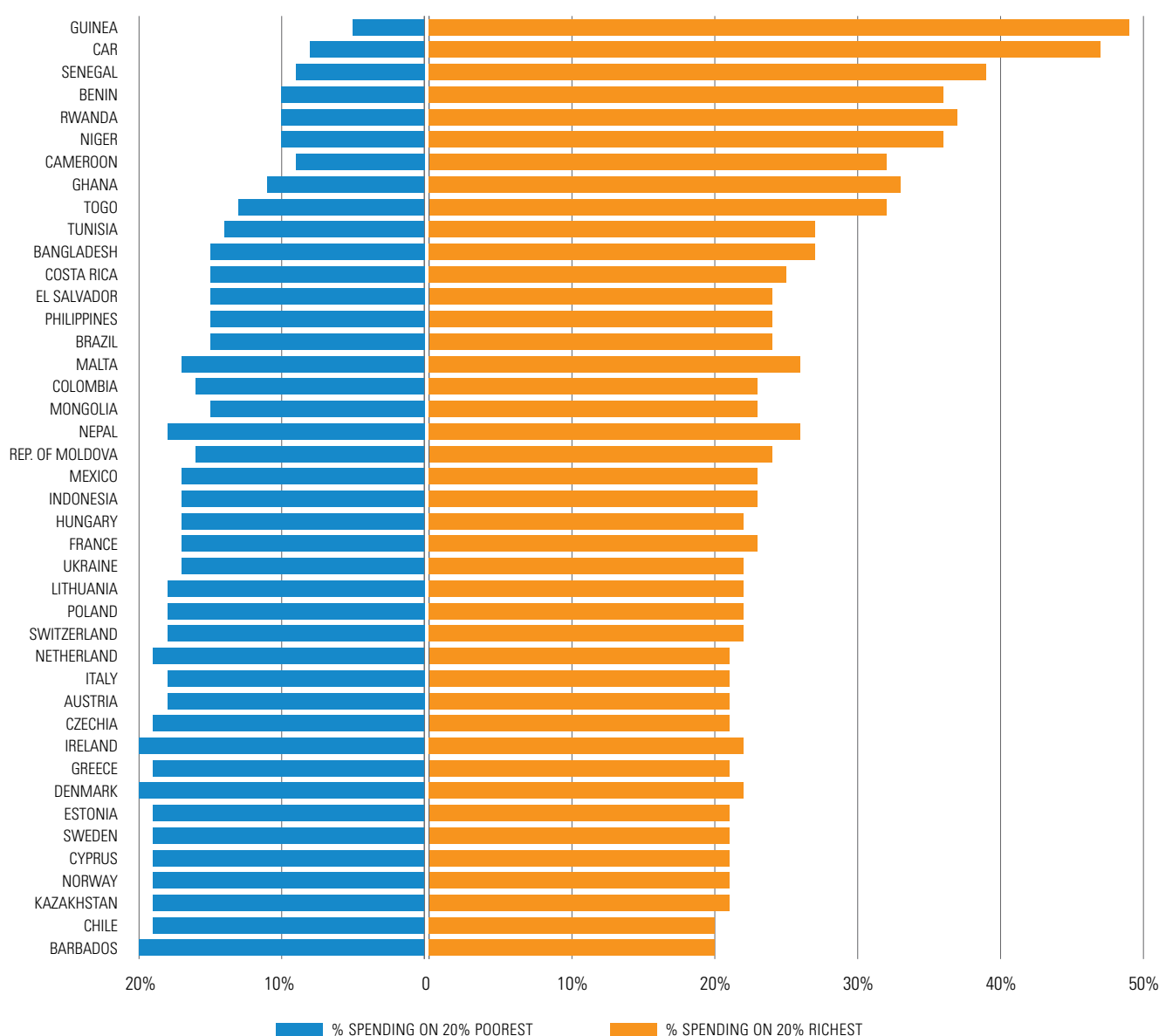
Source: UNICEF calculation using the World Inequality Database on Education and UIS data

LESSONS LEARNT FROM THE EDUCATION RESPONSE TO COVID-19 AND OTHER PANDEMICS

The impacts of the Ebola outbreak[58] in Africa went beyond a 'public health emergency'. The outbreak negatively affected: (i) social services in terms of their availability, accessibility, quality and utilization, (ii) the psychosocial well-being of families, and (iii) national economies, threatening the lives and livelihoods of more than 22 million people in the three most affected countries in Africa (Guinea, Sierra Leone and Liberia).

The COVID-19 pandemic is the worst shock to education systems in recent global history, with the longest school closures and interruptions to education. Lessons learnt from COVID-19 and other pandemics, such as the Ebola outbreak, will help to shift policy towards building resilient and inclusive education systems in Africa and

elsewhere. The COVID-19 pandemic underlined the importance of innovative thinking if the global community is to reimagine the next generation of education systems, in which new technologies and other innovations will be used as enabling tools in delivering education and learning opportunities, to reach the most disadvantaged and vulnerable groups.

The United Nations Secretary-General António Guterres recently called on governments and donors to prioritize education for all children, including the most marginalized, and the Global Education Coalition was established to support governments in strengthening distance learning and facilitating the reopening of schools

3.1 Unpreparedness of education systems for the digital learning era

COVID-19 has forced governments to rapidly roll out or scale up remote learning programmes, and it is unlikely that the ideal preconditions for such a rapid roll-out were in place around the world.[59] Across the globe, countries have responded to school closures by using a variety of learning modalities, including fully remote learning or hybrid learning, as well as other measures to mitigate potential learning losses.[60] Despite these efforts, country-level evidence shows that a large proportion of students did not have access to, or did not participate in, the remote learning that was provided. Approximately 48 per cent of students (54 million) were not reached by digital and broadcast learning in Western and Central Africa.[61] The main reasons for this lack of access were the lack of availability of distance learning (it was only available for specific grades in some countries), followed by the lack of a computer or an internet connection at home – especially for those living in rural areas.

3.2 Addressing the digital divide in Africa

Across Africa, children and young people face barriers that prevent them from accessing and using technology and digital tools. The gap is multifaceted: there are divides in access to the internet, but also in access to mobile phones, in access to and ability to use mobile internet services, in ability to create technology, as well as in basic digital literacy.[62] Currently 34 per cent of households have internet access in Africa, and around 89 per cent of learners do not have access to a computer at home.[63] Only 53 per cent of students in Northern Africa, and 8 per cent of students in sub-Saharan Africa, have access to a computer. Only 14 per cent of students in sub-Saharan Africa have access to the internet at home.[64]

In terms of internet and computer access in schools, evidence shows that there are at least five African countries – Tanzania, Mauritania, Cabo Verde, Botswana and Tunisia – where students enrolled in lower secondary school have access to computers for pedagogical purposes (*see Figure 3.1*).

FIGURE 3.1: Proportion of lower secondary schools with access to computers and the internet for pedagogical purposes in Africa, 2019 or nearest
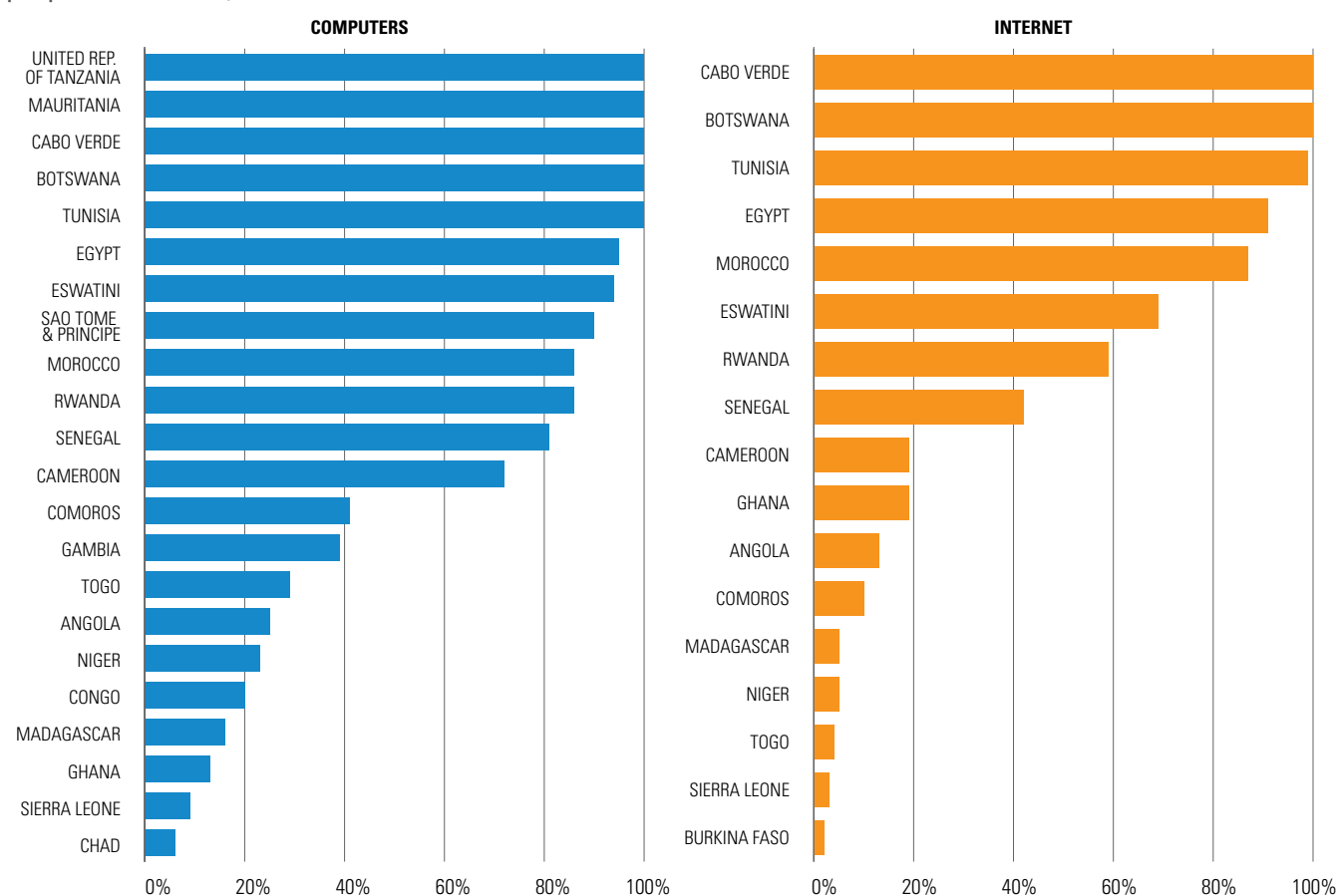
Source: UNESCO Institute for Statistics

Prior to the COVID-19 pandemic several countries, such as Kenya and Rwanda, envisioned the potential use of digital learning to complement traditional modes of learning delivery. The first step involved creating national ICT policies and nurturing strategic partnerships with the private sector, especially with telecommunication companies to lower the cost of access to ICT devices and internet connectivity. It also included developing and implementing digital literacy programmes combining innovative low-cost and no-tech approaches.

Ministries of Education now have a window of opportunity to use the full potential of digital technologies, particularly to make up for the learning loss due to the school closures. This will take investment in ICT infrastructure and strategic partnerships with a wide range of partners, including internet services. Such investments are best made with a clear road map and interministerial collaboration platform, supported by national ICT and Education policy frameworks. Interministerial collaboration between countries' Ministries of Education and Telecommunications is a key enabling factor in the digital transformation of education delivery.

More broadly, government actions on closing the digital divide in Africa can involve:

✔ Developing strategic partnerships with the private sector to encourage telecommunications companies and internet providers to bring down the cost of airtime, mobile data and broadband services.

✔ Engaging in constructive dialogue with the private sector such as IT corporates and mobile network operators to introduce forward-looking, innovative teaching and learning approaches that expands access to online learning resources to all children, including the most disadvantaged and vulnerable.

✔ Developing policies and economic incentives to promote local digital ecosystems, for example, promoting community-based internet access points. Policies and economic incentives can be used to stimulate innovations that will help close the digital divide and create new employment opportunities.

3.3 The benefits of boosting investment in WASH in schools, and considering reductions in class sizes

The COVID-19 pandemic has shown the importance of protecting children, teachers and education personnel. As school operations return to normal, a number of frameworks, guidelines and recommendations (World Health Organization, 2020 and UNESCO, UNICEF, The World Bank, World Food Program, and UNHCR, 2020) have been offered to stakeholders in the education sector, to help ensure a safe reopening of schools, with water, sanitation and hygiene and physical distancing being considered among the recommended measures. UNICEF's framework for the safe reopening of schools has four key pillars: (i) safe operations, (ii) learning, (iii) including the most marginalized, (iv) well-being and protection. It also has two cross-cutting dimensions: policy and financing.

The first pillar, on safe operations, includes a specific call for member states to increase their investment in WASH, and consider reducing class sizes, as effective social distance measures: a) developing detailed protocols on hygiene measures, including handwashing, respiratory etiquette, use of protective equipment, cleaning procedures for facilities and safe food preparation practices; b) developing clear and easy-to-understand protocols on physical distancing measures, including prohibiting activities that require large gatherings, staggering the start and close of the school day, staggering feeding times, moving classes to temporary spaces or outdoors, and having school in shifts to reduce class sizes.

FIGURE 3.2: Proportion of schools with basic WASH facilities in Africa, 2018 or nearest

Bar chart showing proportions by school level:

Category	Primary	Lower Secondary	Upper Secondary
Access to basic drinking water	58%	74%	82%
Basic handwashing facilities	50%	64%	65%
Single-sex basic sanitation facilities	64%	73%	74%

Legend: PRIMARY — LOWER SECONDARY — UPPER SECONDARY
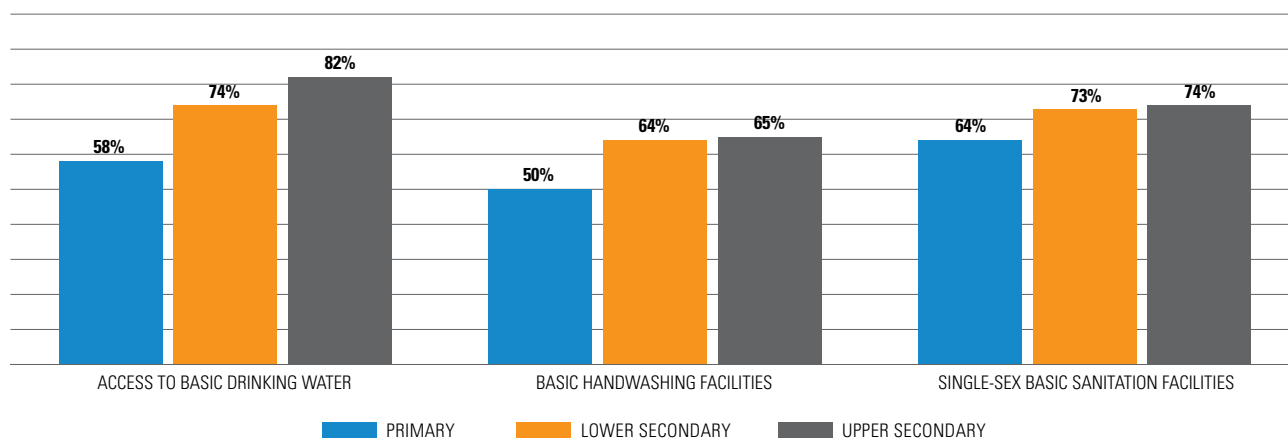
Source: Calculations based on data from the UNESCO Institute for Statistics

In terms of WASH infrastructure, investment in rehabilitating existing facilities and/ or building new ones is very important. Currently, half of all African primary schools do not have access to basic handwashing facilities, and a similar pattern is seen in secondary schools, with close to one in three secondary schools not having access to handwashing facilities (*see Figure 3.2*).

Of the measures recommended in UNICEF's guidelines for the safe reopening of schools, physical distancing in schools seems to be one of the most difficult to meet. Several countries in Africa were already facing major deficits in human resources and infrastructure before the pandemic. Thus, for example, the average number of pupils per teacher in primary education varies between African countries from 20 to over 80 in sub-Saharan Africa, with an average of around 40, while it does not exceed 20 in other regions of the world, except for East Asia and the Pacific Islands, where it is around 23. In addition, it can be a challenge to find sufficient numbers of classrooms. In countries such as Cameroon, Guinea-Bissau and Chad, the pupil/ classroom ratio is above 25 in almost four in five schools, and more than 50 in almost half of all schools. Moreover, without a complementary strategy (such as alternate use of facilities), reducing the number of students per classroom to a maximum of 25 in primary schools would require 84,000 and 48,000 additional classrooms respectively in Cameroon and Chad, more than doubling the current number of classrooms. Under such conditions, the question naturally arises as to what extent these countries can adopt physical distancing in schools.

3.4 Exploring alternative pathways to deliver remote learning solutions

Governments faced numerous challenges as they transitioned to distance learning, such as limited institutional capacity to support teachers, poor access for vulnerable populations, and lack of coherent policies and funds to support remote learning.[65] Responses to COVID-19 school closures included low-cost and/ or high-tech solutions, ranging from paper-based take-home learning material to broadcast media lessons, mainly using TV, radio and digital platforms, with both online and offline capabilities. This showed that there is a range alternative pathways to deliver remote learning, which must be not only sustained but also developed to respond to future disruptions in learning.

Kenya: Digischool

The Government of Kenya initiated the Digital Literacy Programme (DLP), also known under the brand name of DigiSchool, to give life *to its vision to make sure every pupil is prepared for today's digital world*. This programme, led by the Ministry of information, started in 2016 and is executed through a multistakeholder approach with the ICT Authority as the implementing body. It is targeted at learners in all public primary schools in Kenya with five key components i) the provision of digital devices preloaded with interactive digital content covering different subjects for both learners and teachers, ii) capacity development for teachers and implementers, iii) broadband connectivity devices, iv) the provision of content for digital learning and v) the establishment of local assembly for digital devices and related accessories.

As a result of DigiSchool implementation, public primary schools were provided with ICT equipment such as projectors, servers and wireless routers. Building teachers' capacity in ICT and digital skills contributed to the success of the programme, which as of 2017 had benefited over one million students and 91,000 teachers across 19,000 public primary schools. To date, 21,637 public primary schools (99.6 per cent of the public primary schools in Kenya) can access digital devices. In addition, 22,927 schools have been connected to power, of which 19,042 are connected to the national grid and 3,239 to solar power. It is also reported that 331,000 teachers have been trained in ICT integration, 218,253 trained in the use of technology to implement the CBC (Competency Based Curriculum), and 93,009 teachers trained in the use of ICT and digital devices. A key factor in the success of DigiSchool, the Kenyan Government has

focused on developing its own digital learning content and creating an enabling environment from the early stages of the initiative. Beyond the advances in the development and distribution of digital tools, the initiative has changed the landscape of learning in the classroom. According to a survey of teachers, students have shown increased interest in learning through digital devices, and in some counties such as Tana River, Turkana and Mandera, student enrolment has increased as more children have been motivated to come to school to use the devices. Moreover, DigiSchool has encouraged parents to send their children to school to learn digital skills, such as knowing how to use phones and make mobile payments, which benefits the parents also.

From the teachers' perspective, the initiative has brought both direct and indirect benefits. Some teachers have introduced their own teaching materials through the use of projectors. It has also helped teachers and schools to integrate administrative work into digital devices. For instance, many teachers reported that they used the devices in carrying out administrative work, student management, class preparation and school activities. This has helped schools to save time and money.

Another contributing factor in the success of DigiSchool is the public–private partnership model engaged by the government to increase resources for ICT in education. A wide range of external and internal partners have been involved, including the Chinese Government, Huawei and Telkom Kenya. The ICT Authority led the effort to develop internet infrastructure through the partnership. As a result, over 6,000 km of fibre has been laid out countrywide to support digital learnin

COURTESY OF DIGISCHOOL

Morocco: GENIE

As the Government of Morocco closed all schools in March 2020 due to the COVID-19 pandemic, the Ministry of Education quickly involved key stakeholders to continue education by connecting students to distance learning, adopting a two-way system to deliver classes online and via TV.

In areas with no access to the internet, such as rural areas, homeschooling was still able to continue, as some local TV channels broadcast courses. Morocco started recording school lessons and broadcast them on television: for three months (from March to June 2020), 80 per cent of all students accessed education through them. After a three-month school closure, the Moroccan Government reopened schools with a blended learning system – students only attended school a few days a week and continued with distance learning.

Building on the outcomes of the GENIE programme (Generalization of Information and Communication Technologies in Education) launched in 2006, well before the pandemic, the Ministry of Education enabled about 600,000 young people to continue learning through an online learning platform during the school closures. The GENIE programme is structured around three axes: (i) infrastructure (setting up of equipped multimedia rooms connected to the internet), (ii) teacher training (computer literacy and use of ICT in education), (iii) digital resources (creation of a national digital resources laboratory and a national ICT in education portal). According to the latest data from the Ministry of Education, 90 per cent of public schools have been equipped with basic multimedia facilities including internet connectivity. In addition,

COURTESY OF UNESCO

87 per cent of the education staff who are involved in the programme have been trained, a total of 34,110.

Morocco, like other countries, experienced an unprecedented interruption in education: nevertheless, the GENIE programme and the experience that it provided enabled the government to take agile action in responding to the pandemic, leveraging the skills required to operate distance learning through various channels. An already existing education channel, devices and facilities helped the government to produce and deliver educational content on a daily basis.

It is also worth noting that Morocco's Ministry of Education was proactive in taking steps to minimize learning loss for children with disabilities. For example, for students who are deaf or hard of hearing, the government produced educational content with sign language, by recruiting and training a number of Multisensory Structured Language (MSL) teachers. For students without digital tools, the government diversified channels to deliver content by providing tablets.

DATA GAPS: THE NEED FOR ENHANCING EDUCATION DATA SYSTEMS, GIVEN EMERGING DATA NEEDS

Data is critical in the formulation of education policies and the setting of realistic objectives and targets. When it comes to the implementation of education policies, data helps to show progress towards predefined objectives, while also helping to identify setbacks. Informative reports can help all stakeholders to see where there has been progress. The lack of reliable data on disadvantaged children and learners with special needs, meanwhile, is considered to be one of the main obstacles in planning and providing equal education for them.

A significant obstacle arises when analysing the progress and trends of education in many African countries due to a **lack of critical data against key indicators**, such as out-of-school rates, disaggregated data on children with disabilities, learning outcomes, and provision of water, sanitation and hygiene (WASH) facilities.

CESA 16–25 clearly aims at **strengthening education data systems**, in particular Education Management Information Systems (EMIS) for data collection, analysis, dissemination and use at the national level, and as a key enabler for monitoring and evaluation at the regional and continental levels, to track progress toward the CESA 16–25 and SDG 4 goals.

There is an urgent **need to produce more reliable and timely data** in essential areas relating to CESA 16–25 and SDG 4. By dedicating the necessary financial and human resources and data management infrastructure

to this work, as well as creating a favourable enabling environment for it (for example through institutional arrangements and policy and legal frameworks), African countries can help to **build resilient and sustainable education data systems**. Producing quality data helps to support evidence-based programming and allows progress to be monitored against national, regional and continental goals.

Monitoring progress against CESA 16–25 and SDG 4 requires education data that goes way beyond the administrative data produced through traditional EMIS. Therefore, it is critical to ensure that there is **harmonization** between different education data producers and sources, by **establishing effective coordination mechanisms and functional data repositories at the Regional Economic Community (REC) and African Union level**. Additionally, national EMIS systems should adopt a holistic and integrated approach, where systems automatically and directly collect data from existing information systems such as labour, health, population and other relevant systems.

However, most African countries face daunting **challenges** in producing education statistics and developing robust and reliable EMIS. For example, data on basic service and school infrastructure is not available in more than half of all countries across the continent.[66] Many African countries face major difficulties in producing and reporting comprehensive data, in particular in critical domains such as the assessment of teachers' and learners' attendance, learning outcomes, out-of-school children and young people, non-formal education, education of refugees, and learners with disabilities.[67] This situation makes it difficult to monitor progress against CESA 16–25 and SDG 4, and targets set under the 2030 Agenda. Also, EMIS is only able to capture data on children enrolled in school, meaning that there is even less data on the situation of children who are not enrolled in school but who are learning through other often unrecognized pathways.

Another major setback that educational institutions face is a **lack of funding and independence** from their national statistical offices.[68] Even national statistical offices face poor outcomes due to **poor coordination** systems, **lack of uniformity in methodologies and definitions, inadequate financial and human resources**, and **weak infrastructure and technology**. Furthermore, most key education managers at the national and subnational level are unfamiliar with the use of evidence to inform policy and programming.

WAY FORWARD: RECOMMENDATIONS FOR TRANSFORMING AFRICAN EDUCATION SYSTEMS IN A POST-COVID ERA

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The long school closures due to the COVID-19 pandemic have been seen as the worst shock to the education system in decades. According to a recent analysis from the World Bank,[69] the expected learning losses will result in the global learning poverty rate rising from 53 per cent before the COVID-19 pandemic to 63 per cent.

Moreover, it is likely that due to the economic impact of the pandemic many African countries will have less fiscal space for expenditure in education. According to

the International Monetary Fund (2021), sub-Saharan Africa went through a recession of -1.93 per cent of GDP in 2020, compared with annual growth of more than 3 per cent from 2017–2019. A direct consequence of this will be increases in poverty, fiscal austerity and inequality. All of this could lead to a deepening of the crisis in education in Africa.

It is to the credit of many African countries that they are making every effort to mitigate the impact of school

closures, addressing learning losses, and normalizing their education systems. According to UNESCO's global monitoring of school closures,[70] as of July 2021, almost all African countries' schools have reopened, and students have returned to in-person learning. Other countries are still deciding when and how to reopen schools. But across the continent, as with the rest of the world, plans for school reopening remain uncertain in the face of shifting epidemiological situations, surges of new virus variants and unequal access to vaccines among different populations.

In every crisis, however, lies an opportunity. In the education sector, the time is right for 'reimagining education' in Africa based on the perspective that going back to the 'normal' that existed before the COVID-19 pandemic will not suffice. **Rededicating ourselves to an Africa we want must involve implementing recovery measures in education that go above and beyond a 'business as usual' scenario**. Recovery measures must consider traditional views on how 'education is done', supported by evidence-based scenario-based planning and programming, in line with local contexts and national development priorities. They must capitalize on the opportunities that emerged during the pandemic – such as an increase in learning tools, impressive school leadership, and collaboration between teachers and parents — all of which enabled children to continue learning.

The African Union's 2063 Agenda, entitled 'The Africa We Want', sets out a clear vision towards "an integrated, prosperous and peaceful Africa, driven by its own citizens and representing a dynamic force in the international arena." In a similar vein, CESA 16–25 sets out the vision "to create a new African citizen who will be an effective change agent for the continent's sustainable development".[71] The goals set out by these visions can provide the overall guidance on how we can rethink about education systems in Africa so that they can help realize the potential of every African child and young person.

Taking into consideration the hard-earned lessons learned from the COVID-19 and other pandemics, and with the aim of transforming education in Africa, this Report presents the following recommendations for transforming education systems in Africa towards 2030 and beyond:

1 **Schools should be safe and healthy havens for students:** In the wake of the COVID-19 pandemic, establishing health and WASH guidelines and protocols has become more important than ever. Furthermore, schools as safe learning spaces also involve providing critical services such as psychological and psychosocial support and school meal programmes.

African countries can support this by developing policies and guidelines to provide proper WASH facilities, including safe water, handwashing stations, cleaning supplies, and sex-segregated toilets or latrines. They also need to allocate financial and non-financial resources to schools for installing new facilities that comply with WASH guidelines, upgrading existing infrastructure, providing psychological services, and training teachers and school staff. These components are most effective when they are integrated into the school management system, and where relevant indicators and measurements are incorporated into the EMIS – as is the case in Ethiopia, Zambia and Tanzania. Schools can also form 'safe school committees' consisting of teachers, students and community members, to ensure that there is a joint approach to safety.

2 **More inclusive schools, with special attention to groups that tend to drop out:** 'Leaving no-one behind' is the core pillar of the CESA 16–25 vision. Despite significant progress in providing access to primary education, a substantial number of students still drop out of school. Given that out-of-school rates are higher for young people of upper secondary school age than for children of primary and lower secondary school age in all regions in Africa, there is an urgent need to address the issue of low attendance rates in secondary education.

The time is right for African countries to investigate the underlying reasons why individuals in certain groups fail to participate in education, design policies that reduce the major barriers that young people face in accessing secondary education, and implement measures to motivate more adolescents to stay in school. Barriers can be reduced by, for example, creating policies that expand compulsory secondary education. Such policies can be linked to social protection programmes involving

cash transfers or child allowances. Making curricula more relevant to the jobs market also provides more options. Governments can use the time after the school closures of the COVID-19 pandemic to offer remedial learning sessions that provide more tailored learning for those who need it, to close the learning gaps created by the closures.

3 **Focus on foundational learning from an early stage to raise learning levels:** To help raise learning levels among students, African education systems need to strengthen the foundational skills of literacy and numeracy. The earlier that learning takes place the better. By emphasizing teaching focused on basic reading and mathematics in preschool and primary school, African countries can maximize learning impact and raise overall education quality. Governments can make a push for literacy and numeracy and encourage schools to find innovative ways to improve foundational learning skills, even if it means devoting a few hours weekly to teaching children how to read and do maths at appropriate levels.

In addition, given the strong correlation between the language of instruction and learning outcomes, educational planning can benefit from increasing the use of home languages across the curriculum for students in early grades, with greater coordination of teaching and learning in students' first and second languages for upper-level learning.

4 **Prioritize teaching digital skills in schools with an eye to the future:** The African education systems that do not currently teach core digital skills in the classroom, or provide adequate training for young people, are placing a major constraint on the futures of young people. Governments need to increase their budgets to support changes in the curriculum to make it appropriate for children and young people growing up in a world which is becoming increasingly dominated by digital technologies.

Currently, the Human Capital Index shows that sub-Saharan Africa realizes only just over half of its human capital potential, despite the growth of its young population.[72] Investing in digital education, digital literacy

and online learning opportunities for Africa's children and young people is critical to directing this scenario towards a more positive trajectory. School curricula can also be designed to further encourage non-cognitive skills, such as critical thinking, creativity, cooperation and emotional intelligence. By giving special attention to enhancing TVET programmes, skills development can also be aligned with market needs, to nurture the future workforce. Many African countries could work together to invest in digital technologies for learning through continental initiatives such as Africa Code Week. This initiative has built digital capacity through coding workshops and teacher training, and girls' digital skills, through partnerships with the public, private and non-profit sectors.

5 **Prioritize teacher training and development in schools, including skills for digital pedagogy:** Though the COVID-19 pandemic has forced many African countries to change their education systems, teachers remain integral to those systems. Even before the pandemic, schools across Africa faced a chronic shortage of qualified teachers. Moreover, only half of the countries in Northern Africa currently provide teachers with training in distance education, and only 27 per cent of countries in sub-Saharan Africa do so.[73] To move towards a more positive trajectory, African countries should prioritize redesigning their teacher development programmes at all levels, including digital and pedagogical skills for learner-centred, inclusive quality education.

Teachers need to possess higher skills as learning facilitators and instructional designers, using a wide range of technologies to meet students' varying needs. Both pre-service and in-service teacher development programmes are important to achieving this, in conjunction with new teacher training curricula. To support the development of teachers in the digital era prior to the COVID-19 pandemic, for example, Côte d'Ivoire launched the Center for the Promotion of ICTs (CPNTIC): an online system through which teachers can train and produce digital courses.[74] Mechanisms for supporting teachers can also be developed by creating peer groups to share feedback and innovative practices, and help create a conducive learning and support community.

6 **Invest in developing more resilient education systems:** Resilience also comes from guaranteeing access to education, safeguarding the quality and equity of education, and ensuring that education systems function continually under any circumstances, without interruption. It involves developing costed national education plans, supported by a robust results framework. This can be done by taking a comprehensive approach that integrates assessment, teaching and learning, management, and monitoring and evaluation within the same framework. A strong EMIS system, embedded within the school environment, can also help to encourage formative and summative learning assessments and measure diverse skills and track expenditure.

Building stronger education systems also means key players at the municipal, subnational and national level can work together in a streamlined process. In order to achieve this, African governments should aim to strengthen existing communication channels and coordination systems, so that education stakeholders can share feedback and suggest improvements.

Empowering marginalized groups (including girls, children with disabilities, displaced children and refugees, out-of-school children, and those from poor socioeconomic backgrounds) is closely associated with increased resilience in education systems and in societies at large. An important element in this involves strengthening capacity to support the education of disadvantaged and vulnerable groups using flexible and adaptive solutions.

7 **Develop strong education funding mechanisms:** Due to the COVID-19 pandemic and the resulting economic recession, education spending is expected to stagnate in most countries across the world. Africa is no exception: in many African countries educational spending is expected to fall sharply both in real terms and as a share of government expenditure. In this context, simply allocating more resources to the education sector is not realistic. To avoid detrimental impacts on educational outcomes resulting from cuts in government expenditure, African governments can review their fiscal policies and reallocate resources in the education

sector more strategically. Improving efficiency is key to using limited financial resources.

Transparent and solid education expenditure audits and reviews can provide insights and allow budgets to be allocated more efficiently. It is important to have balanced sectoral investment at all levels of education. Policymakers in Africa could benefit particularly from allocating more funding to neglected but critical sectors, such as ECE. This includes providing funding to support children in poor households and other vulnerable students, as missing out on early education can lead to a widening of disparities in learning outcomes.

Exploring innovative finance options, particularly with the private sector, can also help to channel more international private capital into education. In the long term, African governments can consider the option of diversifying the types of partnership they have with the private sector, given the growing role of private sector partners in education funding. This can bring financial contributions to education and make education systems more efficient and transparent. These approaches to education financing, however, must be supported by programme-based budgeting and the use of sector-wide financial simulation models to ensure good governance.

8 **Invest in improving education data and education management information systems**
Having evidence-based information is key to progress. Significant obstacles to measuring progress can arise due to a lack of critical data, such as data on learning outcomes indicators. Producing quality data helps to support evidence-based programming, informs policy, and allows a country's progress to be monitored against national, regional, and continental goals. There is an urgent need for African countries to invest in financial and human resources on data management infrastructure, so that they can capture evidence and measure progress. At a continental level, it is also important to ensure that there is harmonization between different education data producers and sources, by establishing effective coordination mechanisms and functional data repositories at the levels of the Regional Economic Community (REC) and African Union.

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