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Secondary Education in Africa

Expanding Pathways to Work, Livelihoods, and Lifelong Learning

NOVEMBER 2026





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Foreword



Secondary education must be a pathway to opportunity for every young person, not only a stepping stone to further education. It should give them the knowledge, skills, confidence, and agency to access dignified and fulfilling work and shape their futures. The question was never whether secondary education matters, but how do we transform it to deliver on that promise? Six years ago, the first report, *Secondary Education in Africa: Preparing Youth for the Future of Work*, helped establish secondary education as a route to work. The second report takes that ambition forward: expanding access, transforming learning, and building the pathways that connect it to livelihoods. It asks how systems must change so that every young person can learn, navigate transitions, and participate meaningfully in the economy.

In 2026, the Mastercard Foundation marks its 20th anniversary. This report, *Secondary Education in Africa: Expanding Pathways to Work, Livelihoods, and Lifelong Learning,* connects our journey in education with the work still ahead. That connection is at the core of our Young Africa Works strategy, which seeks to enable 30 million young Africans, particularly young women, to access dignified and fulfilling work by 2030.

For the 91 percent of young people in sub-Saharan Africa whose journeys do not include tertiary education, what they gain in secondary school matters profoundly. It must prepare them for work and life while keeping further learning within reach. Their opportunity to thrive should depend not on whether they continue to tertiary education, but on the choices available to them when they complete secondary school. Education must equip them to respond to our changing world and give them greater agency to shape it.

This report calls for relevant, high-quality learning. Young people need foundational skills, including literacy, numeracy, and socio-emotional skills, because they underpin all subsequent learning. They need transferable skills to solve problems, communicate, work in teams, and navigate the world of work. This includes digital and AI skills, which are no longer "optional" for secondary learners, as well as climate and environmental awareness. Finally, they need technical skills to earn a living through a trade, other employment, or their own business.

The African Union's Decade of Education and Skills Development (2025–2034) and the Continental Education Strategy for Africa (2026–2035) make this a timely moment to act. This report offers evidence to help translate continental ambition into national priorities, investment, and implementation.

Sub-Saharan Africa needs an estimated 10.7 million additional secondary teachers to achieve universal secondary education by 2030, with shortages most acute in marginalized communities, including refugee and displaced persons settlements. Meeting this need is not only about recruitment. It requires preparing, supporting, and retaining teachers, investing in their growth and well-being, and backing them with school leadership, stronger financing and data, and closer links with employers, so they have the tools and conditions to help young people thrive.

I am grateful to the researchers, policymakers, educators, communities, partners, the Mastercard Foundation team, and young people whose insights shaped this report. Their contributions reinforce a conviction at the heart of our work: lasting change is built with the people and institutions closest to the challenges and the solutions.

What matters most to us at the Mastercard Foundation is what this work makes possible in the lives of young people: the chance to keep learning, build a livelihood, and shape their own future. I hope this report strengthens our shared responsibility to turn that promise into reality. Let us act on the evidence with young people at the centre.

Sewit Ahderom
President and Chief Executive Officer
Mastercard Foundation

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Executive Summary

Secondary education will play a defining role in shaping Africa's future. For most young people in Africa, secondary education is the final stage of formal schooling before they enter the world of work.[1] It is governments' last opportunity to reach young people at scale and equip them with the knowledge, skills, confidence, agency, and adaptability needed to navigate a rapidly changing labour market. Secondary education will thus shape Africa's future workforce, its economic productivity, and its citizenry. With enrolment at the tertiary level remaining at only nine percent in sub-Saharan Africa,[2] secondary education is the continent's most powerful and far-reaching platform to prepare its growing youth population for the future.

Africa's young people represent one of the greatest human capital opportunities of the 21st century. Home to the largest generation of young people the world has ever seen, Africa is entering a period of unprecedented demographic transformation. By 2035, more than 330 million young people in sub-Saharan Africa will reach working age, surpassing the combined total of all other regions worldwide. If equipped with the right education, capabilities, support, and opportunities, this generation has the potential to drive inclusive growth, accelerate innovation, and shape a more prosperous and sustainable future. The African Union's Continental Education Strategy for Africa (CESA 2026–2035) reflects this imperative, identifying expanded access, skills development, innovation, inclusion, and lifelong learning as central to the continent's development agenda.[3]

Africa has made important progress in expanding access to secondary education and introducing reforms to improve its quality and relevance. Yet much of the growth in enrolment reflects larger cohorts moving through education systems, while learning, progression, completion, and equitable access remain significant challenges. The next frontier is to ensure that reforms are implemented effectively and translate into better learning, progression, completion, and opportunities for young people. Secondary education systems must equip young people to navigate work, entrepreneurship, further learning, citizenship, and life in an increasingly dynamic and uncertain future. They must also recognize young people as partners in shaping the decisions that affect their education and livelihoods. Africa's young people are ready to help forge the continent's future, and they deserve education systems ready to invest in their potential.



This report answers the question: ***How must secondary education systems evolve to reach all young people and prepare them to navigate diverse and changing pathways through learning, work, livelihoods, and life?*** To do this, the report is organized into three parts and nine chapters, each addressing a critical question about the future of secondary education in Africa:

Part I: Why Secondary Education Must Transform

Chapter 1: Understanding the Current State of Secondary Education in Africa –
How has secondary education changed across Africa since 2020, and is it reaching and preparing young people effectively and equitably?

Chapter 2: Reorienting Secondary Education for a Changing World of Work –
How are demographic, technological, economic, and environmental shifts reshaping the pathways young people will navigate, and what does this mean for the future role of secondary education?

Part II: What a Transformed Secondary Education System Must Provide

Chapter 3: Strengthening Skills and Reforming Curricula for Work and Productive Livelihoods –
What knowledge, skills, mindsets, and capabilities do young people need to navigate diverse and changing pathways, and how can secondary curricula be reformed to help young people develop them?

Chapter 4: Embedding Transition to Work Support in Secondary Education –
How are schools and education systems helping young people navigate transitions into work through career guidance, work-based learning, and broader transition-support mechanisms?

Chapter 5: Empowering Teachers and School Leaders to Deliver Transformation –
How are teachers, school leaders, and the wider education workforce evolving to support more diverse learners and pathways through education and beyond?

Chapter 6: Making Formal Secondary Education Work for Marginalized Learners –
How are formal secondary schools becoming more equitable, responsive, and inclusive for the young people most likely to be left behind?

Chapter 7: Building Flexible Pathways Beyond Formal Education –
How are countries creating more flexible, accredited, and connected pathways that enable young people to move into, out of, and across learning opportunities as their circumstances change?

Chapter 8: Using Technology to Strengthen Teaching, Learning, and System Efficiency –
How are technology and artificial intelligence (AI) being used to expand access to secondary education, improve teaching and learning, strengthen systems, and reach young people more effectively and equitably?

Part III: How Transformation Becomes Possible at Scale

Chapter 9: Strengthening Secondary Education Systems to Provide Inclusive, Flexible Secondary Education –
How are countries strengthening financing, leadership, governance, and partnerships to drive system transformation?

A Snapshot of the Report's Key Findings

Part I: Why Secondary Education Must Transform

1

Enrolment growth is outpacing improvements in progression. Approximately 85 percent of recent enrolment growth reflects larger cohorts, while progress in reducing out-of-school rates has been much slower.

2

Progression into upper secondary education remains a critical challenge. Learners encounter financial barriers, limited places, examinations and, in some countries, the end of compulsory or fee-free education at this transition.

3

More than 10 million young people enter Africa's labour market each year, yet only three million formal jobs are projected to be created annually, making the transition from learning to sustainable livelihoods one of the continent's most urgent priorities.

Part II: What a Transformed Secondary Education System Must Provide

4

Curriculum reform has advanced faster than the systems needed to implement it. Changes in assessment, teacher preparation, infrastructure, and learning resources have not consistently kept pace with curriculum reform.

5

General and technical secondary education systems often do not provide comprehensive support for transitions to work, with insufficient links to employers and the holistic services needed, especially for disadvantaged populations. Evidence points to the importance of career guidance, mentoring, work-based learning, internships, apprenticeships, entrepreneurial support, and professional and community networks.

6

Sub-Saharan Africa requires an estimated 10.7 million additional secondary school teachers to achieve universal secondary education by 2030, but the challenge is not just one of supply. Many countries face significant deployment inefficiencies. Shortages are concentrated in rural, remote, fragile, and underserved areas, while some urban areas experience an oversupply of teachers.

7

Expansion of secondary education systems has opened the door to millions, but upper secondary completion remains at only 35.4 percent. Rural and low-income learners, learners with disabilities, refugees and displaced adolescents, and those facing several barriers at once face especially steep challenges to learning within formal education. Access does not guarantee that learners can attend consistently, participate, learn, complete their education, or transition successfully beyond secondary school.

8

With 77 million secondary-school-age young people out of school, including 31 million living in crisis-affected contexts, many learners continue to face circumstances that make uninterrupted participation in conventional schooling difficult. Flexible learning pathways are gaining recognition, but financing and integration of these at scale remain challenges.

9

Technology offers new ways to leapfrog longstanding constraints in access, quality, and system capacity, but digital infrastructure in African secondary schools has improved only marginally over the past decade. Fewer than half of schools are connected to the internet, and just over half have computers as of 2025.

Part III: How Transformation Becomes Possible at Scale

10

The defining challenge for secondary education is increasingly one of implementation: translating ambitious policies and promising innovations into sustainable change at scale while addressing gaps in equity and system and workforce capacity. This requires the financial, institutional, and technical capacity to align plans, budgets, and institutions around shared priorities; target resources equitably; support implementation from the national to the school level; and use data and evidence to continuously learn and adapt.

11

Financing constraints are intensifying as demand continues to grow. The estimated annual cost to achieve Sustainable Development Goal (SDG) 4 at the secondary level is $82 billion. Since 2020, 18 African countries spent more on debt servicing than education, highlighting how rising debt obligations are competing directly with investment in learning and human capital. Fiscal constraints and competing priorities make decisions about equitable resource allocation, efficiency, and effective implementation increasingly consequential.



Part I: Why Secondary Education Must Transform

This section sets the context for the report, examining the progress made since the publication of the first report, *Secondary Education in Africa: Preparing Youth for the Future of Work,* in 2020. It also highlights the persistent challenges remaining and the changing world of work that young people are preparing to enter.

Chapter 1: Understanding the Current State of Secondary Education in Africa

More young Africans are entering and completing secondary education than ever before. Across Africa, lower secondary education typically forms part of the basic education cycle and provides a broad foundation of general education, while upper secondary education offers more specialized academic, technical, or vocational pathways with ages, grades, and structure varying by country. Enrolment at the secondary level increased from 78 million learners in 2015 to 110 million in 2024.[4] Over the same period, completion of lower secondary education rose from 41 percent to 48 percent, while completion of upper secondary education increased from 30 percent to 35 percent.[5]

Progress has been accompanied by substantial gains in gender equity. At the lower secondary level, girls and boys now complete school at virtually identical rates, although significant variation remains within and between countries.[6] At the upper secondary level, the gender completion gap has narrowed to 1.4 percentage points, slightly favouring young men on average.[7]

Yet out-of-school rates have remained largely unchanged. Africa's education systems are on a demographic treadmill: even though they are enrolling more learners and producing more graduates, the ongoing rapid population growth means that exclusion remains stubbornly high.[8] Approximately 77 million secondary school-age young people remain out of school,[9] including an estimated 31 million whose education has been disrupted by armed conflict, forced displacement, natural disasters, or acute socioeconomic shocks.[10]

Africa's education systems are on a demographic treadmill: even though they are enrolling more learners and producing more graduates, the ongoing rapid population growth means that exclusion remains stubbornly high.

More than half (54 percent) of enrolment losses occur before learners reach secondary school and at the transition from lower to upper secondary school. High-stakes examinations, the end of compulsory or fee-free education, and long distances frequently act as transition bottlenecks. At the same time, 85 percent of recent enrolment growth has resulted from larger cohorts of students moving through the system.[11] This expansion is driven largely by demographic growth rather than improvement in transition rates. Africa must now build on this momentum and ensure progress keeps pace with demographic growth, while reaching the millions of young people still being excluded from secondary education.

As one of the largest points of attrition in education systems, the transition from lower to upper secondary education remains a pivotal moment in young people's lives.[12] It is often the stage at which learners begin making decisions that shape their pathways into work, further learning, and adulthood. However, financial barriers, limited school capacity, social and gender norms, distance, high-stakes examinations, and the end of compulsory or fee-free education frequently interrupt progression at precisely this point. Reducing these barriers would allow millions more learners to benefit from secondary education.

Many learners enter secondary education without strong foundational literacy and numeracy skills, limiting their ability to succeed.[13] These learning gaps often persist through lower secondary education, making it harder for learners to progress and complete their schooling. Expanding secondary education must therefore go hand in hand with continued investment in primary education, foundational learning, and effective remediation for learners who need additional support. Data gaps also limit our understanding of learning and skills development at the secondary level. Few countries participate in regional or international comparative assessments, and these assessments rarely capture the full range of skills and competencies required for work.

Equity must be built into the design and delivery of secondary education. Across Africa, poverty and geography continue to constrain the educational progression of young people.[14] These divides often intersect with disability, displacement, conflict, and gender-related barriers, creating multiple and reinforcing obstacles to learning, progression, and completion.[15] Equity must therefore be built into the design and delivery of secondary education, with resources and support directed toward the learners, schools, and communities facing the greatest barriers.

Financing needs for secondary education continue to outpace available resources, creating a growing funding challenge across Africa. Achieving the secondary education targets of UN Sustainable Development Goal 4 in Africa requires an estimated $82 billion annually, including $44 billion for lower secondary education and $38 billion for upper secondary.[16] Only 22 of 42 countries with data are investing the recommended share of their GDP in education.[17] Since 2020, 18 African countries have spent more on debt servicing than on education, highlighting how rising debt obligations are competing directly with investments in learning and human capital.[18] Declining external aid to education is also placing additional pressure on already constrained budgets.[19] Although philanthropic funding has grown, it remains largely concentrated in higher education. Continued progress will depend on achieving greater efficiencies in the system, mobilizing additional resources, and directing them toward the learners, schools, and reforms that produce the greatest gains in access, learning, and equity.

Chapter 2: Reorienting Secondary Education for a Changing World of Work

More than 10 million young people enter Africa's labour market each year, yet only three million formal jobs are projected to be created annually, making the transition from learning to sustainable livelihoods one of the continent's most urgent priorities.[20] Secondary education systems cannot create jobs, but governments do have an important role to play in fostering the macroeconomic conditions and policies that support sustainable economic growth and job creation.

Young people's pathways are becoming increasingly complex, often combining or moving between employment, entrepreneurship, apprenticeships, and other forms of work over the course of their lives. In 2025, 19 percent, or roughly 102 million young people, were not in employment, education, or training (NEET), with young women accounting for 61 percent of this group.[21] Reducing young women's rates of exclusion from employment, education, and training to levels closer to those of young men could enable an estimated 15 million more women to access employment and generate approximately $172 billion in additional economic activity.[22]

Nearly 90 percent of employed young people in Africa work in the informal economy, where employment is generally not fully regulated or protected through formal contracts, labour standards, taxation, or social protection.[23] Informality is thus the primary environment in which most young people begin and sustain their working lives. Helping young people develop the skills and competencies to improve the productivity, quality, and resilience of these livelihoods will be essential to reducing vulnerable employment and expanding stable and secure opportunities.

Africa's world of work is changing in ways that create new possibilities for this generation of young people. These changes are expanding opportunity, but they are also producing more complex and less predictable pathways through work. The services sector is projected to overtake agriculture as the largest employer of young Africans by 2033, fueled by growth in retail, hospitality, care, digital, and creative industries.[24] Artificial Intelligence (AI), digital platforms, renewable energy, climate-smart agriculture, green construction, and environmental services are also creating new avenues for economic participation and innovation. Many occupations are becoming AI-enabled, creating new roles and positions while eliminating others, while the broader impacts of these new developments on employment are still unknown. These shifts are happening in a context of broader demographic, economic, technological, and environmental changes, including rapid population growth, urbanization, technological innovation, and climate change, which are reshaping how young people build, navigate, and sustain livelihoods.

Secondary education must prepare young people not only for jobs, but for how to be adaptable in a rapidly changing world of work. As opportunities diversify across services, entrepreneurship, informal enterprise, digital work, green industries, and other emerging sectors, education systems must equip young people with the relevant knowledge, skills, and adaptability required for changing forms of work. Preparing for work can no longer be treated as a single transition at the end of school. It must become an integral part of how young people learn, explore possibilities, make informed decisions, and prepare for working lives in which continued learning and adaptation will be essential.



Part II: What a Transformed Secondary Education System Must Provide

This section examines how secondary education systems need to transform to better prepare all young people for work, livelihoods, and lifelong learning. It examines how systems could evolve across multiple dimensions including curricula and skills, transitions to work, the education workforce, inclusion, flexible learning pathways, and technology, highlighting new evidence and promising practices throughout the continent.

Chapter 3: Strengthening Skills and Reforming Curricula for Work and Productive Livelihoods

Preparing young people for work and productive livelihoods requires a broader set of knowledge, skills, and competencies than ever before. Academic knowledge remains essential, but it is no longer sufficient on its own. Young people need a wider range of capabilities that enable them to continue learning, adapt to change, solve complex problems, work with others, and pursue multiple pathways beyond school. These capabilities fall into three interconnected categories:

- **Foundational skills,** including literacy, numeracy, and socio-emotional skills, anchored by proficiency in the language of instruction, provide the basis for all subsequent learning.
- **Transferable skills,** including communication, critical thinking, problem-solving, digital and AI literacy, and environmental and climate awareness, help young people navigate change and continue learning throughout their lives.
- **Technical skills,** including vocational, entrepreneurial, and specialized green skills, ensure young people access emerging opportunities and build productive livelihoods.

Governments across Africa are responding through ambitious curricula and skills reforms, but reforms to teacher development, learning environments, and assessment have not kept pace. Competency-based curricula reform is among the most significant education transformations underway on the continent. These reforms seek to make learning more relevant, applied, and responsive

to changing economic and social realities. They move beyond content acquisition and toward the development and application of the knowledge, skills, values, and competencies needed for work, further learning, citizenship, and life.

Successful implementation requires transformation beyond curricula. Yet implementation gaps persist, limiting the impact of such efforts. While many countries have made important advancements in teacher preparation and pedagogy to realize the promise of competency-based curricula, many teachers remain inadequately prepared, and schools and classrooms are not appropriately equipped with the resources and infrastructure to facilitate experiential and hands-on learning. High-stakes examinations continue to reward the recall of knowledge, even as competency-based curricula place greater emphasis on applying knowledge and developing a broader range of skills. These examinations remain widespread and are in place between primary and lower secondary education in 36 countries and between lower and upper secondary education in 46 countries.[25] Effective implementation requires these elements to move together, supported by sustained commitment, long-term investment, practical implementation support, and deliberate efforts to ensure reforms reach every school and learner.

The promise of curricula reform will take time to realize. Many countries have made substantial progress in designing and rolling out competency-based curricula, but in many cases, it remains too early to assess their full effects on classroom practice, learning, and student outcomes.[26] Curriculum transformation is a long-term process. Meaningful changes depend not only on what is written in a curriculum, but also on whether teachers are prepared, learning materials are available, assessment systems reinforce intended competencies, students and teachers are equipped with digital infrastructure, and schools have the capacity to consistently implement change.

Chapter 4: Embedding Transition to Work Support in Secondary Education

Beyond the formal curriculum, secondary education must evolve into a system that actively supports transitions to work as well as lifelong learning. Evidence points to the importance of career guidance, mentoring, work-based learning, internships, apprenticeships, entrepreneurial support, and professional and community networks.[27] Together, these forms of support help young people understand available pathways, make informed decisions, build confidence, acquire practical experience, and navigate transitions into employment, self-employment, entrepreneurship, and further education. Training in entrepreneurship, as well as opportunities to practice it, are essential. Business support services, financing, and technology can be catalytic, allowing young entrepreneurs to build successful businesses to support themselves, their families, and even employ others.

Young people experiencing poverty, young women, learners with disabilities, refugees and displaced young people, and others experiencing intersecting barriers may require broader support that extends beyond education and training alone. Holistic approaches can combine skills development with mentoring, psychosocial support, career guidance, childcare, disability accommodations, community engagement, and other services tailored to young people's circumstances.[28] Labour market information and longitudinal evidence that tracks young people's transition pathways can help governments design more responsive transition supports.

An effective transition system therefore depends on stronger collaboration among the following key actors. Secondary education and training institutions can help young people develop relevant knowledge and skills, explore future pathways, and prepare for life beyond school. Employers, entrepreneurs, and economic actors can provide workplace exposure, practical experience, community networks and mentorship,

and opportunities to apply learning in real-world settings. Governments can provide labour market information, enabling conditions for successful transitions through qualifications and accreditation systems, supportive economic and employment creation policies, and access to health, psychosocial, and other essential services.

Chapter 5: Empowering Teachers and School Leaders to Deliver Transformation

Teachers and school leaders are the critical enablers of secondary education reform. They play an important role in implementing reforms from the "bottom-up," but they must be supported with the capacity and resources to do so effectively. Yet recruitment, preparation, deployment, and workforce planning have not kept pace with these demands, creating a widening gap between what secondary education systems are expected to deliver and the workforce available to deliver it.[29] Teachers and other education personnel are also increasingly working in contexts shaped by conflict, displacement, climate- and health-related emergencies, and public health crises. Evidence from across African countries indicates that these pressures can contribute to burnout, emotional exhaustion, lower job satisfaction, and ultimately attrition.[30]

Sub-Saharan Africa requires an estimated 10.7 million additional secondary school teachers to achieve universal secondary education by 2030.[31] The challenge is not just one of supply. Many countries face significant deployment inefficiencies. Shortages are concentrated in rural, remote, fragile, and underserved areas, while some urban areas experience an oversupply of teachers. Fiscal constraints can also prevent governments from recruiting and deploying qualified candidates even where they are available.[32] These challenges are compounded by workforce inequities, including the underrepresentation of women, teachers with disabilities, and refugee teachers, particularly in leadership and specialist roles.[33] Countries across Africa are now pursuing reforms to address these challenges, highlighting the importance of looking beyond teacher numbers alone.

Sub-Saharan Africa requires an estimated 10.7 million additional secondary school teachers to achieve universal secondary education by 2030.

Professionalizing the education workforce requires a coherent package of mutually reinforcing reforms. Across Africa, governments are strengthening professional standards, licensing systems, teacher preparation, career pathways, access to technology and digital and AI skills, and continuous professional development.[34] Increasingly, professional learning is being embedded in teachers' daily practice through mentoring, coaching, peer learning, and school-based support rather than relying solely on one-off training.[35] Regional and national frameworks are also protecting teacher well-being, through peer networks, supportive leadership, and psychosocial services. These approaches recognize teachers not simply as implementers of reform, but as professionals whose expertise, judgement, and agency are central to improving teaching and learning. Together, reforms addressing these issues can build a skilled, motivated, supported, and empowered workforce capable of delivering complex educational transformation.

No individual teacher can reasonably provide all the expertise learners now require. As countries implement competency-based curricula, strengthen skills development, expand inclusion, integrate technology, and support young people's transitions to work, expectations of the education workforce are growing rapidly. Teachers not only lead classroom instruction but also support the broader well-being of young people. They also play a crucial role in enabling an entrepreneurial mindset and in sharing knowledge about local labour markets and opportunities for work.

Countries are therefore reimagining the teacher workforce. They are experimenting with flexible pathways into teaching, including graduate teaching assistantships, community educators, contract teachers, and refugee teachers. Others are expanding the range of professionals who support learners, including mentors, counsellors, well-being professionals, and community-based educators.[36] Some countries are also using new deployment models that allow scarce specialist expertise, such as inclusion specialists, science, technology, engineering and mathematics (STEM) teachers, or instructional coaches, to support multiple schools rather than being based in a single location. These approaches point toward a broader and more flexible education workforce in which qualified teachers remain central but are supported by a wider range of trained professionals.

Effective school leaders help convert education system reforms into practical improvements in schools and classrooms. As education systems become more complex and workforce models more diverse, school leaders play an increasingly important role in creating the conditions for effective teaching, supporting continuous professional learning, coordinating multidisciplinary teams, and translating national reforms into sustained classroom improvements. Across Africa, governments are placing greater emphasis on more structured approaches to selecting, preparing, and supporting school leaders.[37] Continuing to strengthen this role will be essential to teacher retention and motivation, teaching quality, learner well-being, and successful implementation of reform.

Chapter 6: Making Formal Secondary Education Work for Marginalized Learners

Expansion of secondary education systems has opened the door to millions of young people, but this opportunity is not being experienced equally. Fee-free education, expanded school provision, and other reforms have enabled more young people to enroll in secondary education.[38] However, many learners continue to leave the education system before reaching or completing secondary education.[39] Access alone also does not guarantee that learners can attend consistently, participate fully, learn effectively, complete their education, or transition successfully beyond secondary school.

Achieving genuine inclusion requires identifying and removing the full range of barriers young people face. Although fee-free secondary education is one of the continent's most significant reforms, having moved beyond the policy stage to implementation, hidden costs of transportation, uniforms, meals, examination fees, learning materials, menstrual health products, and assistive devices continue to prevent many young people from participating fully in school.[40] Targeted measures such as cash transfers, bursaries, scholarships, school meals, social protection, and equity-based capitation grants can help ensure that expanded opportunities translate into more equitable outcomes.[41] These interventions are most effective when combined with efforts to address well-being, health, safety, discrimination, restrictive social norms, and the other conditions that determine whether young people can learn and thrive.

Inclusion also depends on what happens inside schools and classrooms. As secondary schools serve increasingly diverse learners, teachers require stronger capacities in remediation, differentiated instruction, gender-responsive and disability-inclusive teaching, and multilingual learning. While governments are increasingly embedding these approaches in teacher development and school curricula, evidence on effective implementation remains scarce.

Many young people continue to live more than five kilometers from the nearest secondary school. Locally responsive provision can bring education closer to learners whose needs are not met by conventional models. Community-based schools, refugee-led initiatives, faith-based providers, and other locally rooted approaches often respond to circumstances that public systems struggle to

address, particularly in underserved and remote contexts. Low-fee private secondary schools can also play an important role in expanding access where demand exceeds the capacity of public systems, although their contribution raises distinct questions related to affordability, equity, quality, and regulation.[42] The contribution of these complementary provision models should be recognized, while ensuring clear and appropriate quality standards, strong safeguarding and accountability, effective regulation, and alignment with national education goals.

Some of the most marginalized learners remain excluded from data and planning systems. The lack of accurate and comprehensive data on young people with disabilities, displaced youth, or those facing intersecting barriers remains a key challenge for designing equitable education systems.

Stronger learner- and school-level data can reveal who is being excluded, where barriers arise, and whether reforms are improving participation and learning for all students. Data alone, however, cannot fully explain young people's experiences. Learners facing exclusion must have meaningful opportunities to shape the policies, practices, and services intended to support them.[43] Their perspectives can help identify barriers that administrative data often miss and ensure reforms respond to lived realities. Inclusion is strongest when systems respond to young people's circumstances, aspirations, knowledge, and voice.

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Chapter 7: Building Flexible Pathways Beyond Formal Education

Formal secondary education remains the primary pathway for most young people, but it cannot be the only one. With 77 million secondary school-age young people out of school,[44] including 31 million living in crisis-affected contexts,[45] many learners continue to face circumstances that make uninterrupted participation in conventional schooling difficult. Expanding opportunity therefore requires multiple pathways through which young people can continue learning, develop relevant skills, gain recognized qualifications, and transition into work and productive livelihoods.

Flexible learning programs have supported young people to re-enter formal education, develop foundational skills, and transition to improved livelihoods. Evidence from flexible learning programs shows that well-designed models can strengthen literacy, numeracy, and other foundational capabilities, while creating pathways back into formal education, vocational training, entrepreneurship, and employment.[46] Many successful models combine flexible delivery, learner-centred approaches, local relevance, and targeted support that address the barriers that initially excluded learners. When connected to recognized qualifications and progression pathways, these approaches can provide credible routes into further learning, skills development, access to employment, and entrepreneurship.[47]

Across Africa, governments are increasingly recognizing that flexible pathways are legitimate components of national education systems. Since 2020, a growing number of countries have strengthened the policies, guidelines, and institutional arrangements that support flexible learning pathways.[48] Accelerated education programs, re-entry pathways, and other flexible learning programs are helping young people reconnect with education and continue their learning journeys. Micro-credentials can provide another route by allowing young people to complete shorter courses and accumulate recognized learning over time when longer

programs are not immediately available to them. These programs are particularly important for out-of-school young people, displaced learners, and those whose education has been interrupted.

National Qualifications Frameworks, Recognition of Prior Learning systems, and equivalency policies can ensure learning acquired outside formal schooling is recognized, certified, and linked to further education, training, and employment.[49] These mechanisms help ensure flexible pathways become credible routes forward, leading to recognized qualifications and meaningful opportunities. This reflects a growing recognition that flexible pathways provide a viable means of achieving universal secondary education.

Scaling these flexible pathways, while maintaining learner responsiveness, will be essential. Several countries have demonstrated that flexible pathways can be successfully connected to national education systems and expanded to reach larger numbers of learners. However, many programs remain inadequately financed through education budgets, insufficiently integrated into national systems, or disconnected from formal curricula, recognized qualifications, and progression routes.[50] Scaling their impact will require sustainable financing, effective governance, integrated data systems, consistent quality standards, and clear pathways connecting flexible provision to further learning, skills development, training, entrepreneurship, and work. Flexible pathways should become fully planned, financed, accredited, and governed components of national education systems that meet young people where they are and help them to move into viable opportunities.

Chapter 8: Using Technology to Strengthen Teaching, Learning, and System Efficiency

Digital education is expanding rapidly across Africa, but evidence of its impact on secondary-level learning remains uneven and highly dependent on the systems in which technology is introduced. The COVID-19 pandemic accelerated digital innovation and remote learning across the continent, while advances in AI are creating new possibilities for personalized learning, teacher support, administrative efficiency, expanded access, and more responsive education systems.[51]

For many countries, technology offers new ways to leapfrog longstanding constraints in access, quality, and system capacity. Governments are investing in connectivity, digital infrastructure, learning platforms, and technology-enabled education reforms. These efforts are moving beyond isolated information and communications technology (ICT) projects toward more comprehensive digital education strategies that connect infrastructure, curricula, teacher development, learning resources, data systems, and AI.[52] Implementation of these reforms varies across the continent and evidence of impact is limited.

Technology can strengthen secondary education at three interconnected levels:

- **For teachers,** digital and AI tools can support lesson preparation, learner-centred instruction, learner assessment, professional learning, and administrative efficiency.
- **For learners,** technology and AI can provide additional practice, personalized feedback, greater access to resources, and continuity of learning when schooling is disrupted.
- **For education systems,** digital platforms, assessment systems, and education management information systems can strengthen planning, resource allocation, monitoring, and responsiveness.

Technology is most effective when it extends professional learning and enhances effective pedagogy. Digital and AI tools can reduce administrative burdens and help teachers dedicate more time to the distinctly human dimensions of education, including explanation, encouragement, mentoring, relationship-building, and responding to individual learners' needs.[53] Technology can also be leveraged to support teacher professional development.

Unequal access to electricity, devices, connectivity, AI tools, accessible content, and digital skills can deepen existing inequalities. Access to digital infrastructure in schools has improved only marginally since 2015, with significant gaps especially for girls and women, people with disabilities, displaced populations, and rural and underserved communities. Poorly designed uses of AI bring new risks, including weakening critical thinking, reducing meaningful engagement with learning, or encouraging overreliance on automated outputs. Digital systems can expose sensitive learner and teacher data, reproduce bias, provide inaccurate information, and create new privacy and safeguarding concerns.[54]

Recognizing these risks, a growing number of African countries are strengthening digital education, data protection, online safety, and AI policies, reflecting a broader shift toward more deliberate governance of technology in education. However, policy ambition often outpaces implementation capacity.[55] Realizing technology's potential will require approaches designed around accessibility, inclusion, affordability, and local context, alongside sustained efforts to expand equitable access from the outset.

Technology is not a substitute for an effective education system. It is a powerful tool whose value depends on the people, institutions, infrastructure, governance, and educational practices around it.[56] When grounded in educational purpose and supported by sustainable financing, strong safeguards, teacher capacity, and thoughtful implementation, technology can expand opportunity, improve learning, maintain continuity during disruptions, expand access to resources and support, and help prepare young people for a digital future where they can be active participants.



Part III: How Transformation Becomes Possible at Scale

This section examines how education systems can turn policy ambition and promising practices into sustainable transformation at scale. It explores the financing, institutional capacity, evidence, and partnerships needed to support implementation of key reforms to secondary education and sets out recommendations for policymakers.

Chapter 9: Strengthening Secondary Education Systems to Provide Inclusive, Flexible Secondary Education

The defining challenge for secondary education is increasingly implementation: translating ambitious policies and promising innovations into sustainable change at scale, while addressing gaps in equity and system and workforce capacity. This requires the financial, institutional, and technical capacity to align plans, budgets, and institutions around shared priorities; target resources equitably; support implementation from the national to the school level; and use data and evidence to continuously learn and adapt.

Adequate, equitable, and sustainable public financing is essential to transforming secondary education, but resources must be used more strategically. Equity-based approaches can lower household costs and direct additional resources to learners, schools, and locations facing the greatest barriers.[57] Financing should be linked to clearly defined equity outcomes and address multiple barriers simultaneously. Communities, including parents and caregivers, local businesses, and faith-based organizations, play an important role in supporting and financing secondary education, but their contributions should complement rather than substitute for adequate and equitable public financing, especially given variation in communities' capacity to mobilize resources.

Complementary innovative financing mechanisms are needed to meet the growing resource gap in secondary education.[58] These can include debt-for-development agreements in which debt payments are redirected to education, results-based financing, employer levies, national training funds, climate finance, and direct industry co-financing. However, these mechanisms should supplement rather than replace core public expenditure and be transparently governed, aligned with national

priorities, and designed to protect quality and equity in secondary education.

Across reforms, implementation capacity emerges repeatedly as the missing link between policy ambition and change in schools. Strong institutions are needed to turn policy ambition into coordinated and sustained implementation. It is governments' role to establish clear priorities, sequence reforms according to fiscal, demographic, and institutional realities, and align mandates, resources, and accountability across ministries, national agencies, and levels of government. This requires leaders with the enduring capabilities to manage change, coordinate stakeholders, use evidence, and support implementation.[59] Leadership development must therefore extend beyond one-off project training and become part of long-term institutional learning.

A capable middle tier, including regional, district, and other subnational authorities, is essential to connect national policy with schools and training institutions, and to implement reforms.[60] These officials translate reform into practice through monitoring, coaching, data use, and local problem-solving. However, these actors are often expected to implement increasingly complex reforms without sufficient staffing, training, authority, or operational resources. Investing in the middle tier would strengthen implementation, enable appropriate local adaptation, and direct additional support to schools and communities facing the greatest challenges.

Better data will strengthen education systems, but only if institutions have the capacity and routines to use it.[61] Data pertaining to learners, teachers, financing, different forms of secondary provision, learning, and transitions beyond school can help governments plan better and allocate resources more fairly. Governments also need the capacities and systems to leverage technology, including AI, to understand evidence, use it to guide implementation, and adjust policies when needed. Domestic universities, research institutions, think tanks, and other knowledge brokers can strengthen this capacity by addressing government priorities and strengthening national evidence systems.

Partnerships can bring additional capacity, expertise, resources, and accountability to education reform while reinforcing government ownership.[62] Employers, communities, young people, researchers, civil society, and development partners can provide financing, specialized expertise, evidence, and implementation support. They should have clear roles and responsibilities linked to long-term national plans. Broader coalitions can also help maintain progress when leadership changes.

System transformation will look different in every country, but the key is turning policy ambition into meaningful change for learners. Governments will need to sequence reforms according to their fiscal, demographic, and institutional conditions. Across contexts, however, progress depends on sustainable and equitable financing, capable leadership and middle-tier actors, integrated evidence systems, and government-led partnerships. Together, these foundations can turn promising policies and programs into coherent, adaptive, and sustainable secondary education systems.

Recommendations

This report offers the following recommendations to strengthen a collective effort of systemic transformation. Many of these recommendations highlight practical reforms needed to deliver on priorities already articulated by African institutions, including the African Union, Association for the Development of Education in Africa (ADEA), and regional economic communities. We must ensure that ambitions translate into real outcomes for young people. Africa's youth are ready to help shape the continent's future, and they deserve learning systems that are equally ready to invest in their potential.



1 Invest in secondary education systems to meet the pace of demographic growth and reach the young people facing the greatest disadvantage, while ensuring continued investment in foundational learning and primary education.

1.1. Direct resources toward learners, schools, and communities facing the greatest barriers through fee-free education, equity-based financing, school meals, and inclusive physical and digital infrastructure.

1.2. Mobilize complementary resources through mechanisms such as debt-for-development agreements that redirect debt repayments to education, public-private partnerships, corporate social responsibility, and unlocking climate finance, while ensuring that these supplement adequate and equitable domestic public financing and align with national education priorities.

2 Accredit, recognize, and scale learning pathways flexible enough to meet young people where they are.

2.1. Develop and strengthen multiple entry and progression routes through general and technical secondary education, including through National Qualifications Frameworks, equivalency policies, and Recognition of Prior Learning.

2.2. Recognize, finance, and scale flexible learning pathways as core components of national education systems, aligned with national curricula.

2.3. Provide support for learners across flexible pathways for their transitions into work through apprenticeships, work-based experiences, micro-credit, and other support for entrepreneurship.

2.4. Strengthen longitudinal tracking of learners across pathways and into further education, training, and work, so that governments can understand how young people's trajectories unfold and adapt policies accordingly.

3 Design secondary education systems that prepare all young people for work, livelihoods, and lifelong learning.

3.1. Realize the promise of competency-based curricula by implementing complementary reforms to teacher preparation, learning resources, assessment systems, and school infrastructure.

3.2. Develop policies and curricula to address both the opportunities and risks of AI for education and employment. Deliver digital and AI literacy training for teachers and students to prepare young people to use these skills in the world of work.

3.3. Enable transitions to work for young people by embedding labour market information, career guidance, mentoring, work-based learning, and entrepreneurship training and support within secondary education, including through stronger partnerships with employers.

3.4. Support young people facing the greatest disadvantage by combining transition interventions with holistic supports such as psychosocial services and school meals, while addressing harmful gender and social norms and policies that restrict access to education and work.

4 Strengthen and expand the education workforce, while advancing their ability to support students' learning, well-being, inclusion, and successful transitions.

4.1. Continue professionalising teaching through stronger professional standards, initial preparation, continuous professional development, clear career pathways, and fair remuneration.

4.2. Expand the number of teachers to address the estimated 10.7 million additional secondary education teachers needed by 2030, while improving recruitment and professional support for educators working in rural, remote, fragile, and underserved areas. Strengthen incentives for these educators, prioritizing the inclusion of underrepresented groups.

4.3. Incorporate mental health and psychosocial support into both pre-service and in-service teacher training as part of a wider system of teacher well-being policies, peer support, mentoring, and referral pathways.

4.4. Strengthen the capacity of school leaders to improve instruction, motivate and develop teachers, use data for continuous improvement, foster inclusive learning environments, and translate national reforms into school-level change.

4.5. Experiment with alternative roles in the education workforce, including teaching assistants, subject specialists, inclusion and well-being professionals, and community mentors to alleviate teacher shortages and create a support system for teachers and learners.

5 Strengthen the effectiveness, efficiency, equity, and implementation capacity of secondary education systems.

5.1. Invest in foundational and remedial learning, improved teacher capacity, and support for marginalized learners while removing barriers at critical transition points from enrolment in primary through completion of upper secondary education to create efficiencies and achieve better outcomes. Give particular attention to progression from lower to upper secondary education, including reviewing the financial, examination, capacity, and other barriers that prevent learners from continuing.

5.2. Improve the availability and quality of real-time data and AI tools, and strengthen the capacity of system actors to use them to target resources more equitably, track student learning and employment outcomes, and assess progress toward meeting national goals.

5.3. Invest in the capacity, resources, and tools of middle-tier education officials who are closest to schools in order to better implement reforms, assure quality, collect data, and support schools and teachers.

5.4. Develop an African-led framework for secondary education that articulates a shared vision for the knowledge, skills, values, and agency that young people need to learn throughout life, navigate work and livelihoods, participate as active citizens, and shape their communities and societies, while allowing countries to adapt the framework to their own contexts and priorities.

6 **Build a coalition to advance secondary education in Africa.**

6.1. Bring together a broad range of stakeholders in a government-led Coalition for Secondary Education in Africa to mobilize additional financing, technical expertise, evidence, innovation, and implementation support to effectively deliver on the ambitious agenda for secondary education outlined in this report.

6.2. Ground the vision for this coalition in continental and national priorities, expertise, and long-term system strengthening rather than fragmented or short-term projects. The proposed coalition should build on and complement relevant continental and inter-country initiatives in alignment with the priorities of the African Union and the Association for the Development of Education in Africa (ADEA).

The opportunity is unprecedented. Africa's young people represent one of the greatest assets of the 21st century, but realizing their potential requires secondary education systems equal to the scale of their ambition. Delivering on the promise of secondary education in Africa will not simply prepare young people for the future, it will enable them to shape it, unlocking the potential of a generation and creating a stronger, more prosperous future for the continent and the world.

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INTRODUCTION

Why Secondary Education Matters Now



Secondary education remains Africa's main platform for work and the only part of the education system capable of reaching young people of secondary school age at scale, but it must evolve to help them navigate increasingly diverse and nonlinear pathways through learning, work, and life. Many young people move between different forms of learning and livelihood opportunities throughout their lives, often in response to rapid technological, economic, environmental, and social change. Preparing all young people for these realities will require broadening our understanding of where, when, and how learning occurs, expanding beyond the walls of the formal classroom. Building on the Mastercard Foundation's flagship 2020 report *Secondary Education in Africa: Preparing Youth for the Future of Work*, this Phase II report explores how secondary education systems can evolve to help all young people navigate nonlinear pathways and transition successfully into a rapidly changing world of diverse jobs, livelihoods, and opportunities.

Africa's growing generation of young people will shape the continent's future

Africa is home to the world's youngest population and the largest generation of young people the world has ever seen.[1] Approximately 75 percent of sub-Saharan Africa's population is under the age of 35, and more than 400 million Africans are between the ages of 15 and 35.[2] By 2035, more than 330 million young people in sub-Saharan Africa are expected to reach working age, more than in the rest of the world combined.[3] While much of the world is adapting to aging populations and shrinking workforces, Africa is the only major region where the working-age population is projected to continue growing substantially over the coming decades.

This demographic transformation presents an extraordinary opportunity, but a demographic dividend is not guaranteed. As the share of working-age adults grows, Africa could become the world's largest source of labour and talent; by 2075, approximately 67 percent of the population of sub-Saharan Africa is projected to be of working age, compared with less than 60 percent globally.[4] Unlike many regions experiencing population aging and labour force contraction, Africa could sustain a large working-age population well into the second half of the 21st century.[5] However, demographic changes translate into prosperity only when young people are healthy, well-nourished, educated, and possess the skills needed to access productive work.[6] Whether Africa realizes a demographic dividend will depend on the investments and policies that shape the capabilities of its growing population of young people and the opportunities available to them.

Secondary education will be central in determining whether Africa's demographic transformation becomes a demographic dividend. Beyond contributing to better health, productivity, earnings, and labour force participation, secondary education can support young people in acquiring the knowledge, confidence, capabilities, and agency to pursue productive livelihoods, participate in their communities, exercise leadership, and adapt to economic, social, environmental, and technological change. Together with effective health, economic, labour market, and social-protection systems, these investments can help translate Africa's demographic transformation into sustainable and inclusive development.

Africa is home to the world's youngest population and the largest generation of young people the world has ever seen.

Secondary education for girls and young women is particularly consequential. Higher levels of female education are consistently associated with women's increased participation in the labour market, later marriage, and greater autonomy in their decision-making and changes in girls' perceptions of gender equality and social norms.[7] Families with higher levels of educational attainment also tend to invest more in the health, well-being, and learning of each child, reinforcing an intergenerational cycle of human development.[8]

The scale of Africa's demographic transformation means that secondary education systems must do more than expand. They must also keep pace with growing cohorts while transforming to enable far more young people to enter, learn, progress, complete their education, and transition successfully into further learning or work. Africa's demographic opportunity will ultimately depend not simply on the size of its youth population, but also on the human capital that population is able to develop and the ability to transition into productive pathways. Over the past decade, African governments have increasingly recognized secondary education as a cornerstone of economic transformation, social inclusion, and democratic participation. This shift is reflected in the African Union's Agenda 2063 and Continental Education Strategy (CESA) for 2026–2035, as well as numerous national education sector plans that place greater emphasis on skills development, youth employment, digital transformation, and lifelong learning.

Secondary education can equip young people to thrive in a changing world

Most young people in Africa do not proceed to tertiary education and instead enter the world of work directly from basic education.[9] Although enrolment in tertiary education in sub-Saharan Africa more than doubled between 2000 and 2021, increasing from four percent to nine percent, it remained far below the global average of 38 percent over the same period.[10] Data available for most countries in the region indicate that the tertiary enrolment rate has not changed significantly since the Mastercard Foundation's flagship report, *Secondary Education in Africa: Preparing Youth for the Future of Work* was published in 2020.[11] For most young people, secondary education is therefore the main platform for preparing for work and life.

Secondary education coincides with a critical period for developing the capabilities young people need to navigate adulthood and a changing world. The secondary education years offer an important window for strengthening resilience, agency, and the adaptive capabilities needed to respond to social, economic, technological, and environmental change.[12] Secondary education can build on foundational learning while enabling young people to deepen their knowledge, develop skills and agency, discover their interests and aspirations, and prepare for diverse pathways through further learning, technical and vocational training, employment, entrepreneurship, caregiving, and community participation. This is what young people say they want:

> **"We want a school that prepares us for exams, but also for life. We want to learn things that we can understand, practice, and use to build our future." –Senegal youth manifesto**[13]

> **"In the past, we used to be given more content, but now we are given more opportunity to think." –Tanzanian secondary school student**[14]

Secondary education therefore has complementary, rather than competing, purposes. It should build the knowledge and skills young people need for work and livelihoods, while also strengthening the values, agency, civic capabilities and capacity for lifelong learning that enable them to make informed choices, contribute to their communities and societies, and shape their own futures. These purposes reinforce one another: the critical thinking, communication, collaboration, problem-solving, and sense of agency that help young people navigate work also support continued learning, active citizenship, and participation in community life.

Yet these opportunities are not equally accessible to all young people. Enrolment and completion of secondary education have increased significantly across the continent since 2020. Yet barriers accumulated throughout a learner's educational journey can become particularly consequential at transitions into and through secondary education, where schooling becomes less universally available, more costly, and often more selective. Loss of students during primary education and weak foundational learning in those early years constrain the effectiveness, equity, and efficiency of secondary education systems. During secondary school, limited places, examinations, distance, and safety concerns can also intersect with growing responsibilities outside school. In addition, at this stage of life, gender norms can further shape these pressures, including expectations around marriage, motherhood, and caregiving for young women and household provision for young men.[15] These challenges are compounded for young people with disabilities and refugees and displaced young people. This makes secondary education a critical opportunity to counter exclusion and support young people's successful transitions into adulthood.

With 77 million secondary school-aged young people in Africa out of school, secondary education must be understood more broadly than formal schooling alone.[16] Millions of adolescents and young people never enter formal secondary education, leave before completing it, or move in and out of education as their circumstances change. For the more than 31 million out-of-school secondary school-age learners in conflict- and crisis-affected settings, displacement, insecurity, and school closures can further disrupt access to formal education.[17] An estimated 20 million additional students in Africa were judged at risk of leaving school due to climate related disruptions.[18] More learners are being affected as crises intensify and spread globally; six of the 10 countries with the highest headcount of out-of-school young people are located in Africa. [19] Secondary education systems, therefore, need to encompass both formal schooling and flexible, accredited, and connected learning pathways, enabling out-of-school young people to reconnect with learning, gain recognized credentials, and progress into further learning, work, and livelihood opportunities. These pathways must be diverse without becoming fragmented, disconnected, or hierarchical.

This broader vision requires expanding beyond the walls of the classroom and rethinking when, where, and how learning can occur.

This broader vision requires expanding beyond the walls of the classroom and rethinking when, where, and how learning can occur. It recognizes that meaningful learning can take place through multiple pathways and settings, and that young people should be able to move between these pathways as their circumstances, needs, and aspirations evolve. Preparing young people for multiple and diverse opportunities will require education systems that are not only larger but also more flexible, connected, and responsive to the realities of young people's lives. Lessons since 2020 point to a broader role for secondary education.

This year, the Mastercard Foundation marks 20 years of working alongside partners and young people. Secondary education has been a central part of that journey from the beginning. Together with partners, governments, communities,



"My journey has taught me that success is not determined solely by classroom results. It requires perseverance, hard work, continuous learning, and the courage to keep moving forward despite setbacks."

Tanzanian youth participant

educators, and young people themselves, we have worked to expand access to quality, relevant secondary education and strengthen young people's transitions beyond school. Along the way, we have seen both the transformative power of secondary education and the limitations of systems that are not evolving as rapidly as the world young people are entering.

Our work in secondary education has evolved alongside our learning. Our early programming focused primarily on expanding access and addressing the financial, social, geographic, and institutional barriers that prevent young people from entering, remaining in, and completing secondary education. Access remains a central priority for our work, particularly for young people facing poverty, displacement, disability, gender-related barriers, geographic isolation, conflict, and other forms of exclusion. As our programming evolved, we placed greater emphasis on system-level reforms that strengthen teaching and learning, skills development, inclusion, and transitions beyond school. This shift reflected a growing recognition that lasting change requires strong systems, institutional capacity, effective implementation, and sustained government leadership.

Ensuring that young people enter and complete secondary education is essential, but it also raises a broader question: what should secondary education ultimately prepare young people for? As systems expand, questions about what young people learn, how learning relates to their aspirations, and whether education supports successful transitions beyond school become increasingly important. These questions informed the Mastercard Foundation's flagship 2020 report, *Secondary Education in Africa: Preparing Youth for the Future of Work*. The report advanced a central message: secondary education is the main pathway to work for young people in Africa.

The 2020 report was deeply influential on both our thinking and our programming. As our understanding of young people's experiences deepened, we strengthened our focus on improving teaching and learning, supporting girls and young women, exploring new approaches to technology-enabled education, and creating more flexible pathways for young people who have been excluded from formal schooling. The report underscored the importance of primary education as a strong foundation for our work to support learning and success in secondary education. It directly inspired new initiatives, including the Resilience in Secondary Education initiative, which provides accredited second-chance secondary education to out-of-school young people in Africa. It also helped shape the expansion of existing programs, including the Leaders in Teaching initiative and girls' education programming. More broadly, the report deepened our commitment to centring the voices and experiences of young people themselves. Through our research, partnerships, and programs, young people have helped shape our understanding of the barriers they face, the opportunities they value, and the futures they aspire to build.

While this report focuses on secondary education, we also recognize that any education level cannot be considered in isolation from the wider education continuum. Foundational learning and primary education shape whether young people enter secondary education prepared to succeed,[20] while tertiary education, Technical and Vocational Education and Training (TVET), and other pathways beyond secondary school expand the choices available to young people as they pursue further learning and specialized occupations. Indeed, tertiary education plays a particularly important role in preparing future teachers and education leaders. This report thus illustrates how barriers and learning gaps accumulate across this continuum, reinforcing the need for investments at different levels of education to complement rather than compete with one another. Only by making all levels and pathways more equitable will countries be able to expand young people's choices and enable them to pursue their aspirations.

A changing world requires renewed ambition for secondary education

The central message of the 2020 *Secondary Education in Africa* **report is as important today as it was when it was published.** Secondary education remains Africa's primary platform to work and the only part of the education system capable of reaching young people of secondary school-age at scale. What has changed is the context in which it operates. We have seen that rates of youth who are not in education, employment, or training (NEET) have not significantly improved.[21] The years since the first report have brought progress, disruption, and new learning. The COVID-19 pandemic, deteriorating fiscal space compounded by rising debt burdens, intensifying climate change and technological advances, including the accelerating development and adoption of artificial intelligence (AI), have raised new questions about what young people need from secondary education and what education systems must do differently to support them.

This report builds on and expands the conversation that began in 2020. The first report focused on preparing young people for the future of work, while also recognizing the importance of creating flexible pathways through secondary education. This report places greater emphasis on the need to both: (1) expand and recognize a diversity of pathways through secondary education; and (2) provide deeper and broader support for young people in navigating nonlinear pathways into a rapidly changing world of work, livelihoods, and life-long learning. Work remains central, but young people's pathways will be shaped by a broader set of transitions across learning, work, and life. In this context, success will depend not only on what young people know when they leave school, but also on their ability to adapt, continue learning, build networks, access opportunities, and move between pathways over time. This report takes stock of progress since 2020, identifies persistent and emerging challenges, and explores the reforms, innovations, and system capabilities required to help young people navigate these transitions.

The evidence reveals a clear paradox. Secondary education systems are larger than they were five or 10 years ago. Enrolment has surpassed 110 million, adding nearly 15 million learners since 2020,[22] and completion rates have improved.[23] Yet out-of-school rates remain stubbornly high, and much of the recent growth in enrolment reflects larger cohorts moving through the system rather than greater inclusion of the most marginalized.[24] Secondary education is expanding, but expansion alone has not yet fundamentally altered young people's chances of progressing through school and successfully transitioning beyond it.

Africa's education systems operate within diverse demographic, economic, social, linguistic, and political contexts. Rather than outlining a single set of reforms, this report seeks to contribute to ongoing conversations among governments, policymakers, educators, researchers, employers, development partners, and young people about how secondary education can become more responsive to local realities, national ambitions, and young people's aspirations. This situates our understanding of progress alongside African aspirations for education embodied in the AU's Agenda 2063 and the Continental Education Strategy for 2026–2035 that envision secondary education systems that are relevant, equitable, innovative, and responsive to changing economic and social realities. While intended primarily for policymakers and government leaders, the report also speaks to the wider community of actors whose contributions will be essential to achieving this transformation. The findings and recommendations should therefore be interpreted and adapted in relation to national priorities, sector plans, and local contexts.



> "We have talents and ambitions like everyone else, but we need more support, mentorship, and information about career pathways available to us."
>
> **Out-of-school young woman with a disability, Tanzania**

Secondary education is expanding, but expansion alone has not yet fundamentally altered young people's chances of progressing through school and successfully transitioning beyond it.

This report brings together diverse evidence from across Africa

Understanding how secondary education must evolve requires drawing on a broad and diverse evidence base. This report builds from an extensive body of evidence, research, and learning, including a continent-wide landscape study synthesizing quantitative trends in education and employment outcomes; commissioned scoping papers synthesizing evidence published since 2020 with a focus on African scholarship; commissioned background papers examining thematic areas where significant new evidence, innovation, or disruption have emerged since 2020; and in-depth country case studies in Ethiopia, Ghana, Malawi, Rwanda, Senegal, Sierra Leone, and Tanzania. Examples from across Africa are used throughout the report to illustrate promising practices, innovations, and policy approaches.

The voices of young people were central to this research. Consultations with young people, especially women and girls, young people with disabilities, refugees or displaced youth, and those not in school, formed a core component of all primary research, with many research institutions engaging young people as co-researchers and co-authors of their respective reports. Each country case study is accompanied by a youth report that explores young people's perspectives in more detail.

The report also reflects a process of internal reflection and dialogue across the Mastercard Foundation and its wider partner network. Drawing on the experiences of governments, educators, employers, civil society organizations, and young people themselves, this report incorporates lessons learned since 2020, explores how secondary education has evolved, and considers the opportunities and challenges emerging across diverse contexts. Throughout the report, young people's voices remain central. Their perspectives provide critical insights into how education systems operate in practice, where they fall short, and how they can better support the futures young people hope to build.

The report combines quantitative analysis with qualitative evidence. This approach makes it possible to examine both the scale of the challenges facing secondary education and the lived experiences of the young people, educators, policymakers, and institutions navigating them.

Important evidence gaps remain, but they should not become a barrier to action

Important data and evidence gaps remain across many African education systems, but they should not become a barrier to action. These limitations should be considered when interpreting the report's findings and should reinforce the need for continued investment in data, research, evaluation, and learning. At the same time, the evidence is sufficient to identify promising approaches, demonstrate the scale and urgency of the challenges facing secondary education, and inform action while the evidence base continues to strengthen.

Comparable data on learning outcomes at the secondary level, and data that reflects the skills and competencies prioritized through competency-based curricula remain scarce, limiting our ability to assess education quality, and ultimately, young people's readiness to transition to work.

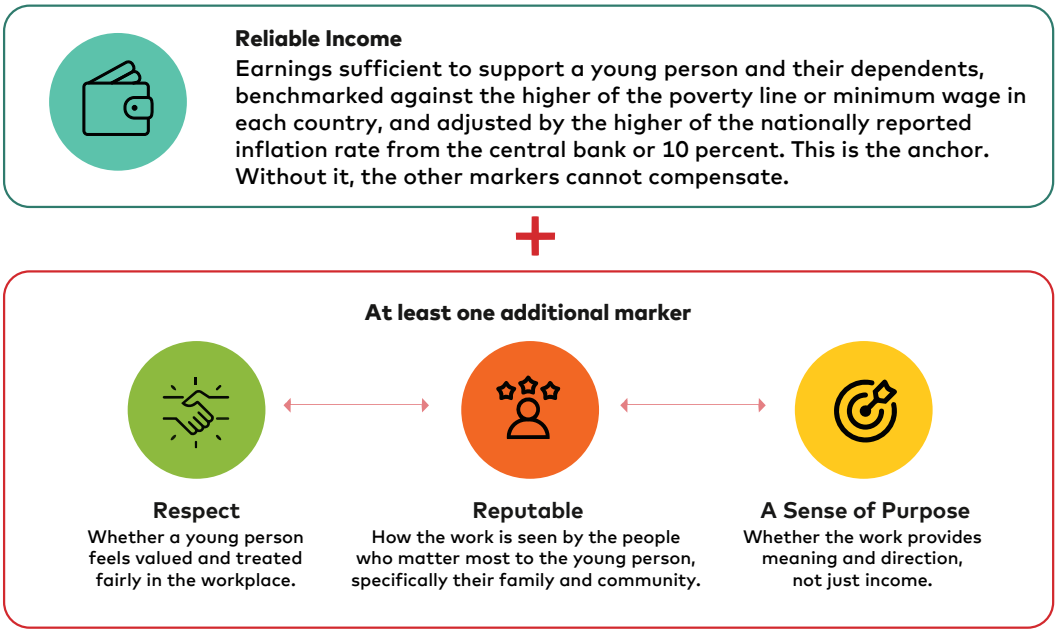
The evidence base is strongest on who participates in secondary education, but weaker on what young people learn and how systems are financed and implemented. While enrolment, completion, and participation data are increasingly available, significant limitations persist in areas such as education financing, learning outcomes, and the experiences of displaced learners, those with disabilities, and especially young people facing intersecting forms of disadvantage. Comparable data on learning outcomes at the secondary level, and data that reflects the skills and competencies prioritized through competency-based curricula remain scarce, limiting our ability to assess education quality, and ultimately, young people's readiness to transition to work. Important questions also remain about which reforms work, for whom, and under what conditions. Finally, there exist few evaluations or longitudinal studies on policy implementation and system transformation, particularly since the publication of Mastercard Foundation's first *Secondary Education in Africa* report in 2020, leaving a need for stronger evidence about what works, and how to sequence reforms and target resources in contexts of constrained financing and institutional capacity.

Three broader evidence gaps are also important for the future of secondary education. First, more longitudinal research and tracer studies are needed to understand what happens to young people, especially marginalized young people, as they move through the system, after they leave school, and as they enter further learning, work, and livelihood opportunities. Second, more evidence is needed about how countries can institutionalize and sustain flexible pathways, implement qualitative frameworks and equivalency systems, and create more flexible and connected learning ecosystems at scale. Third, significant gaps remain in our understanding of how technology and AI can be effectively, equitably, and responsibly integrated into secondary education systems. More evidence on AI is needed regarding what works, at what cost, and under what conditions, as well as on sustainable and scalable teacher adoption, impacts on learning and equity, and the governance challenges associated with AI.

Across Africa, education reform is advancing at different stages. While many countries have adopted ambitious policies and frameworks, implementation remains uneven, and rigorous evidence of improvements in learning, inclusion, and transitions to work is often limited. This report therefore distinguishes where possible policy commitments from reforms being implemented and from those with demonstrated outcomes.

This report also recognizes that education alone cannot determine employment outcomes. Access to dignified and fulfilling work (defined below) also depends on broader economic conditions, labour market opportunities, public policies, and the capacity of economies to create productive employment at scale. In many African countries, the supply of stable jobs remains limited. While secondary education can strengthen young people's capabilities, opportunities, and transitions, it cannot by itself generate sufficient employment for growing youth populations. Realizing the benefits of educational investment will also require progress on the demand-side of the labour market, including policies and investments that support and incentivize economic growth, enterprise development, innovation, productivity, and job creation. The types of policies and investments that can best support employment and sustainable development in varying contexts, therefore, warrant continued analysis beyond the scope of this report, particularly as policymakers seek to expand access to opportunities for young people to pursue dignified and fulfilling work.

How the Mastercard Foundation defines dignified and fulfilling work



In developing the *Young Africa Works* strategy that guides much of the Mastercard Foundation's work, young people across Africa told us that income alone is not enough: they aspire to work that provides economic security alongside respect, recognition, and a sense of purpose. The concept of dignified and fulfilling work reflects these aspirations, complementing traditional measures such as employment, earnings, and productivity. Reliable income is its foundation, alongside at least one of three dimensions: **1)** respect, or feeling valued and being treated fairly; **2)** reputation, or work regarded positively by family and community; and **3)** purpose, or work that provides meaning beyond income. Throughout this report, successful transitions are understood as movement toward dignified and fulfilling work, while recognizing that secondary education also supports young people's broader personal, social, civic, and lifelong development.

Source: Mastercard Foundation, "Reflections on Seven Years of Implementation and Learning" (2026).

The world is changing, and secondary education must change with it. Secondary education remains the main platform to work for most young people in Africa and the only system capable of reaching them at scale. The chapters that follow explore how secondary education systems can evolve to help all young people navigate diverse and nonlinear pathways through learning, work, and life in a rapidly changing world.

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Part I

Why Secondary Education Must Transform

CHAPTER 1 Understanding the Current State of Secondary Education in Africa

CHAPTER 2 Reorienting Secondary Education for a Changing World of Work



CHAPTER 1

Understanding the Current State of Secondary Education in Africa

Progress, inequities, and an unfinished agenda for secondary education expansion



QUESTION THIS CHAPTER ANSWERS

How has secondary education changed across Africa since 2020, and is it reaching and preparing young people effectively and equitably?

What has changed since 2020

African governments have made remarkable progress since 2020. Secondary enrolment has risen by nearly 15 million to more than 110 million, and completion and gender parity have improved. Yet around 85 percent of recent enrolment growth reflects larger cohorts rather than improved transition rates, and 77 million secondary school-age young people remain out of school. Reductions in out-of-school rates have declined more slowly, creating a demographic treadmill in which education systems must continuously expand simply to maintain existing levels of participation. Fiscal pressures have also intensified, including rising debt burdens and declining external aid.

What is needed now

Secondary education is expanding, but expansion has not yet translated into equivalent reductions in exclusion or improvements in learning. More young people are entering and completing secondary education, but demographic growth, progression bottlenecks, weak learning, persistent inequalities and constrained financing mean that millions of young people are still not benefitting fully. The next phase of expansion must therefore improve progression, learning, and equity alongside access.



1.1 Africa has made significant progress in secondary education, but challenges remain

Africa has made significant progress in expanding access to secondary education. More young people are enrolled in secondary education than at any point in the continent's history, with secondary enrolment surpassing 110 million learners in 2024 (Figure 1.1).[1] Gender gaps have narrowed, completion rates have improved, and participation has continued to grow since the publication of the first *Secondary Education in Africa* report in 2020. Yet expansion has not translated into equivalent reductions in educational exclusion, improvements in learning, or equitable outcomes for all learners. Across much of the continent, education systems are simultaneously responding to growing demand, persistent inequalities, and increasing fiscal pressures. This chapter describes how participation in secondary education has changed since 2020, where progress has been strongest, and where major challenges remain.

The analysis is structured into five main sections: enrolment, completion, and out-of-school young people (Section 1.2); progression through the education system (Section 1.3); learning outcomes and evidence gaps (Section 1.4); patterns of inequality and disadvantage (Section 1.5); and the financing landscape for continued expansion of secondary education (Section 1.6).



FIGURE 1.1

Africa has made significant progress in expanding access to secondary education

SECONDARY TOTAL
110.2m
students enrolled in secondary education in Africa in 2024.
95% CI: 92.5–127.9m

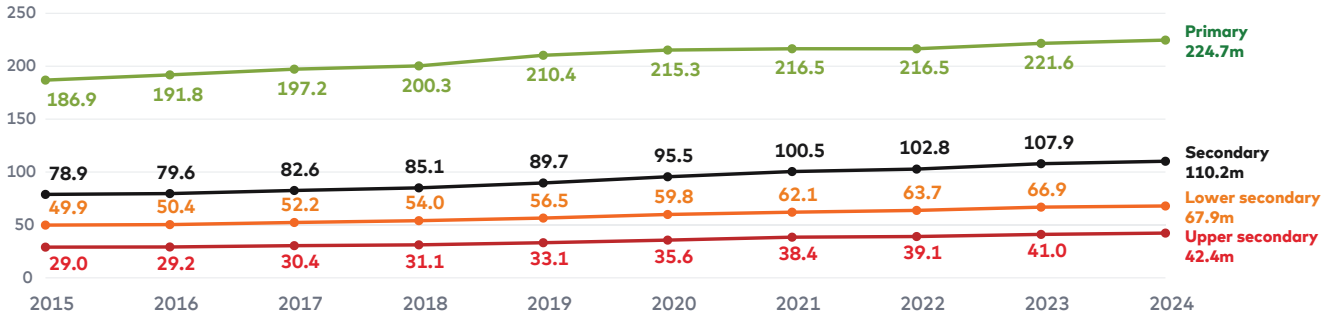
PRIMARY
224.7m
95% CI: 211.0–238.4m

LOWER SECONDARY
67.9m
95% CI: 59.4–76.4m

UPPER SECONDARY
42.4m
95% CI: 33.8–50.9m

How enrolment has changed over time

Millions of students

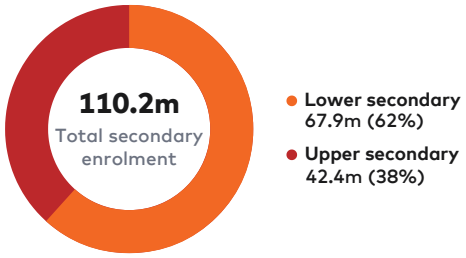


Change since 2015

Level	2015	2024	Change (millions)	Change (%)
Primary	186.9m	224.7m	+37.8	+20.2%
Lower secondary	49.9m	67.9m	+18.0	+36.1%
Upper secondary	29.0m	42.4m	+13.3	+45.9%
Secondary	78.9m	110.2m	+31.3	+39.7%

Upper secondary grew fastest: +45.9% since 2015.

Secondary enrolment in 2024



Key takeaways

- Secondary enrolment surpassed 100 million in 2021 and reached 110.2 million in 2024.
- Upper secondary enrolment grew fastest since 2015, rising by 45.9%.
- Primary education still serves the largest number of learners, with 224.7 million enrolled in 2024.

Source: Reproduced from Stoelinga et al., *Secondary Education in Africa: Enrolment, Progression and Completion Aggregate Trends 2015-2024* (Laterite, 2026), drawing on UNESCO Institute for Statistics data and imputation for missing data. [2]

Note: The data covers 53 countries, including lower- and upper secondary-level data. Figures are shown in millions, with 95 percent confidence intervals (CI) shown for 2024.



1.2 Participation is rising, but rapid population growth is limiting progress toward universal access

Secondary education in Africa is expanding rapidly, but population growth is making progress toward universal access more difficult to achieve; this section examines the resulting "demographic treadmill." Sustained improvements in participation and completion at the secondary level will depend on strengthening progression through the primary grades, improving retention in lower-secondary education, and reducing barriers to the transition to upper secondary.

Enrolment in general secondary education

Secondary school enrolment has expanded substantially. Across 53 countries for which data is available, secondary enrolment rose from 78.9 million students in 2015 to 110.2 million in 2024, passing the 100 million mark in 2021.[3] Since 2020 alone, estimated secondary school enrolment has increased by 14.7 million students, from 95.5 million to 110.2 million.[4] This represents an average annual increase of about 3.5 million additional secondary students between 2015 and 2024. While both girls' and boys' participation in secondary education increased over the past decade, girls' enrolment grew more rapidly, helping to narrow long-standing gender gaps, a promising trend explored in Section 1.5.

Much of Africa's secondary school enrolment growth reflects demographic momentum rather than major improvements in progression through the education system. Approximately 85 percent of recent enrolment growth is driven by larger cohorts moving through the system, while 15 percent is attributable to improved progression rates.[5] This suggests that many systems are expanding under demographic pressure rather than fundamentally transforming how effectively they enroll, retain, and advance the most marginalized learners. Despite rising enrolment and completion, out-of-school rates have therefore declined only slowly:[6] systems must

continually expand simply to maintain existing participation rates as the secondary school-age population grows. This is the "demographic treadmill" that constrains progress toward universal access.[7]

Completion

More young people are successfully completing secondary education than a decade ago. Completion rates have continued to improve since publication of the first *Secondary Education in Africa* report, reflecting gradual but sustained progress across the continent. Lower secondary school completion increased from 40.5 percent in 2015 to 47.7 percent in 2024, while upper secondary school completion rose from 29.9 percent to 34.3 percent over the same period (Figure 1.2).[8] These gains suggest that a growing share of young people are progressing through the education system and reaching key educational milestones.

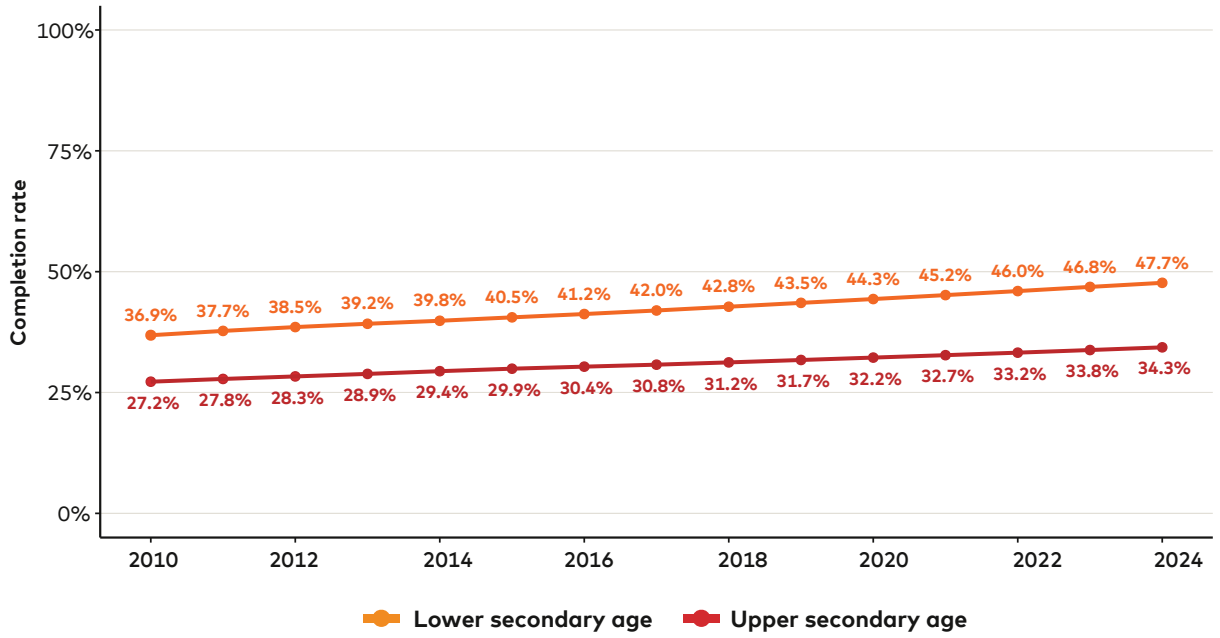
Despite rising enrolment and completion, out-of-school rates have declined only slowly: systems must continually expand simply to maintain existing participation rates as the secondary school-age population grows.

Progress in completion is also reflected in improvements in gender parity. Lower secondary school completion has now reached parity at 47.7 percent for both girls and boys, while the remaining upper secondary school completion gap has narrowed to just 1.4 percentage points (35 percent for boys and 33.6 percent for girls).[9] Gender dynamics and progress, particularly for girls, are explored in greater detail in Section 1.5.

FIGURE 1.2

Lower and upper secondary school completion rates have increased

Lower and upper secondary school completion over time in Africa



Both series use modelled both-sex completion rates weighted by the matching both-sex school-age population. UIS interval bounds were not present in the local extract, so no margin band is drawn. For years before the population file starts, the nearest available country population year is used.

Source: Reproduced from Stoelinga et al., *Secondary Education in Africa: Enrolment, Progression and Completion Aggregate Trends 2015-2024* (Laterite, 2026), drawing on UNESCO Institute for Statistics modeled series and population-weighted cross-country means across 48 countries.

Out-of-school rates

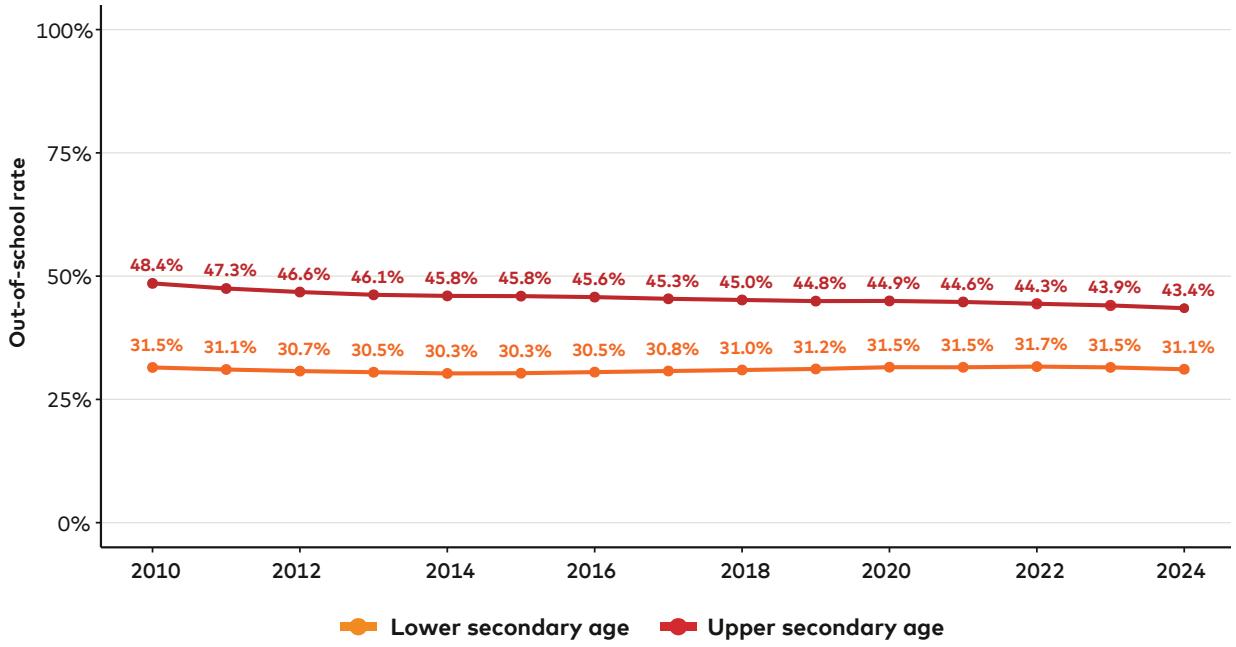
Progress in reducing out-of-school rates has been much slower than progress in enrolment and completion. Between 2015 and 2024, the lower secondary school-age out-of-school rate remained largely unchanged at around 31 percent, while the upper secondary school-age out-of-school rate declined only modestly from 45.8 percent to 43.4 percent.[10] Improvements since 2020 have been similarly limited, underscoring the challenge of reducing educational exclusion at scale.[11] As Figure 1.3 illustrates, gains in participation and completion have not translated into equivalent reductions in the share of young people who remain out of school across the continent. Indeed, sub-Saharan Africa alone accounts for an increasing share of the world's out-of-school young people: among lower secondary school-age adolescents, the region's share rose from 25 percent in 2000 to 42 percent in 2015 and 49 percent in 2023, while among upper secondary school-age young people it increased from 15 percent to 22 percent and 28 percent over the same period.[12]

Approximately 77 million young people of secondary school age are excluded from education across Africa.[13] Nearly a third (31.1 percent) of all lower secondary school-age young people in Africa are not in school, and this rises to 43.4 percent of upper secondary school-age young people.[14] Forty percent of secondary school-age young people who are out of school (31.2 million) live in crisis-affected contexts: 25.5 million in sub-Saharan Africa and 5.7 million in Northern Africa.[15] These trends highlight that exclusion is not evenly distributed, with the greatest barriers concentrated among the most underprivileged populations. Section 1.5 of this chapter explores *who* these populations are.

FIGURE 1.3

Out-of-school rates have fallen much more slowly

Lower and upper secondary school-age out-of-school rates over time



Both series use modelled both-sex out-of-school rates weighted by the matching both-sex school-age population. UIS interval bounds were not present in the local extract, so no margin band is drawn. For years before the population file starts, the nearest available country population year is used.

Source: Reproduced from Stoelinga et al., *Secondary Education in Africa: Enrolment, Progression and Completion Aggregate Trends 2015-2024* (Laterite, 2026), drawing on population-weighted cross-country means using the available UNESCO Institute for Statistics (UIS)-modeled out-of-school series data from 52 countries.

Note: Sample follows UIS model availability; point labels show percentages rounded to one decimal place.



1.3 Progression bottlenecks continue to prevent many learners from completing secondary education

More young people are entering secondary education than ever before, but many do not successfully make their way through the system. Learners leave school at different points along the educational pathway, particularly during the primary years and at the transition from lower to upper secondary education. Understanding these patterns requires looking not only at learners themselves, but also at how education systems are organized. This section does so by exploring how the length of schooling cycles, the points at which fee-free and compulsory education begin and end, and the use of high-stakes examinations all shape learners' opportunities to progress through school.

In some countries, progression through the education system has improved at key transition points. Analysis of grade-by-grade enrolment data from 17 African countries suggests that, in recent years, education systems have been slightly more successful at enrolling and retaining students as they move from primary to lower secondary and from lower to upper secondary education.[16] However, these gains have been modest overall.

The largest losses occur before learners reach secondary school and at the transition from lower to upper secondary education.

The largest losses occur before learners reach secondary school and at the transition from lower to upper secondary education. Analysis of grade-by-grade enrolment patterns shows that these transition bottlenecks account for more than half (54 percent) of enrolment declines across the system (Figure 1.4).[17] Expanding access to lower secondary education, while important, is

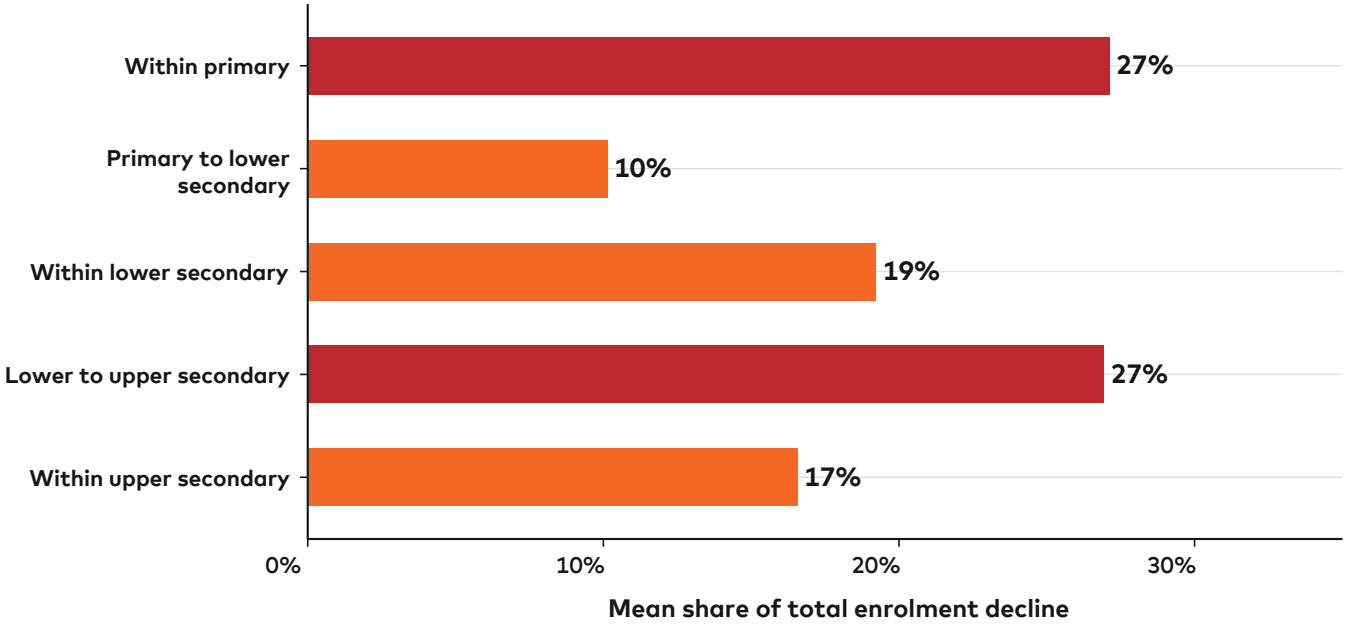
thus unlikely to be sufficient on its own: progress toward universal secondary education also depends on strengthening earlier progression through primary and the transition into upper secondary education. Improving learning outcomes at the primary level is crucial to enable students to remain in school, while also generating system efficiencies through reduced grade repetition, dropout, and remedial learning (Section 1.4). Ensuring that investment in secondary education does not come at the cost of investment at the primary level is an important prerequisite for system transformation (Chapter 9).

The structure of secondary education varies considerably across Africa. Primary schooling ranges from five to nine years, and the length of lower and upper secondary cycles vary considerably across countries. These structural differences also shape the points at which learners face examinations, rising costs, and transition bottlenecks between education cycles. Figures 1.5 and 1.6 illustrate these differences and help explain why barriers to progression occur at different points across countries.

Structural differences help explain why progression into upper secondary education remains a major bottleneck in many countries. In most countries, the transition to upper secondary education coincides with the end of compulsory education, the end of fee-free education, high-stakes examinations, or some combination of all three (Figure 1.6). As a result, the upper secondary level functions as a major institutional bottleneck rather than simply the next stage of the education system.[18]

FIGURE 1.4

Most enrolment loss occurs in the primary level and transitions to upper secondary level

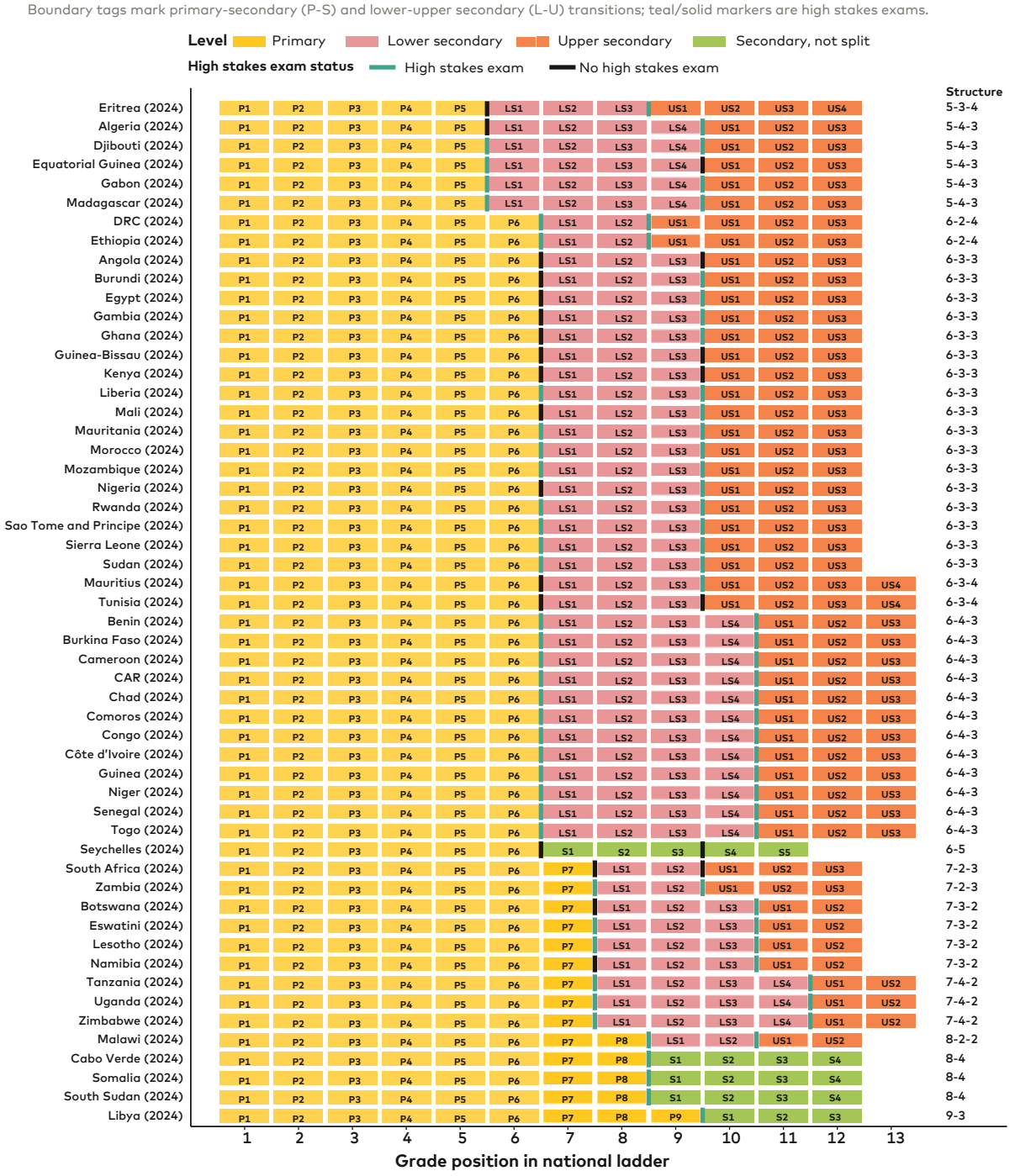


Source: Reproduced from Stoelinga et al., *Secondary Education in Africa: Enrolment, Progression and Completion Aggregate Trends 2015-2024* (Laterite, 2026), drawing from Education Management Information Systems administrative grade-by-grade enrolment records for 27 countries.

Note: Data drawn from the mean share of each country's positive grade-to-grade narrowing, using the latest complete grade profile. Shares sum to 100 percent within each country-year before averaging across countries. Expansions between adjacent stages contribute zero. Countries represented (n=27): Algeria, Angola, Botswana, Cameroon, Central African Republic, Chad, Cote d'Ivoire, Democratic Republic of Congo, Gabon, Gambia, Ghana, Kenya, Liberia, Malawi, Morocco, Namibia, Niger, Nigeria, Rwanda, Sierra Leone, South Africa, Tanzania, Togo, Tunisia, Uganda, Zambia, and Zimbabwe.

FIGURE 1.5

Education structures and high-stakes examinations shape barriers to progression



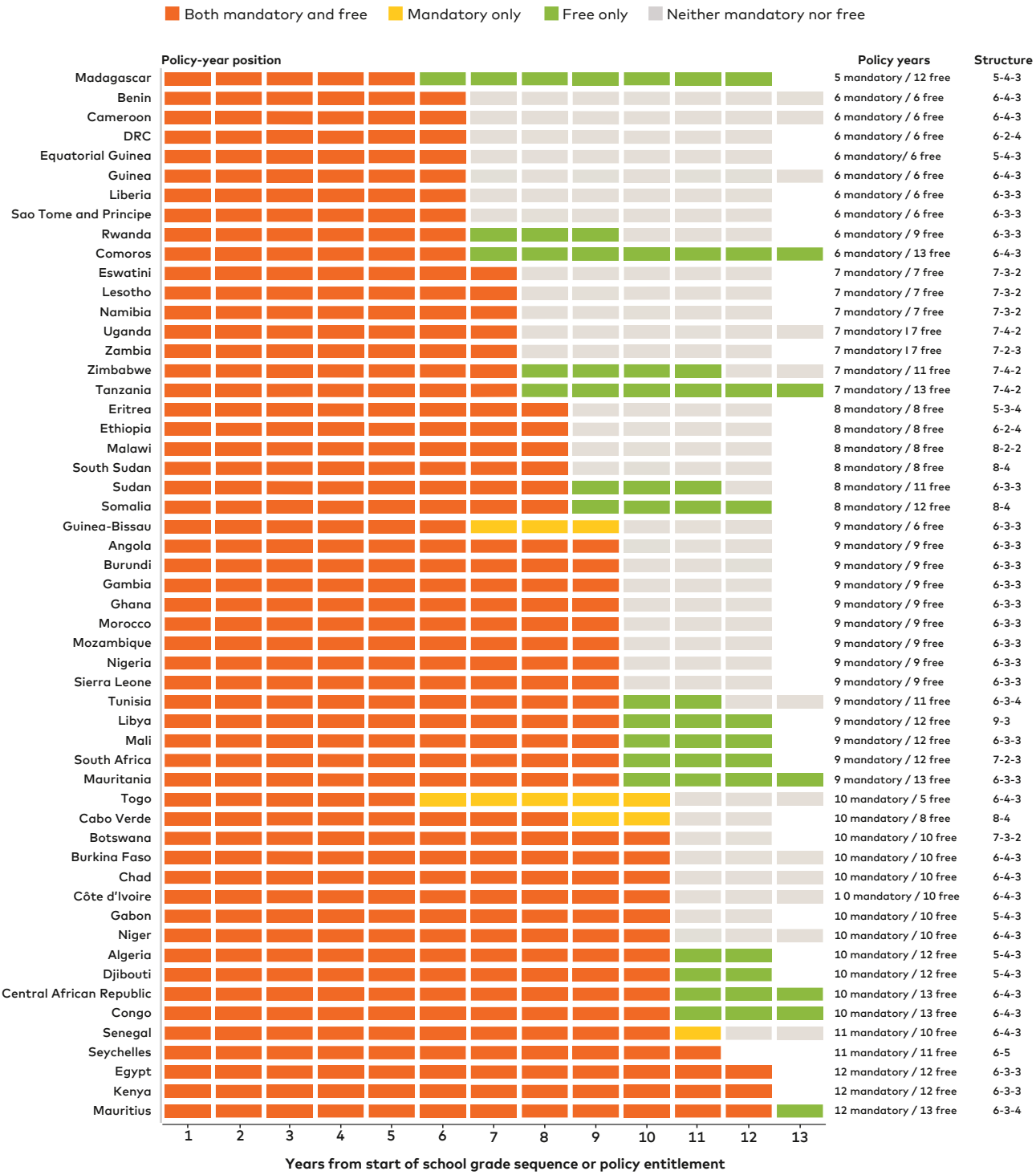
Source: Reproduced from Stoelinga et al., *Secondary Education in Africa: Enrolment, Progression and Completion Aggregate Trends 2015-2024,* (Laterite, 2026), drawing on data from 54 countries from Education Management Information Systems high-stakes exam and education structure workbook. High-stakes exams are indicated by black bars, and transition points by the change in colours.

Note: Sudan's lower-to-upper-secondary marker reflects the formally re-adopted 6-3-3 structure and Grade 9 certificate examination; evidence confidence for Sudan is low, as conflict has disrupted both implementation and documentation of this policy since 2021. P-S marks the primary-secondary transition; L-U marks the lower-to-upper-secondary transition where applicable. Black/solid markers are high-stakes exams; grey/dashed markers are not high-stakes exams. Countries represented: all 54 rows available for 2024.

FIGURE 1.6

Compulsory and fee-free education often end before the upper secondary level

Each tile is one policy-year position from the start of the school ladder; colours show whether that year is mandatory, free, both, or neither.



Source: Reproduced from Stoelinga et al., *Secondary Education in Africa: Enrolment, Progression and Completion Aggregate Trends 2015-2024* (Laterite, 2026), drawing on Education Management Information Systems high-stakes exam and education policy workbook data from 54 countries.

Note: N=54 countries; applicable lower- and upper-secondary denominators vary by system structure.

In some countries, high-stakes exams remain a major barrier to progression. High-stakes exams are assessments used to determine progression between education levels, often serving as formal selection points for entry into lower or upper secondary education. Data from 22 countries between 2018 and 2024 suggest that transitions from primary to lower secondary levels were, on average, about 20 percentage points lower in systems with high-stakes examinations than in those without.[19] Exams present multiple barriers for learners, including accessing exam venues, paying exam fees, and achieving high scores (Chapter 6). While exams alone are not the only problem, the data suggest that assessment systems can act as a gatekeeper to higher levels of education. Where examinations and limited public places restrict progression, families that can afford to do so may turn to private provision, helping explain the growing role of private providers.

In most countries, the transition to upper secondary education coincides with the end of compulsory education, the end of fee-free education, high-stakes examinations, or some combination of all three (Figure 1.6).

Several countries have sought to enhance progression through the education system by reducing formal barriers to transition. In 2018, for example, Mozambique removed the grade 5 transition examination as part of a wider reform package that expanded free and compulsory schooling, and re-structured the system by merging the first two primary cycles (grades 1 to 5 and 6 to 7) into a single cycle spanning grades 1 to 6, with grade 7 reclassified as part of lower secondary education.[20] Together, these reforms sought to support smoother progression into lower secondary education and broaden access to post-primary learning opportunities. Since then, repetition rates have become lower and flatter across grades, signalling improved transitions, with primary school completion rates rising from 56 percent in 2021 to 66 percent in 2024, and admission rates to lower secondary education rising from 36 to 56 percent in the same period.[21]

Yet no country has fully eliminated high-stakes examinations from its system; rather, the number of countries with gateway exams between lower and upper secondary has increased since 2019. The first *Mastercard Foundation Secondary Education in Africa* report found that high-stakes examinations can limit learner progression through education. All 48 countries that used a high-stakes gateway exam in 2019 still used one somewhere in the primary and secondary education systems in 2025. Some countries have moved high-stakes exams from the end of primary to the transition between lower and upper secondary (Figure 1.7). This helps to explain why this transition remains one of two junctures when the largest share of learners (27 percent) leaves the system.[22] One country, Kenya, removed its primary leaving exam in 2023 and in 2025 introduced a new exam in grade 9 as part of the competency-based curricula reform.

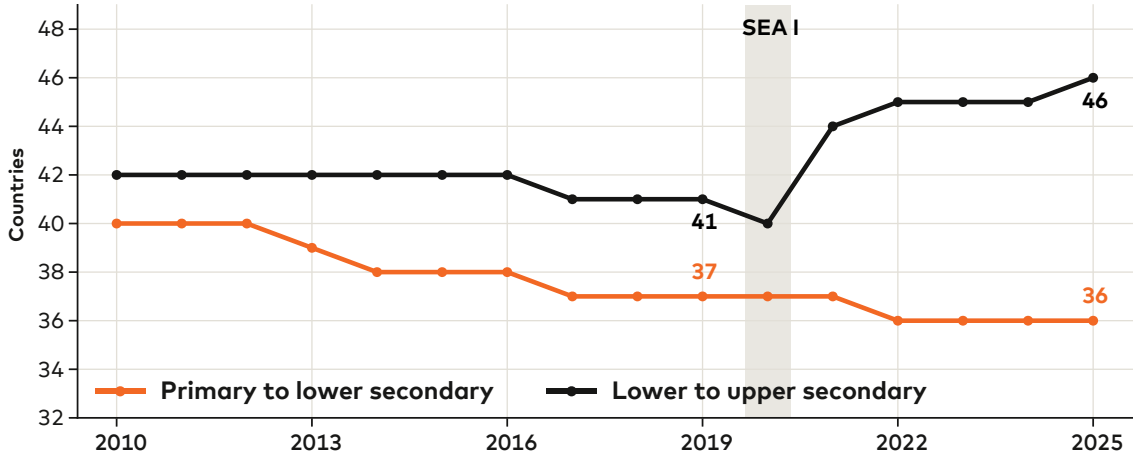
Enrolment in secondary private schools

Private providers account for a sizeable proportion of enrolment in secondary education across Africa, particularly at the upper secondary level. Analysis of UNESCO Institute for Statistics data suggests that private institutions account for a median of 14.1 percent of enrolment at the lower secondary level, rising to 22.6 percent at the upper secondary level.[23] In many countries, private provision expands precisely where compulsory and fee-free secondary education policies end, helping to absorb demand when public systems are unable to provide sufficient places or coverage.[24] However, the role of private providers varies considerably across contexts: among 45 countries with available data, private institutions account for just 1.4 percent of secondary school enrolment in Lesotho compared with 79.2 percent in Somalia.[25] Unlike public schools, private schools are less likely to be fee-free, creating barriers to access for many.

FIGURE 1.7

More countries are using gateway exams between lower and upper secondary education

Countries using a high-stakes exam at each transition, 2010 to 2025



Number of African countries (of 54) where a national exam functions as a high-stakes gate at each transition. SEA I was published in July 2020 on data accessed August 2019, marked here. Counted per transition: a country can appear in both lines. Source: Laterite harmonised gateway exam panel, the dataset behind Report 1 Figure 8.

Source: Developed for this report by Laterite 2026 harmonized gateway exam panel data.

Note: Mastercard Foundation's first Secondary Education in Africa Report (SEAI) was published in 2020.

While public systems remain the dominant providers in many countries, the overall trend over the past decade has been toward increased private provision (Figure 1.8). Among 26 countries reporting comparable data, private enrolment shares increased in 17 countries, with some of the largest increases occurring in Angola, Chad, and Mali.[26] In some countries, enrolment in public secondary school is based on exam scores, so those who perform best have access to fee-free secondary school, while others who are able may enroll in private schooling. Importantly, the data reflect students already enrolled, not the school-age population, so a rising private share may mean either increased school attendance or a shift from public to private schools. These findings suggest that understanding secondary education expansion requires attention not only to public provision but also to the growing role of non-state actors in financing and delivering education. The implications for financing, access, and equity are explored further in Chapter 6.

Enrolment in secondary-level Technical and Vocational Education and Training

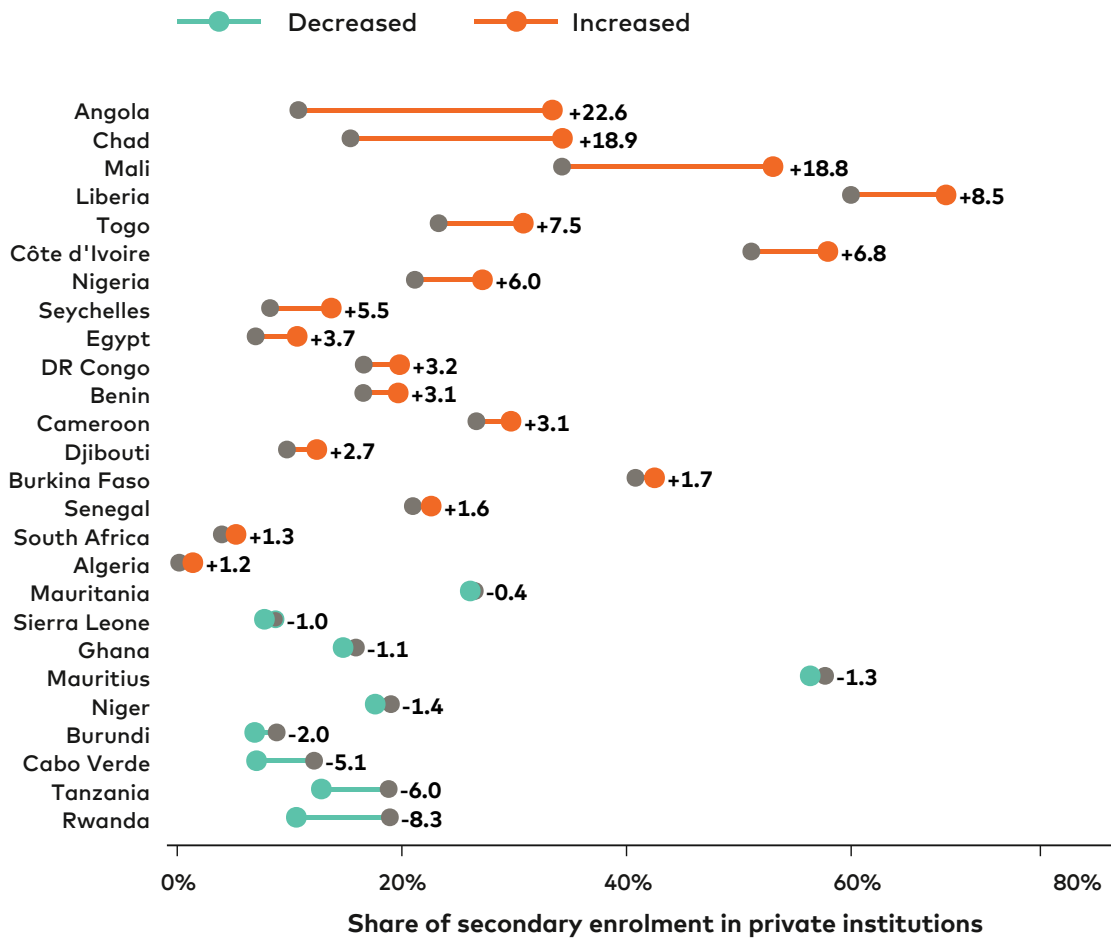
While enrolment in general education has increased, enrolment in secondary level TVET has generally plateaued. For the purposes of this report, secondary level TVET is defined as the study of "technologies and related sciences alongside the acquisition of practical skills and attitudes related to occupations in various economic sectors."[27] In Africa, secondary level TVET typically includes a track parallel to general secondary school but under the Ministry of Education (such as Technical Secondary Schools in Rwanda), or shorter, formal vocational training programs in specialized centres under ministries such as labour and employment.[28] While informal training and apprenticeships are a form of technical training, they are not generally included in official TVET statistics.

Africa has the lowest TVET enrolment rate of any world region, despite having the world's youngest population and a large number of young people entering the labour market each year.[29] Enrolment

FIGURE 1.8

Private provision at the secondary level has increased in 17 of 26 countries

Private share of secondary enrolment: average of 2010-2014 (grey) versus average of 2020-2024. Labels show the change in percentage points.



Shares are of enrolled students, not of the school-age population; private + public = 100.

Source: Reproduced from Stoelinga et al., *Secondary Education in Africa: Enrolment, Progression and Completion Aggregate Trends 2015-2024* (Laterite, 2026), drawing on UNESCO Institute for Statistics private-institution enrolment indicators, February 2026.

Note: Change in the private share of secondary enrolment, early 2010s to early 2020s. N=26 countries reporting in both windows; window means 2010 to 2014 and 2020 to 2024.

in TVET at the lower secondary level is 1.8 percent in sub-Saharan Africa and 3.4 percent in North Africa, while at the upper secondary level it ranges from less than 15 percent in sub-Saharan Africa to 31.2 percent in North Africa.[30] Across African countries, participation in TVET has remained largely unchanged over the past decade, with as many countries recording declines as increases and only a handful experiencing substantial growth.[31] An important caveat to this, however, is that coverage of secondary level TVET enrolment data is low across the continent, with data available in only 25 countries, and not consistently reported over the years.

Available data suggest there is enormous cross-country variation in access to vocational pathways. In the 2020–2024 period, TVET accounted for just 0.2 percent of secondary school enrolment in Mauritania, around 0.5 percent in

Comoros and Tanzania, and more than 20 percent in Angola, Egypt, and Cameroon.[32] Seychelles and Angola are two examples of expanding TVET systems, rising from 4.5 percent to 12.8 percent and from 14.1 percent to 21.4 percent, respectively.[33] Angola has expanded access by formally embedding TVET within lower secondary education. Reforms redefined vocational education as part of the mainstream secondary education system (grades 7–9), creating a clearer vocational pathway linked to qualifications and labour-market needs (Box 1.1). Rwanda has also pursued one of Africa's most ambitious TVET expansion agendas. The government set a target of 60 percent TVET enrolment, and over four years, secondary level TVET enrolment more than doubled, with 40 percent of upper secondary students now enrolled in TVET pathways.[34] This expansion has involved a major increase in TVET schools and conversion of some general secondary schools into Technical Secondary Schools (Chapter 3).

Enrolment in tertiary and post-secondary education

For most young Africans, the opportunity to pursue tertiary or post-secondary education remains out of reach. Despite growing demand, the tertiary gross enrolment ratio in sub-Saharan Africa remains around nine percent, compared with 38 percent globally.[35] This reflects barriers throughout the education continuum. As described above, many young people never complete secondary education or acquire the qualifications needed to progress, while those who do may be unable to afford tuition, accommodation, transport, and other costs. Limited scholarships and student financing can further disadvantage learners from low-income households, while underfunded institutions struggle to accommodate growing demand.[36] These barriers are compounded by geographic inequalities, gender disparities, particularly in science and technology fields, and limited opportunities for young people with disabilities and those affected by displacement.[37] The progression bottlenecks discussed in this section therefore shape not only who completes secondary education, but also who can exercise meaningful choice among tertiary education, TVET, work, entrepreneurship, and other post-secondary pathways.

Expanding equitable access to tertiary education is essential both to young people's agency and to Africa's future development. Universities, colleges, and higher technical institutions prepare the teachers, education leaders, doctors, engineers, lawyers, researchers, and public servants needed to strengthen public services, institutions, and economies. They also generate research and

BOX 1.1

Angola: Formalizing vocational pathways expands access to secondary level TVET

Angola's rapid TVET expansion followed a series of reforms that formalized lower secondary vocational education within the national school system, established clearer qualifications pathways, and strengthened links between education and the labour market through curriculum reform, teacher training, internships, and employer engagement. This reform has now been implemented. While evidence on enrolment and outcomes remains limited, Angola's experience suggests that expanding vocational pathways is most effective when TVET is integrated into the broader education system and supported by coherent qualifications frameworks and partnerships with employers, rather than being treated as a separate training track.

Source: Stoelinga et al., *Secondary Education in Africa: Enrolment, Progression and Completion Aggregate Trends 2015-2024* (Laterite, 2026).

innovation to address challenges in health, agriculture, energy, technology and other sectors.[38] Yet expanding places in tertiary education alone will not be enough: tertiary systems must offer affordable, high-quality, relevant, and diverse pathways, including stronger connections with labour markets and opportunities for lifelong learning. The AU's Continental Education Strategy for Africa 2026–2035 recognizes these priorities, calling for expanded access, stronger research capacity, and more equitable participation in higher education.[39] Investing across the education continuum is therefore essential not only to enable more young Africans to pursue their aspirations, but also to develop the advanced skills and knowledge needed for Africa to shape its own future and contribute to the global economy.







1.4 Learning outcomes remain a challenge, but data gaps obscure the full picture

Learning is arguably the most important outcome of education, yet it is not well-measured at the secondary level. Unlike data on enrolment, completion, and out-of-school rates, comparable data on secondary school learning outcomes remain limited across much of Africa, making it difficult to assess progress over time or to compare performance across countries. Only four African countries participate in the Trends in International Mathematics and Science Study (TIMSS) exam, and five in the Programme for International Student Assessment (PISA) exam, further constraining comparable evidence on learning at the secondary level.[40] The Analysis Programme of the CONFEMEN Education Systems (PASEC in French)[41] is an exam now also given at the end of basic education and has expanded to 21 African countries from 10 in 2014; results from the 2024 cohort are expected to be released in late 2026.[42] At the third Africa Foundational Learning Exchange in 2026, 42 African governments renewed their commitment to end learning poverty by 2035 and reiterated key areas for continuing collective action. These included political commitment, financing and equity, data, scaling evidence-based pedagogy, strategic integration of AI, and whole child access. The initiative brought new funding commitments toward improving learning especially in the early grades.[43]

Learning is arguably the most important outcome of education, yet it is not well-measured at the secondary level.

The available evidence nevertheless points consistently to a serious learning challenge: many learners arrive in secondary education without strong foundational literacy and numeracy skills, creating a learning deficit that follows them through the lower secondary level. This section

draws on foundational learning assessments, international and national assessment results, and learning-adjusted years of schooling to provide an indicative picture of learning and the skills young people need to thrive in further education, work, and life.

Latest available learning assessments show minimum proficiency levels remain low at the end of primary education across countries with available data (Figure 1.9). Mathematics outcomes are particularly weak, while reading outcomes are generally higher but still far below universal proficiency. Although results are not directly comparable across assessment systems, they consistently indicate substantial foundational learning gaps.[44] Many learners enter secondary school without the skills needed to engage successfully with increasingly complex curricula, creating a learning deficit that follows them through the education system. When learners are unable to develop the skills needed to succeed in school, they are more likely to drop out.[45] Learning lags are thus an issue of both quality and access.

Language of instruction remains an important barrier to learning in secondary education. Across Africa, many students transition from learning in their home or local language to receiving instruction in a national or international language, often English or French, in which they have limited proficiency. This can undermine their ability to understand increasingly complex subject matter, participate in classroom activities, and demonstrate what they know.[46] Research from Ethiopia, for example, found that students receiving English-medium instruction in grades 7 and 8 performed significantly worse in mathematics than those taught in their mother tongue, without achieving better English-language outcomes.[47] Recent UNESCO guidance reinforces the importance of sustained instruction in familiar languages and a gradual, well-supported transition to additional languages.[48] For secondary education systems, this means recognizing that language proficiency is a critical determinant of learning outcomes and that students may need continued linguistic support even after the formal transition to English, French, or another language of instruction.

Recent international assessments reinforce concerns that expanded access to secondary education has not yet translated into adequate learning for many young people. Results from the 2025 Programme for International Student Assessment (PISA), which assessed 15-year-olds in Kenya, Mauritius, Morocco, Rwanda, and Zambia, show that most students in those countries did not reach minimum proficiency in reading, mathematics or science (Table 1.1). Learning outcomes also remain highly unequal: socioeconomic barriers are associated with lower performance, although the strength of this relationship varies substantially across countries.

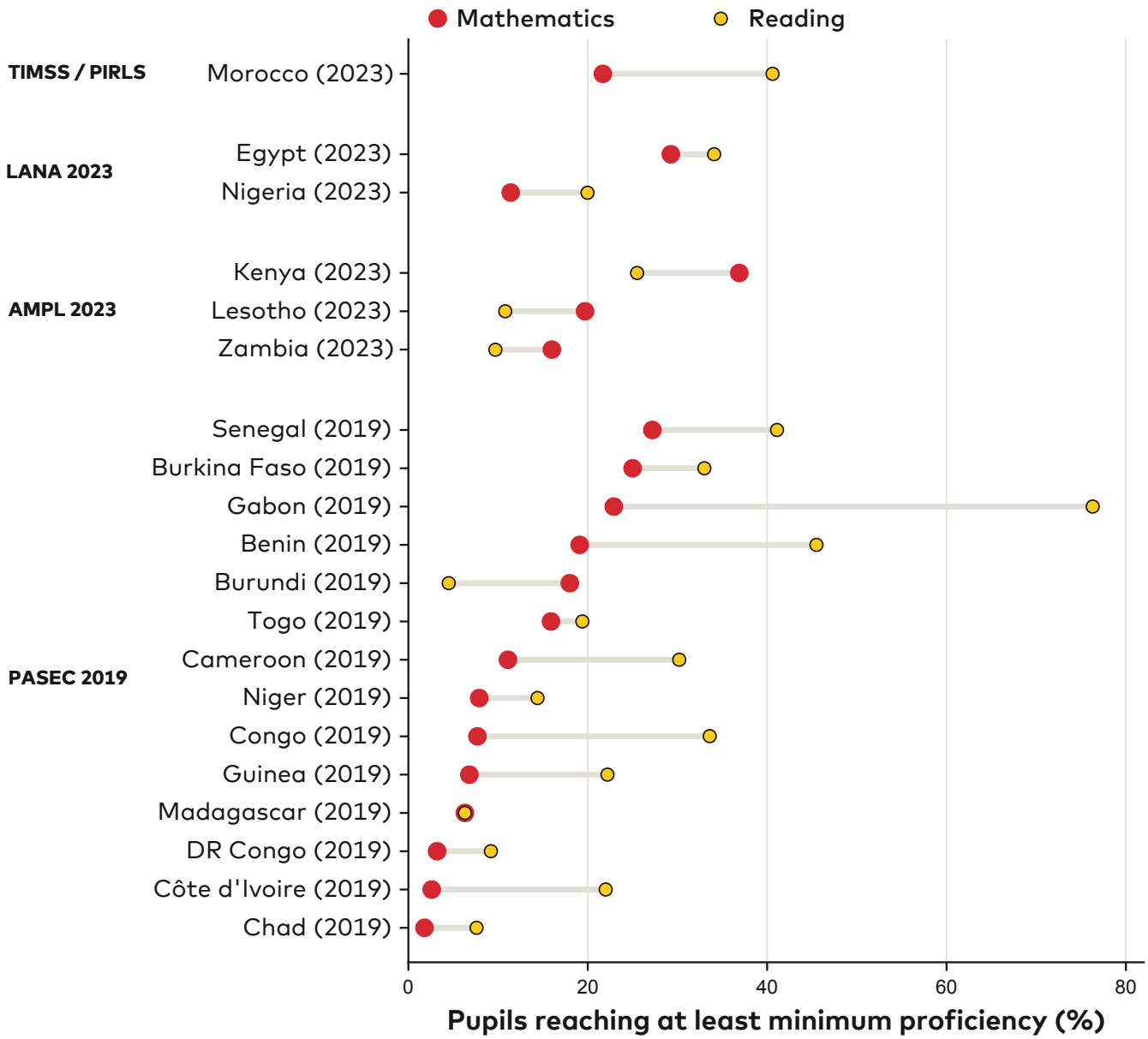
The data also show some early signs of progress but require cautious interpretation. Results in Zambia improved in all three subjects compared with 2017,[49] and results in Mauritius improved in science, remained generally stable in reading, and declined in mathematics compared with 2010. [50] Morocco's scores have declined but the country has also substantially expanded the share of 15-year-olds eligible to participate in PISA compared to 2018, meaning recent results capture a broader and more diverse student population than in the past.[51] Kenya and Rwanda participated for the first time in 2025.[52] Taken together, the findings highlight the dual challenge of expanding access while ensuring that more time spent in school translates into meaningful learning.

Evidence suggests low learning outcomes persist until the end of lower secondary school, but data gaps make it difficult to assess progress across Africa. As Table 1.2 shows, only a small number of African countries report lower secondary school data, most reporting only a single observation and very few having comparable data over time. Moreover, the UNESCO Institute for Statistics cautions that differences across assessment rounds may reflect changes in assessment design, administration, or methodology rather than genuine changes in learning.[54] The available evidence therefore points to a continuing

FIGURE 1.9

Low proficiency at the end of primary education creates a learning deficit

Proportion of students in late primary achieving at least minimum proficiency level, by assessment



Source: Reproduced from Stoelinga et al., *Secondary Education in Africa: Enrolment, Progression and Completion Aggregate Trends 2015-2024* (Laterite, 2026), drawing on latest UNESCO Institute for Statistics assessment data per country.

Note: Minimum proficiency thresholds are set within a program, so levels compare within a block, not across blocks.

TABLE 1.1

Most 15-year-olds do not reach proficiency in reading, mathematics, and science

Proportion of students (%) reaching proficiency (Level 2) in PISA 2025

Country	Reading	Mathematics	Science
Kenya	11	9	16
Mauritius	48	44	60
Morocco	13	16	23
Rwanda	4	8	13
Zambia	18	15	25

Source: Organisation for Economic Cooperation and Development Programme for International Student Assessment country profiles 2026.[53]

TABLE 1.2

Low learning levels persist at the secondary level, but data remain limited

The proportion of students at the end of lower secondary education achieving at least minimum proficiency in reading or mathematics (Sustainable Development Goal 4.1.1(c)).

Subject	Country	2009	2010	2011	2012	2015	2017	2018	2019	2022	2023
	Algeria	—	—	—	—	21.03	—	—	—	—	—
	Mauritius	53.32	—	—	—	—	—	—	—	—	—
	Morocco	—	—	—	—	—	—	26.69	—	18.92	—
	Senegal	—	—	—	—	—	8.66	—	—	—	—
	Tunisia	49.84	—	—	50.70	28.42	—	—	—	—	—
	Zambia	—	—	—	—	—	5.04	—	—	—	—
	Algeria	—	—	—	—	19.04	—	—	—	—	—
	Côte d'Ivoire	—	—	—	—	—	—	—	—	—	0.73
	Egypt	—	—	—	—	21.32	—	—	26.84	—	—
	Ghana	—	—	4.85	—	—	—	—	—	—	—
	Mauritius	49.84	—	—	—	—	—	—	—	—	—
	Morocco	—	—	—	—	—	—	24.37	—	18.43	—
	Senegal	—	—	—	—	—	7.71	—	—	—	—
	Tunisia	26.43	—	—	32.25	25.19	—	—	—	—	—
	Zambia	—	—	—	—	—	2.30	—	—	—	—

Source: Authors, drawing on UNESCO Institute for Statistics data for the proportion of students at the end of lower secondary education achieving at least minimum proficiency in reading or mathematics (Sustainable Development Goal 4.1.1(c)).

Note: Dash indicates no value in the UNESCO Institute for Statistics extracts provided.

secondary learning challenge but remains insufficient to determine whether learning outcomes have improved or deteriorated over the past 15 years.

National examination results provide an additional, though imperfect, indication of learning. In Rwanda, 2023 national examination results indicate that only 47 percent of final-year secondary school students met national standards in English, 64 percent in mathematics, and 65 percent in science.[55] In Tanzania, results show similarly large variation, with approximately a 25 percent pass rate in mathematics, a 69 percent pass rate in English, and a 97 percent pass rate in Kiswahili.[56] This suggests a much stronger examination performance in language subjects than in mathematics, pointing to persistent gaps in quantitative analytical and problem-solving skills.[57] It is also evident that many young people lack the foundational skills necessary to master more complex secondary level content.

Country case studies also show considerable variation. Analysis from Rwanda, Senegal, and Sierra Leone indicates low levels of foundational literacy and numeracy, or learning regression caused by COVID-19 school closures.[58] Ghana reports literacy among 15- to 24-year-olds reaching 92 percent in 2021 compared with the sub-Saharan African average of about 78 percent.[59] Using youth literacy and national exam passing rates as a metric, Ghana has maintained relatively strong foundational learning and recovered its academic performance after COVID-19, although outcomes remain uneven, with approximately 40 percent of learners still not achieving a passing grade in the West African Senior School Certificate Examination. [60]

Young people in Africa are spending more time in school than in the past, but more years of education does not necessarily translate to stronger skills or better preparation for work.

The Skills-in-Literacy Adjusted Mean Years of Schooling indicator adjusts years of schooling based on observed literacy skills and shows a substantial continent-wide gap. Mean years of schooling average 7.1 years, compared with 3.8 years once literacy skills are accounted for.[61] Table 1.3 shows considerable variation across countries, including several Sahel countries, where literacy-adjusted years of schooling falls below one year despite substantially higher average years of schooling. These findings suggest that participation in education does not always translate into equivalent gains in learning and skills acquisition.

This is a system-wide, learning-adjusted measure of schooling rather than a direct measure of secondary school students' learning outcomes. Nevertheless, it reinforces the broader finding of this section: access to education is not enough to guarantee learning and skills acquisition. Many young people finish school still unable to read, do basic mathematics, or communicate effectively in the national language of instruction. Improving education quality is critical if young people are to develop the skills needed for productive employment and countries are to fully harness Africa's potential demographic dividend.

Young people in Africa are spending more time in school than in the past, but more years of education does not necessarily translate to stronger skills or better preparation for work.

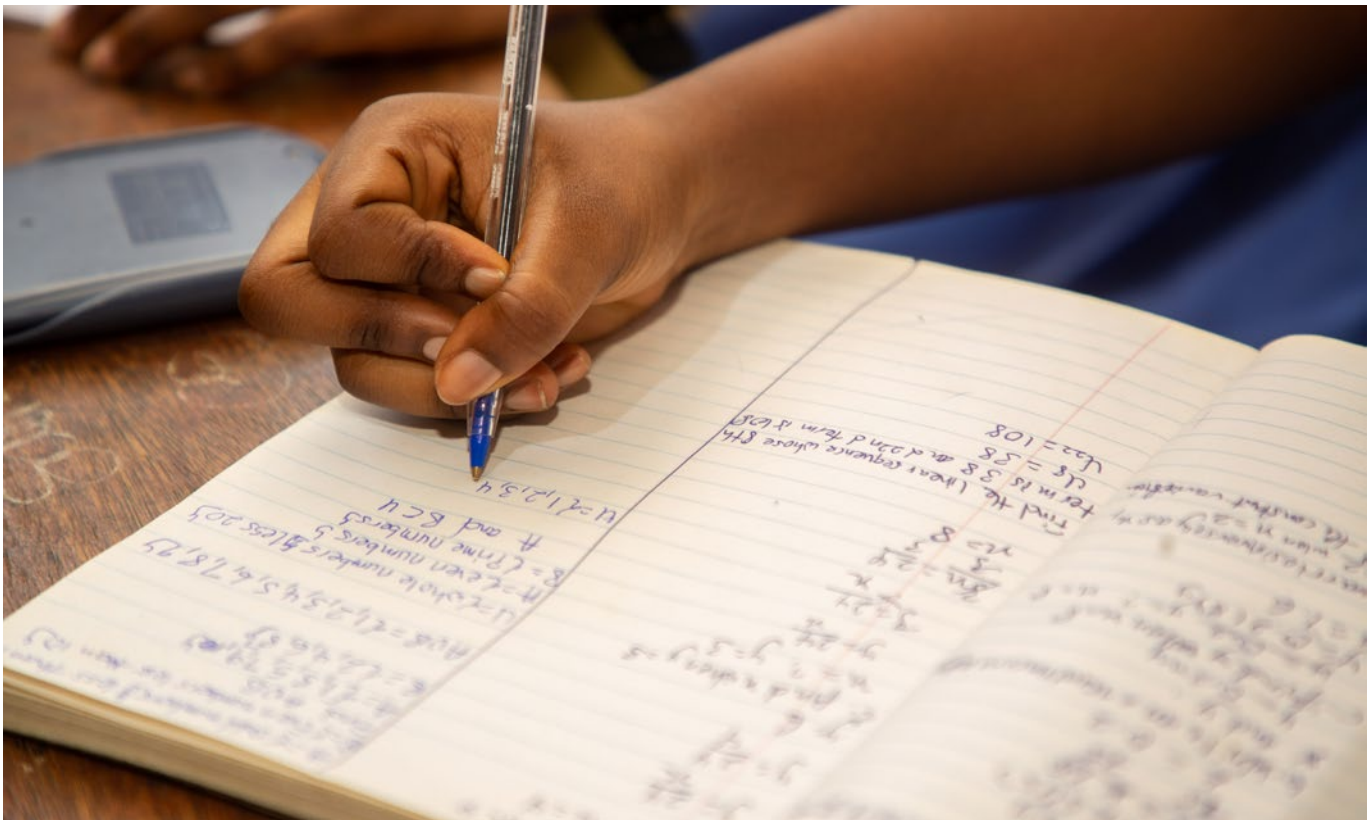
TABLE 1.3

More schooling does not always translate into stronger skills

Country or region	Mean Years of Schooling (MYS), 2025	Skills-in-Literacy Adjusted Mean Years of Schooling (SLAMYS), 2025
Africa	7.1	3.8
Zimbabwe	11.0	8.7
Mauritius	10.3	8.2
South Africa	10.5	8.1
Algeria	10.1	7.7
Kenya	8.3	4.5
Tanzania	7.8	4.6
Ghana	8.2	2.9
Rwanda	5.3	2.8
Ethiopia	3.6	1.1
Burkina Faso	2.4	0.5
Niger	2.7	0.5

Source: Adapted from International Institute for Applied Systems Analysis (IIASA), *African Human Capital Data Sheet* (2026), drawing on Potančoková et al. (2025) for Skills-in-Literacy Adjusted Mean Years of Schooling and KC et al. (2024) for schooling data.

Note: Figures refer to adults aged 20–64 in 2025. Skills-in-Literacy Adjusted Mean Years of Schooling adjusts Mean Years of Schooling using adults' observed literacy skills relative to the Organization for Economic Co-operation and Development average. It is a population-level human-capital indicator, not a direct assessment of current secondary school students or an absolute number of years of learning. The final column is calculated as mean years of schooling minus the skills-in-literacy indicator.





1.5 Gender equality has improved, but rural poverty remains a major driver of exclusion for both boys and girls

Underlying continental averages are large differences in who can enter, progress through, and complete secondary education. This section explores how unequal pathways are shaped by wealth, place, gender, disability, displacement, and other intersecting forms of vulnerability. It shows that while gender gaps have narrowed significantly over time, household wealth and rural location remain the strongest and most consistent predictors of secondary school participation across Africa.

Household socioeconomic level and location

Household income is the strongest and most consistent divider of secondary school participation. Learners from the wealthiest 20 percent of households (based on the Demographic Health Survey index) are far more likely to be enrolled in secondary school, while those from the poorest 20 percent of households are more likely to be out of school or still enrolled in primary school beyond the expected age (Figure 1.10).[62] Indeed, wealth not only affects whether a young person is in school or out of school; it also affects whether they have reached secondary school at the expected age.[63] These wealth-based disparities in progression mean that household income remains a powerful gatekeeper to higher levels of learning.

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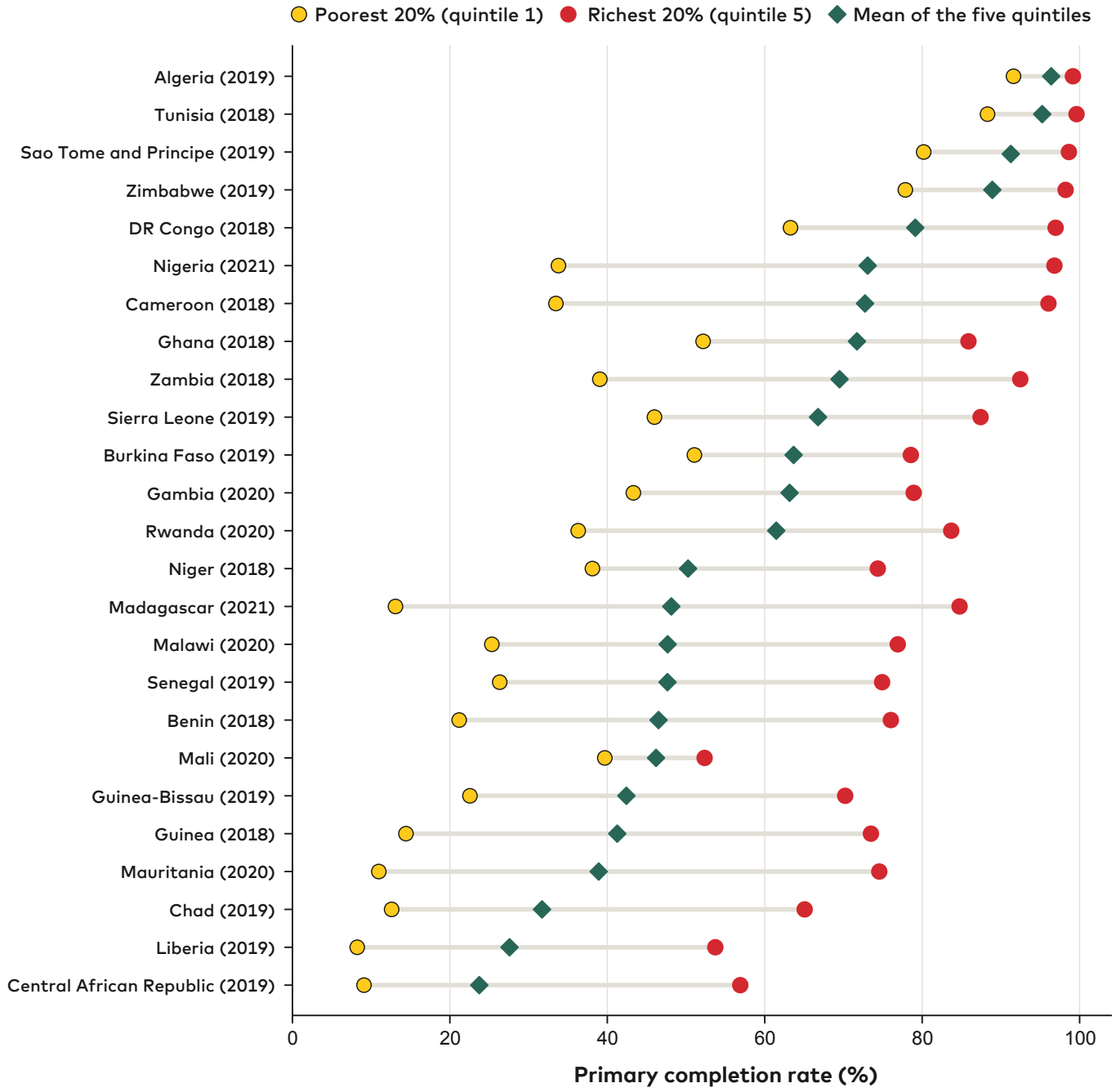
Household costs remain an important constraint on participation in secondary education. Even where governments have expanded fee-free education policies, many families continue to face substantial direct and indirect costs associated

FIGURE 1.10

Learners from low-income households are less likely to reach secondary education



Source: Developed for this report by Laterite 2026, drawing on UNESCO Institute for Statistics WIDE's latest survey data per country.

Note: The diamond is the unweighted mean of the five quintiles, not the national average.

with schooling, such as textbooks, school uniforms, transportation, school meals, or boarding (Chapter 6).[64] These costs can become particularly significant at transition points and at the upper secondary level, contributing to continued inequalities in participation and completion. Morocco demonstrates an approach whereby it has consistently reduced the share of out-of-school young people of secondary school age through a range of policies including conditional cash transfers, support for school transportation, and school meals, with supports targeted to disadvantaged learners and regions (Box 1.2).

Geography is strongly associated with educational disadvantage. Where total access to secondary education is limited and more spatially concentrated, rural provision is often an important constraint, although affordability, delayed progression, school capacity and household-level barriers also contribute.[65] Young people from rural communities are consistently less likely to be in secondary school, and they are also more likely to reach secondary school later in life, due to late entry, repetition, interrupted schooling, or slower progression through earlier grades.[66] As shown in Figure 1.10, the chance of completing primary school is largely determined by household income, which means that access to secondary education is influenced by root causes that begin much earlier.

BOX 1.2

Morocco: Coordinated support increases access to secondary education

Morocco has made substantial progress in expanding access to secondary education over the past two decades, illustrating how sustained public investment and measures to address the barriers facing disadvantaged learners can contribute to greater educational inclusion. Between 2000 and 2023, the proportion of adolescents of lower-secondary-school age who were out of school declined from 42 percent to six percent, while the proportion of upper-secondary-school-age young people who were out of school fell from 63 percent to 23 percent.[67] Morocco supported this expansion in part through large scale school construction, more than doubling the number of public lower secondary schools and nearly tripling the number of public upper secondary schools, while also expanding the number of upper secondary boarding schools with canteens in rural areas. Concurrent with school construction, Morocco offered Tayssir (meaning "facilitate" in Arabic) conditional cash transfers targeted in large part to young people in rural areas with poverty rates of over 30 percent. The payments aimed to alleviate the financial burden of schooling for low-income families and were contingent on a learner enrolling in secondary school and maintaining a school attendance rate of fewer than four absences per month.[68]

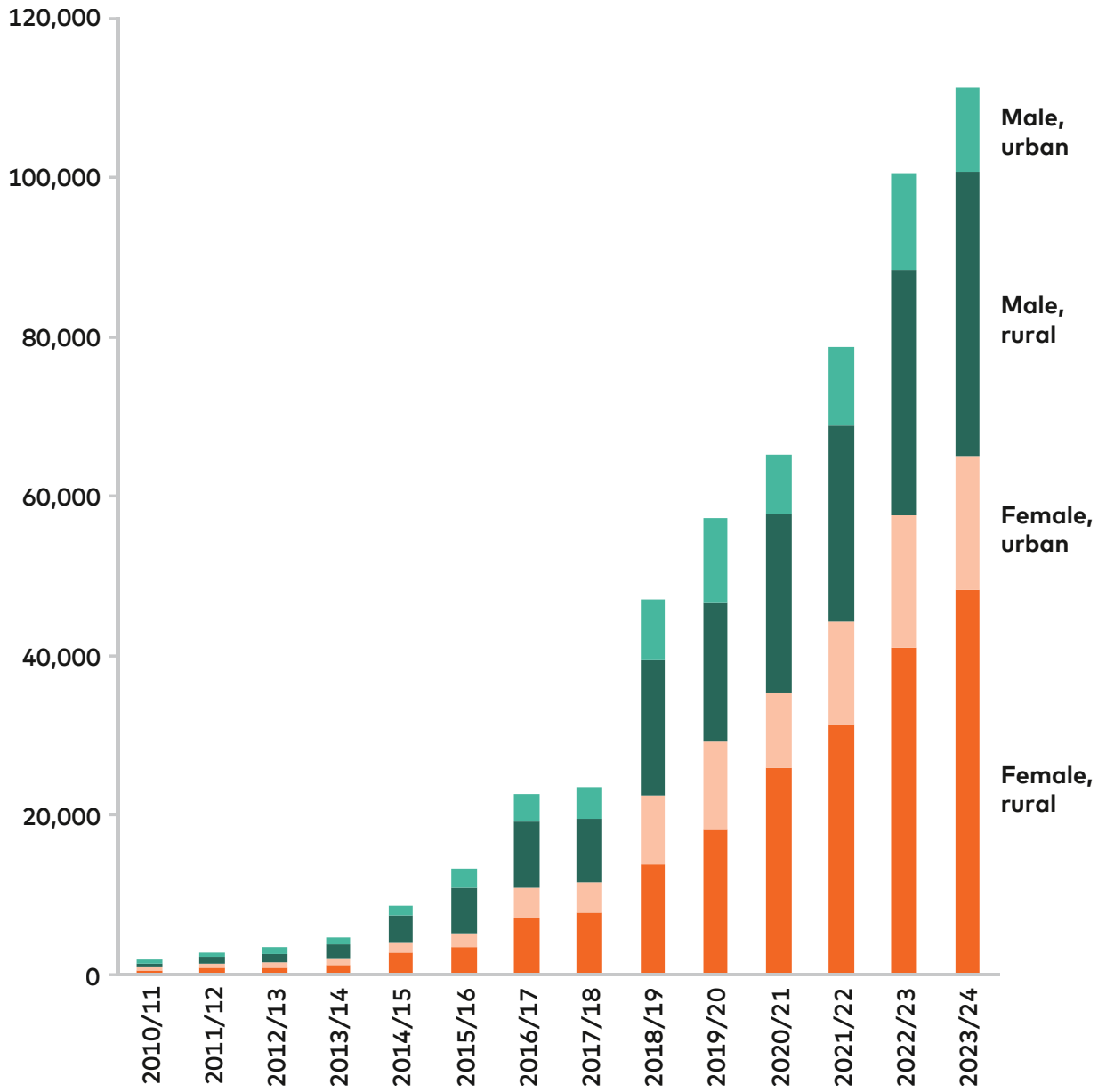
Morocco's 2022–2026 Roadmap set a goal of reducing dropout by one-third, supporting at-risk students with school transport, school meals through canteens, and community schools.[69] One in nine upper secondary schools benefitted from school transport support as of 2023–2024, with rural girls accounting for the largest group of recipients (Figure 1.11).[70]

Morocco has also developed a network of programs around the country serving out of school youth of secondary school age to enter education, training, or employment. The RAE2C-Maroc network, launched in 2020, operates 238 training centres. By 2024/25 it enrolled nearly 18,000 students, and reintegrated 72 percent of these learners into formal education, vocational training, and employment. Morocco's approach to increasing enrolment and retention stands out for its comprehensive set of supports targeting at-risk students. Important challenges, however, remain. Though Morocco has achieved lower secondary school enrolment rates equivalent to those of upper middle-income countries, nearly one-quarter of upper-secondary-school-age young people were still out of school in 2023.[71]

FIGURE 1.11

One in nine upper secondary students in Morocco benefits from school transport

Number of upper secondary school students benefiting from school transport, by sex and location, Morocco, 2010/11–2023/24



Source: Reproduced from UNESCO, *Global Education Monitoring Report* (Paris: UNESCO, 2026).

Note: In accordance with CC BY-SA 3.0 IGO this figure has been modified from its original format to align with the design specifications of this report.

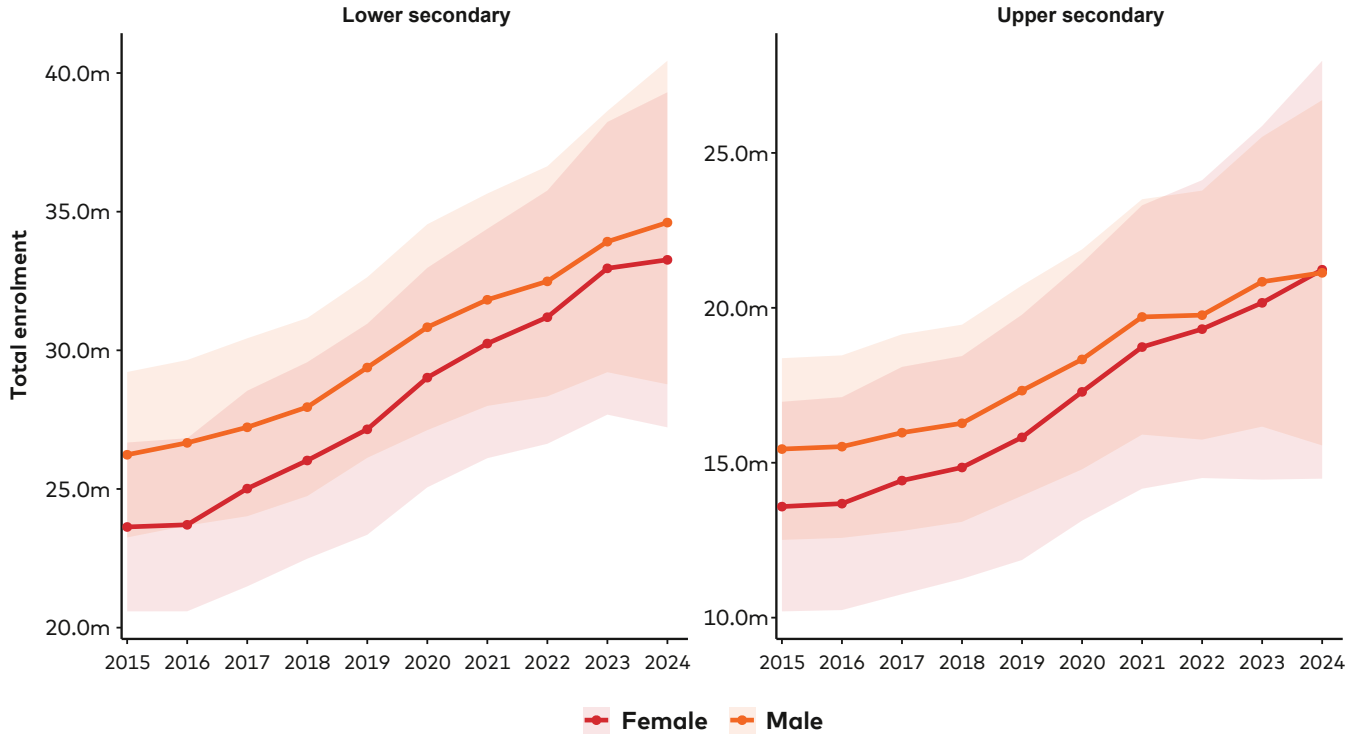
Gender

Both girls' and boys' participation in secondary education have increased over the past decade, but girls' enrolment has grown more rapidly, helping to narrow long-standing gender gaps and achieving a long-sought milestone (Figure 1.12). At the lower secondary school level, girls' gross enrolment increased from 54.3 percent to 60.1 percent, compared to an increase from 58.9 percent to 61.0 percent for boys.[72] At the upper secondary school level, girls' enrolment rose from 37.7 percent to 45.9 percent, compared to an increase of 42.0 percent to 44.7 percent for boys, helping to narrow long-standing gender gaps in participation. Girls' progress is also evident in completion rates: lower secondary school completion has reached parity at 47.7 percent for both girls and boys, while the upper secondary school completion gap has narrowed, with boys completing at 35.0 percent and girls at 33.6 percent.

FIGURE 1.12

Girls account for a larger share of the enrolment increase in secondary education

Total enrolment by sex and secondary level, 2015-2024



Source: Reproduced from Stoelinga et al., *Secondary Education in Africa: Inequalities and Disadvantages Aggregate Trends 2015-2024* (Laterite, 2026), drawing on UNESCO Institute of Statistics and World Bank enrolment and population data, 2015-2024, for lower secondary (N=53) and upper secondary (N=53), with modelled estimates where observed values are missing.

Note: Balanced country-level modelled enrolment counts by gender and level; lines sum country-level modelled enrolment counts across the balanced country set for each level; shaded bands show approximately uncertainty intervals from model standard errors; South Sudan excluded.

Both girls' and boys' participation in secondary education have increased over the past decade, but girls' enrolment has grown more rapidly, helping to narrow long-standing gender gaps and achieving a long-sought milestone (Figure 1.12).

Gender gaps are also narrowing in out-of-school rates. Girls' out-of-school rates have trended downward since 2015, while boys' have risen.[73] Compared with 2015, girls are now slightly less likely to be out of school at lower secondary age by 0.4 percentage points and clearly less likely at upper secondary age by 3.9 percentage points.[74] Boys have moved in the opposite direction. Their out-of-school rate increased by 2.8 percentage points at lower secondary age and by 0.2 percentage points at upper secondary age. This means that the gender gap is narrowing for two distinct reasons: girls are increasingly likely to remain in school, especially at upper secondary age, while boys are becoming more likely to be out of school, particularly at lower secondary age.

Upper secondary is where the gender balance changes most clearly, with girls often catching up with and, in many contexts, surpassing boys. As systems expand to include more learners at the upper secondary level, girls often not only catch up with but overtake boys in enrolment rates.[75] This may reflect a combination of factors, including: stronger progression among girls who remain in school, weaker retention among boys, differences in repetition and over-age enrolment, labour market pull factors affecting boys, and social and institutional changes that have made continued schooling more attainable for girls.[76] These dynamics are explored further in Chapter 6. It is also important to recognize that there is not one single continental story: while girls are increasingly represented in the later grades in many countries, they remain underrepresented in others, highlighting the importance of context-specific responses.[77]

Country-level patterns suggest that gender gaps evolve as education systems expand. In countries where secondary school participation remains low and out-of-school rates are high, girls are often more likely than boys to be excluded from education, particularly at upper secondary school age. However, where participation is higher and exclusion lower, the pattern frequently shifts, with boys becoming more likely to be out of school and girls increasingly represented among those who remain enrolled. This pattern is visible not only at the upper secondary school level but also in tertiary education, where female enrolment exceeds male enrolment in many higher-participation systems (Figure 1.13). Together, these findings suggest that the gender dynamics of exclusion and progression shift as education systems expand, reemphasizing the need for context-specific responses to ensure that both boys and girls have equal opportunities to progress.

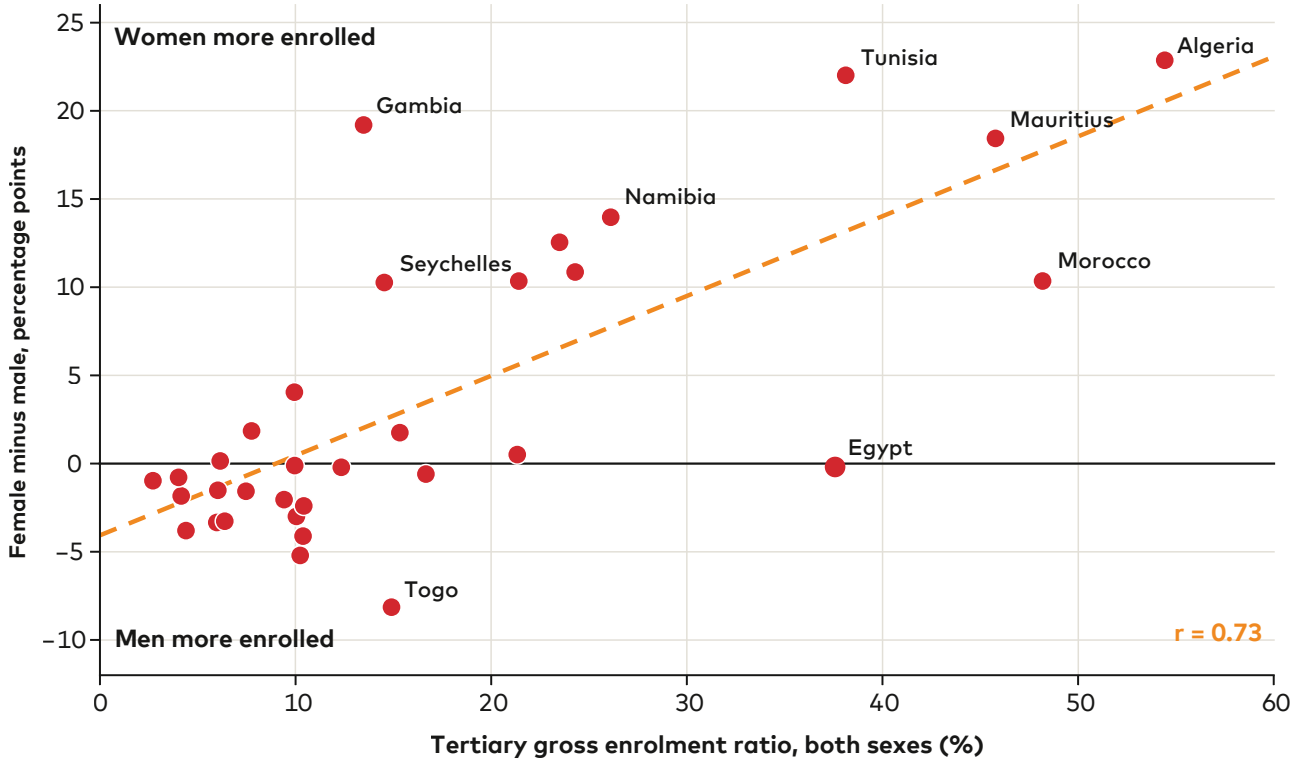
Increased rates of enrolment and completion for girls represent real progress, but gender barriers persist in learning, completion, transitions to work, and girls' participation in subjects such as science, technology, engineering, and mathematics (STEM). Female participation in TVET has also increased but remains below parity in many systems and is concentrated in traditionally female occupations rather than higher-paying technical fields.[78] Gendered barriers include gender-based violence, a lack of access to gender-specific sanitation facilities, and social expectations for boys to work and girls to marry or have children (Chapter 5).[79] Importantly, averages also mask inequalities within both sexes, rendering invisible the barriers faced by girls and boys from poor, rural, or remote households, those with disabilities, and young people who are displaced, as discussed below.

Crisis and displacement

Refugees and displaced learners, and those in fragile and conflict-affected contexts, are more likely to be out-of-school, with many failing to transition from the primary to secondary level. Transitions between primary and lower secondary education emerge as the most critical points of attrition in the education continuum for refugee

FIGURE 1.13

Where tertiary systems have higher enrolment, women are further ahead



Source: Developed for this report by Laterite, drawing on UNESCO Institute for Statistics, latest year with data for both sexes from 2018 on.

and displaced young people.[80] Fewer than a quarter of secondary-school-aged refugees in Africa are enrolled in secondary school, as in many countries secondary schools are not provided for refugee populations, including those in protracted refugee settings.[81] Out-of-school rates at the secondary level for crisis-affected learners are 20 to 35 percentage points higher than national averages.[82] Analysis from Burkina Faso, the Central African Republic, the Democratic Republic of Congo, Mali, and Somalia shows that displaced children in particular experience lower rates of transition between grades, slower progression, and overage rates that are five to 15 percentage points higher than those of non-displaced peers.[83] In the Central African Republic, progression from primary to secondary school for internally displaced persons falls to just 15 percent, compared to 73 percent for non-displaced learners, the starkest single-grade gap observed across the five countries with data.[84] Chapter 6 discusses access to education for refugees and displaced young people in more detail.

Children and youth living in contexts of conflict and violence face the steepest learning deficits. The pervasive insecurity of armed conflict contributes to significant, persistent learning losses for young people in conflict-affected contexts.[85] Available data suggests substantially lower reading proficiency and slower learning progression among children exposed to conflict and violence.[86] These young people are not simply lagging; they are starting from baselines well below the sub-Saharan African average, and crises compound a preexisting, already substantial deficit.[87] Climate-related crises – including droughts, floods, and cyclones – also negatively affect education. They reduce participation and attainment primarily through damage caused to schools, displacement of teachers, school

closures, lower attendance, household economic shocks, displacement, and psychological stress.[88] Ways to support refugee and displaced learners within formal education systems are discussed in Chapter 6, while Chapter 7 addresses flexible education pathways – both formal and non-formal – that can accommodate diverse learners, including refugees and displaced youth.

Evidence on many marginalized learners remains limited. Household surveys and censuses often disproportionately fail to include refugees, internally displaced populations, nomadic groups, young people who are detained or living without a home, and households in conflict affected areas, meaning that educational exclusion in crisis-affected contexts is likely to be underestimated in available data sets.[89]

Disability

Young people with disabilities are disproportionately excluded from secondary education, with exclusion highest at the upper secondary level and in technical and vocational institutions. For example, while approximately one-third of learners with functional difficulties[90] are not in school at the lower secondary level in Madagascar and Zimbabwe, this rate doubles at the upper secondary level (Table 1.4). The limited data available is likely to significantly underrepresent learners with disabilities, as it only draws on a sub-set of learners with disabilities who have – at some point in time – attended school, therefore excluding learners who have never accessed the system. Within TVET education, learners with disabilities are also underrepresented compared to their share of the population.[91] Across 26 African countries with data, people with disabilities account for only 1.6 percent of those who have ever attended TVET.[92] Disabilities consist of a wide range of physical, sensory, psychosocial, and developmental conditions that shape the experiences of young people. The barriers these young people face are diverse, from inaccessible infrastructure, learning materials, and transportation to stigma and discrimination, rigid

TABLE 1.4

Young people with disabilities face higher rates of exclusion from school

	Percentage of primary school-age learners not attending school		Percentage of lower secondary school-age learners not attending school		Percentage of upper secondary school-age learners not attending school	
	With functional difficulties	Without functional difficulties	With functional difficulties	Without functional difficulties	With functional difficulties	Without functional difficulties
Madagascar	24	21	34	37	67	61
Guinea-Bissau	-	-	30	21	-	-
Central African Republic	-	-	30	22	-	-
Zimbabwe	-	-	29	23	72	57
Lesotho	3	3	8	16	36	36
Malawi	11	5	16	11	-	-
Sao Tome and Principe	6	3	12	3	-	-
Tunisia	3	3	10	6	27	19
Algeria	5	1	7	3	29	20

Source: Reproduced from D'Angelo, *Secondary Education and Transitions to Work for Youth with Disabilities: A Scoping Review of Post 2020 Evidence* (Mastercard Foundation: 2026) drawing on Multiple Indicator Cluster Survey (MICS) data from 2018-2020, presented in UNICEF (2021, 2022, 2023).

Note: Differences for Lesotho, Madagascar, Malawi, and Tunisia, between learners with and without functional difficulties are not statistically significant; out-of-school indicators only represent the situation of children who have ever attended school, and therefore only reflect the experiences of a subgroup of children that, likely face lower barriers to education than those who have never been able to attend school.

curricula, and pedagogy that does not address their learning needs.[93] In addition, young people with multiple and severe disabilities are also more likely to be excluded from secondary education.[94]

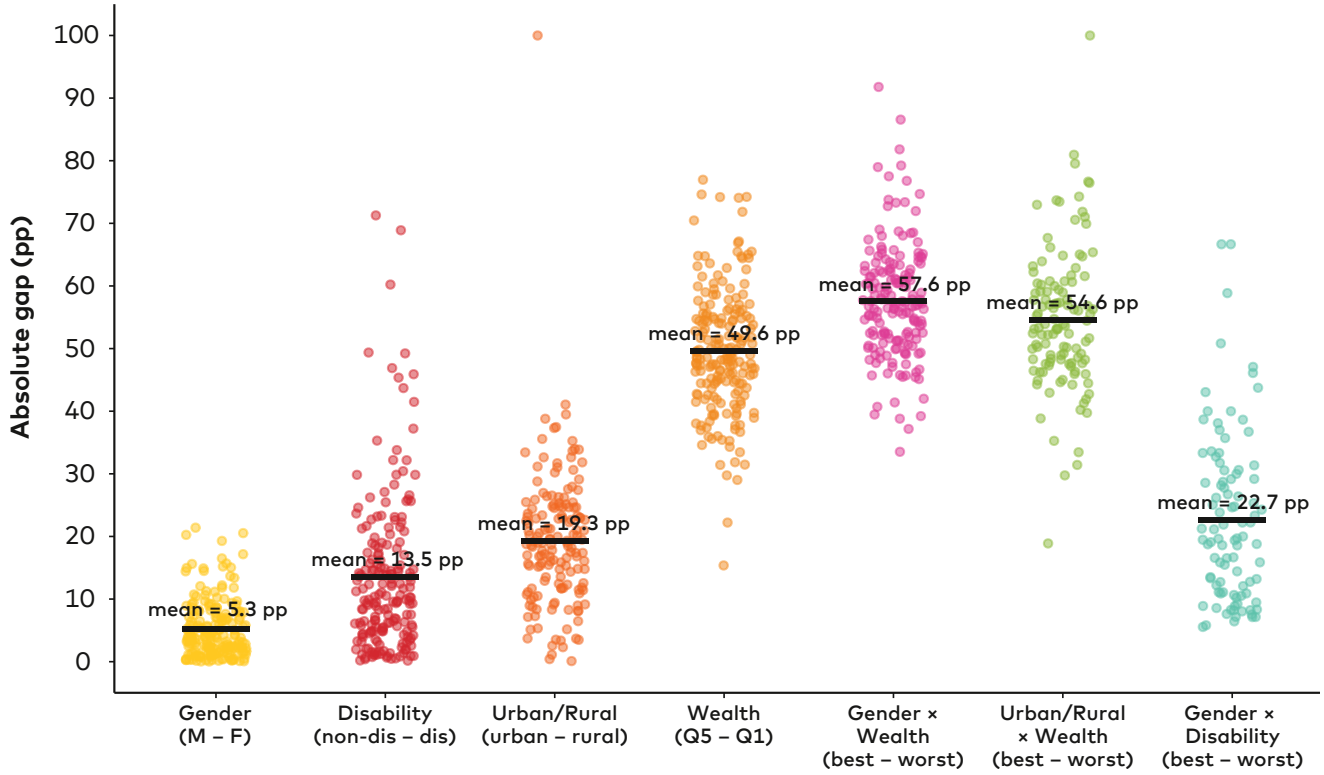
Intersecting vulnerabilities

Young people facing intersectional disadvantage, in which gender, disability status, and rural location compound, experience the greatest barriers in their educational journeys. While limited data captures this level of intersectionality, Tanzania provides an illustrative example. Drawing on data points from the 2022 census, intersectional disadvantages in Tanzania were associated with much lower rates of lower secondary school completion[95] (Figure 1.14). While gaps in lower secondary school completion by gender average just 5 percentage points across municipalities, wealth-related gaps average nearly 50 percentage points, and become even larger when poverty overlaps with other barriers, such as rural residence or disability. The evidence underscores that while poverty is the strongest and most consistent source of inequality, educational disparities are rarely shaped by just one factor. Rather, multiple barriers interact, highlighting the importance of understanding and addressing learners' overlapping needs.

FIGURE 1.14

Overlapping disadvantages create much larger completion gaps than gender alone

Lower secondary school completion rates, by marginalization



Source: Reproduced from Stoelinga et al., *Secondary Education in Africa: Inequalities and Disadvantages Aggregate Trends 2015-2024* (Laterite, 2026), drawing on data from 196 Tanzanian municipalities from the Tanzania 2022 Population and Housing Census 10 percent microdata.

Note: Each dot is a municipality. The vertical axis shows the absolute completion gap in percentage points. Bars show the average gap across municipalities. Single-dimension gaps compare gender, disability, residence, and wealth groups; interaction gaps compare the highest- and lowest-completion subgroups within the relevant combined category. The disability gap is not filtered for minimum subgroup size. Of the 193 municipalities with a disability estimate, 27 rest on fewer than five disabled respondents, and the signed version of the same gap averages -3.4 percentage points, so municipality-level disability gaps are considerably stronger than the other dimensions shown.

The evidence presented in this section suggests that while socioeconomic level is the largest driver of exclusion from secondary education, exclusion is rarely driven by a single factor. Rather, disadvantages linked to poverty, rural location, disability, displacement, and gender frequently overlap and reinforce one another. This means that policies targeting only one dimension of inequality are unlikely to reach the learners facing the greatest barriers. Expanding equitable access will therefore require more targeted approaches that identify and support young people experiencing multiple and intersecting forms of exclusion, rather than relying solely on population-wide expansion strategies. Building mechanisms for learner feedback and participation into education planning can also complement stronger disaggregated data and help systems respond more effectively to young people's lived realities, as discussed in Chapter 6.





1.6 Governments are financing secondary education in an increasingly constrained fiscal space

Financing needs for secondary education continue to outpace available resources, creating a growing funding challenge across Africa. The resources required to achieve universal, quality secondary education remain far beyond current spending levels. UNESCO estimates that achieving the secondary education targets of UN Sustainable Development Goal 4 in Africa would require approximately $82 billion annually, including $44 billion for lower secondary education and $38 billion for upper secondary education.[96] Yet low- and lower-middle-income African countries face an estimated annual financing gap of $37 billion for secondary education alone, equivalent to approximately 1.5 percent of GDP.[97] These financing challenges are occurring at the same time that demand for secondary education is growing rapidly due to demographic change, expanding completion of primary education, and increasing labour market requirements for secondary-level credentials.

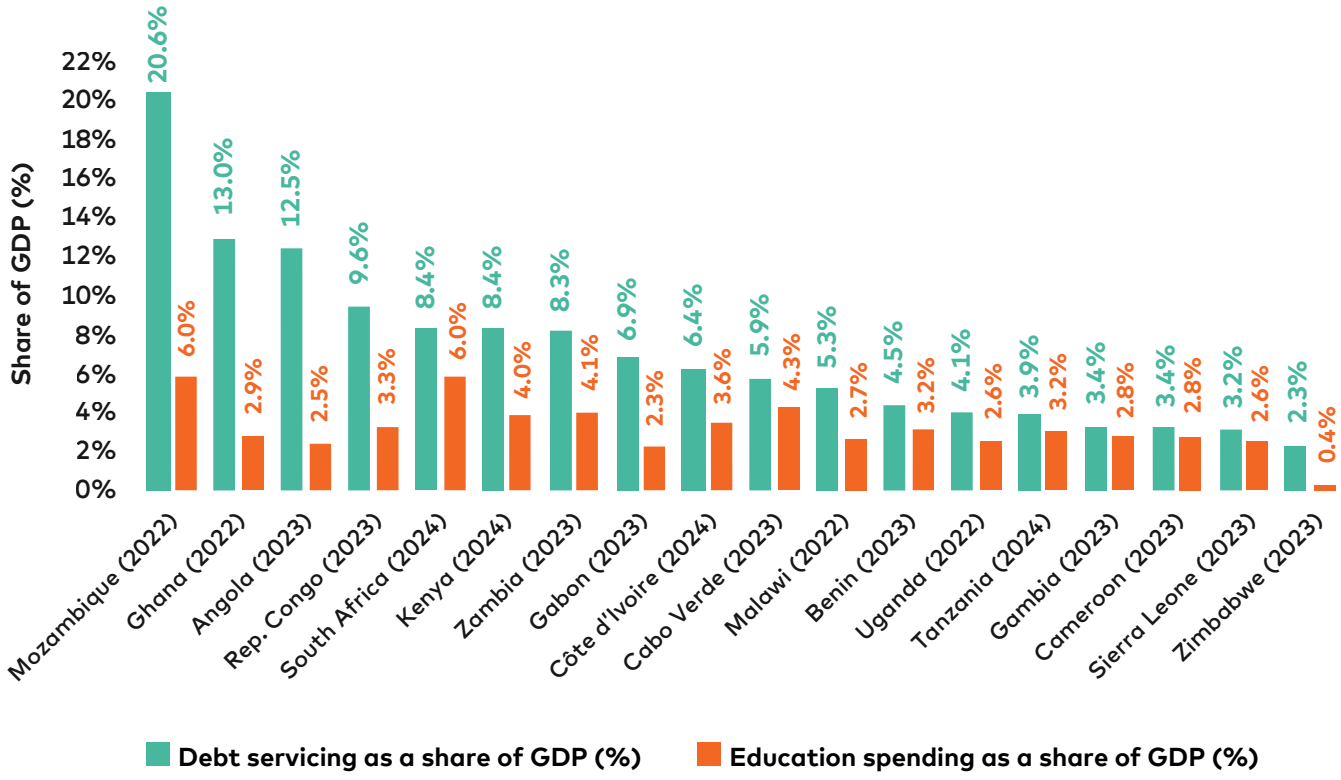
Many African governments face constrained fiscal space, limiting their ability to invest in secondary education at the scale required. Across 33 countries with available data, 25 collected less than the African Union benchmark of tax revenues equivalent to 20 percent of GDP, resulting in limited resources to finance public services, including education.[98] At the same time, spending growth has slowed or contracted in a number of countries since COVID-19, reflecting wider fiscal pressures associated with debt servicing, conflict- and climate-related spending, and economic instability.[99] The central financing challenge is no longer to simply expand secondary education but to identify sustainable ways to finance continued growth while improving quality and equity. Community actors including families, faith-based organizations, and local businesses also contribute to funding schools and learners, but their support should not be a replacement for government spending on education, given varying levels of resources across different communities.

Africa has limited fiscal resources for investing in education, in part because many countries are facing their worst debt crisis in a generation. Public debt in Africa has more than doubled, from 32 percent of GDP in 2010 to 67 percent in 2024.[100] The IMF and the World Bank identify 55 percent of GDP as a red line, above which countries face an increased risk of debt distress. Interest and principal payments can significantly disrupt domestic spending, increase a country's vulnerability to an economic crisis, and raise the cost of future borrowing. Twenty-eight countries, over half of the countries in Africa, are currently categorized as being in debt distress or at high risk of falling into debt distress. [101] Since 2020, 18 of these countries have spent more on debt servicing than on education (Figure 1.15).[102] Africa's growing debt crisis occurs at a time of increasing macroeconomic uncertainty, with high inflation resulting in part from the conflicts in Europe and the Middle East, frequent disruptions to international trade, and a rise in trade barriers imposed by some of the world's largest economies, which is constraining prospects for export-driven growth and job creation.

Growing indebtedness is causing some countries to cut spending on public wages, including teacher salaries, at a time when expansion of the teacher workforce is needed. Teacher salaries typically account for the majority of recurrent public expenditure on education, accounting for 60 percent of the secondary education budget in Ghana and 73 percent in Senegal, for example.[103] Expanding secondary education in part by hiring more teachers can thus be a major expense. Spending to service public debt can cut significantly into the fiscal space needed to recruit, train, and deploy more teachers. In Kenya, where debt servicing was one of the largest government expenditures, the government deferred plans to upgrade 24,000 intern teachers to permanent

FIGURE 1.15

Debt-servicing costs exceed public education spending in 18 countries



Source: Reproduced from Williams et al., *Secondary Education in Africa: Equitable Financing - Progress since 2020* (The REAL Centre, 2026), drawing on UNESCO-Institute for Statistics database, United Nations Conference on Trade and Development Debt Dashboard, and World Bank International Debt Statistics.

positions.[104] After Ghana defaulted on its external debt in 2022, the government delayed paying teachers their salaries while the Ministry of Finance created controls focused on recruitment and wage expenditures.[105]

While political commitments to education remain strong, actual public spending often falls below agreed international benchmarks in many countries. Global and regional frameworks continue to call for governments to allocate at least 4 to 6 percent of GDP, or 15 to 20 percent of public expenditure, to education.[106] However, only about half of African countries with available data (22 of 42) achieve the recommended share of GDP devoted to education (Figure 1.16).[107] Countries such as Namibia, Algeria, Botswana, Mauritania, Lesotho, and Senegal exceed the benchmark, while others – including Ethiopia and Malawi – spend substantially below recommended levels. Similarly, nearly half of countries with available data allocate less than 15 percent of public expenditure to education, despite their repeated commitments under Sustainable Development Goal 4, Agenda 2063, and the CESA.

Twenty-eight countries, over half of the countries in Africa, are currently categorized as being in debt distress or at high risk of falling into debt distress.

There is substantial variation in public investment in secondary education across African countries, but there are no internationally recognized benchmarks to guide spending levels specifically on secondary education. More than half of countries (17 of 31) with available data (including data prior to 2020) allocate one percent of GDP or less to the subsector (Figure 1.17).[108] In contrast, Algeria allocated five percent of GDP to secondary education in 2024 (nine percent of GDP spent on education overall), illustrating substantial variation in investment across countries.[109] Restricting the analysis to data from 2020 onward yields a similar pattern, with 11 of 21 countries spending one percent of GDP or less on secondary education.[110] These differences highlight the need for an assessment of the resources needed to meet growing demand and improve quality and equity.

22 of 42

Only about half of African countries with available data (22 of 42) achieve the recommended share of GDP devoted to education (Figure 1.16).

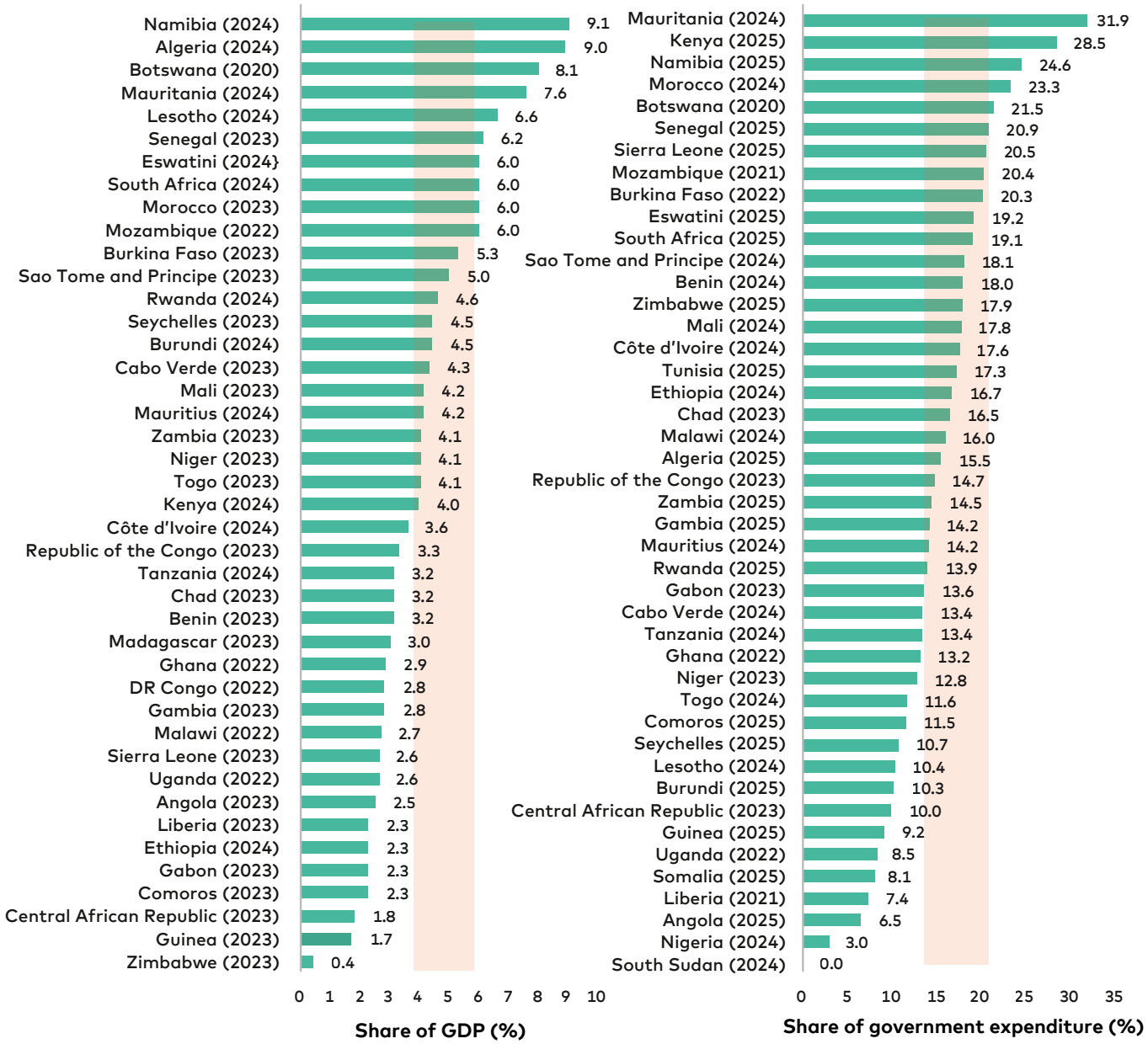
The distribution of public education spending across primary, secondary, and tertiary levels varies considerably among African countries and does not always align with patterns of participation. For the 27 countries with available data, five (Algeria, Cameroon, Kenya, Mauritius, and Senegal) allocate a larger share of education spending to secondary versus primary education (Figure 1.18), reflecting that the cost of education per secondary student is substantially higher than per primary student due to higher facility costs and teacher salaries.[111] Examining per capita spending, 20 of 26 countries with data spend more per secondary school student than per primary school student. In eight countries (Chad, Ethiopia, Guinea, Liberia, Mauritania, Sierra Leone, South Sudan, and Togo), public spending on tertiary education exceeds spending on primary education, despite relatively low participation in higher education, particularly among learners from vulnerable backgrounds.[112] For 15 countries with data, expenditure per secondary school student was $489 compared to $3,639 per tertiary student, even though only nine percent of young people reach tertiary education.[113] How education budgets are distributed across education levels is an important determinant of both the efficiency and equity of public investment.

Financing patterns often reinforce existing inequalities, with wealthier populations benefitting disproportionately from public education spending. Education financing is not equity-focused in many

FIGURE 1.16

Many countries remain below agreed benchmarks for public education spending

Education as a share of GDP and government budget, latest year



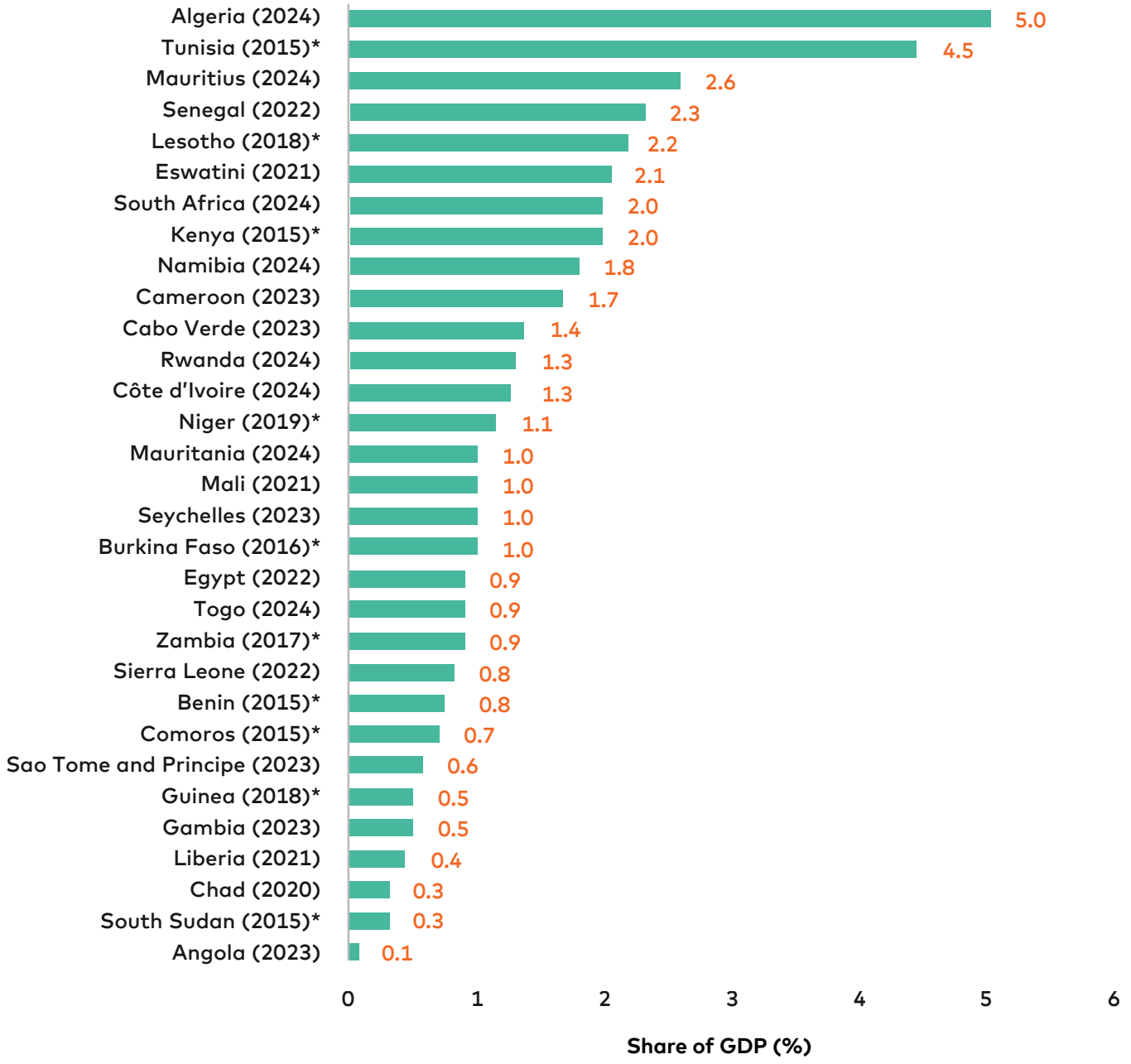
Source: Reproduced from Williams et al., *Secondary Education in Africa: Equitable Financing - Progress since 2020* (The REAL Centre, 2026), drawing on the UNESCO Institute for Statistics database, *accessed May 2026.*

Note: Shaded pink areas refer to UNESCO's recommendation for public expenditure on education (UNESCO 2016).

FIGURE 1.17

Of 31 countries, more than half spend one percent of GDP or less on secondary education

Secondary education expenditure as a share of GDP (%), latest year



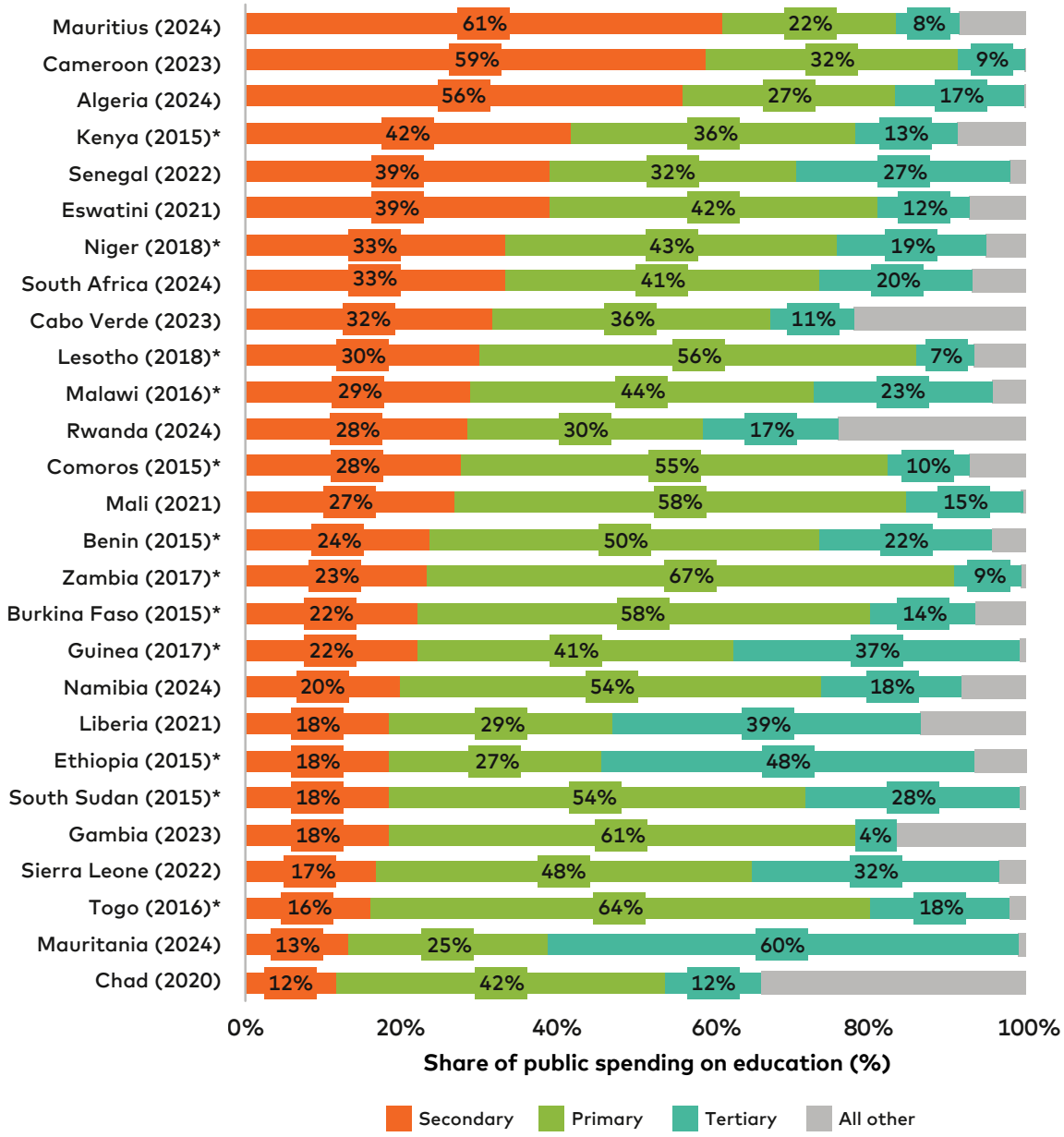
Source: Reproduced from Williams et al., *Secondary Education in Africa: Equitable Financing - Progress since 2020* (The REAL Centre, 2026), drawing on the UNESCO Institute for Statistics database, *accessed May 2026.*

Note: (*) refers to countries with no data points from 2020 onward, but at least one data point from 2015 to 2019.

FIGURE 1.18

Public education spending does not always reflect the number of learners in each level

Share of education budget, latest year



Source: Reproduced from Williams et al., *Secondary Education in Africa: Equitable Financing - Progress since 2020* (The REAL Centre, 2026), drawing on UNESCO Institute for Statistics database, *accessed May 2026.*

Notes: (*) refers to countries with no data points from 2020 onward, but with at least one data point from 2015 to 2019, which were used for this figure. "All other" refers to administrative costs and costs relating to pre-primary education, and post-secondary non-tertiary education. The latter two categories have not been disaggregated in the graph above either because the data are not available or because they represent small proportions.

contexts. Because learners from the poorest households are less likely to complete primary school and transition to secondary education, public spending on secondary and tertiary education disproportionately benefits wealthier households.[114] Evidence from West Africa suggests that young people in the wealthiest households benefit far more from public education expenditure than those in the poorest quintile.[115]

Many countries that have introduced fee-free secondary education rely heavily on regressive forms of taxation, such as value-added taxes. This means that poorer households may bear a disproportionate share of the financial burden of education while benefitting less from post-primary education opportunities.[116] While limited data exists on funding for learners with disabilities, evidence across multiple African countries indicates that inclusive and special education remain persistently underfunded, with limited dedicated budget allocations for these young people.[117] Expanding secondary education without explicitly targeting vulnerable learners risks reproducing and even deepening existing inequalities. Effective, equitable-based financing models are further explored in Chapter 9.

Spending on secondary education is often poorly tracked, limiting evidence-based decision-making. While overall education spending is regularly monitored, spending on secondary education is reported inconsistently across countries. While at least one data point on government spending on secondary education as a share of GDP was available for 27 of 54 African countries from 2015 to 2019, this decreased to only 17 countries for the 2020 to 2024 period.[118] The declining availability of subsector expenditure data poses a challenge in relation to accountability and planning. Improving financing data systems is therefore not merely a technical issue, it is essential for understanding whether governments are investing adequately in secondary education and increasing accountability for education outcomes.

Domestic public expenditure is expected to remain the foundation of financing for African education systems. Aid and philanthropic funding play an important complementary role, but at current levels, are insufficient to compensate for constrained domestic revenues, rising debt-servicing costs, and persistent education financing gaps.[119] Traditional development aid to education in African countries increased between 2015 and 2019, then declined significantly in 2020 amid the COVID-19 pandemic and as a result of a shift in national priorities of key aid donors (Figure 1.19). The OECD estimates that aid provided to education fell by 22.2 percent between 2024 and 2026. Assuming aid to education in Africa continues to decline at the same rate, and that secondary education receives the same share of education aid as it did in 2024, aid to secondary education is projected to fall even further from $1.3 billion in 2024 to $990 million in 2026. [120]

$489

For 15 countries with data, expenditure per secondary school student was $489 compared to $3,639 per tertiary student, even though only nine percent of young people reach tertiary education.

Increases in aid to secondary education have come at the expense of aid to primary education. Aid to primary education has stagnated since 2018, while aid to secondary education has increased. By contrast, aid to tertiary education has remained high, making up a significant portion of education aid budgets. The portion of aid funds spent on tertiary education for those studying in donor countries (with funds not leaving those countries) was almost equal to the share of aid spending on primary and was higher than the share of aid spending on secondary education in 2024 (Figure 1.19). Sustained investment in primary education is important to improve retention and learning at that level, while also achieving efficiencies at the secondary level due to less need for grade repetition and remedial learning.

Philanthropic funding to education has been increasing but remains limited in relation to domestic and aid spending. In 2023, aid to education by philanthropic donors was equivalent to just 10 percent of the amount spent by bilateral and multilateral donors. In addition, over half (56 percent) of philanthropic funding to education was on higher education, with just 20 percent allocated to secondary education (Figure 1.20).[121]

Aid to primary education has stagnated since 2018, while aid to secondary education has increased.

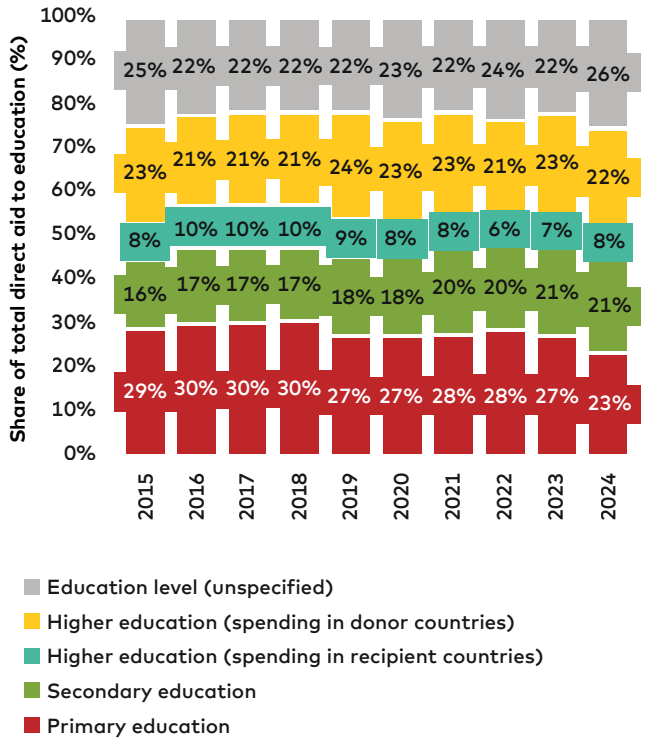
External funding remains a significant source of funding for system expansion, infrastructure development, equity-focused programs, and targeted support for marginalized learners, particularly in low-income, fragile, and conflict-affected contexts.[122] However, external funding alone is not enough to cover the estimated financing gaps necessary to accelerate the expansion of quality and equitable secondary education, particularly in countries with limited capacity to mobilize domestic resources.[123] Further, the recent decline in aid highlights that dependence on external financing creates vulnerabilities for long-term, sustainable system development.

Heavy reliance on external financing may create sustainability challenges if investments are

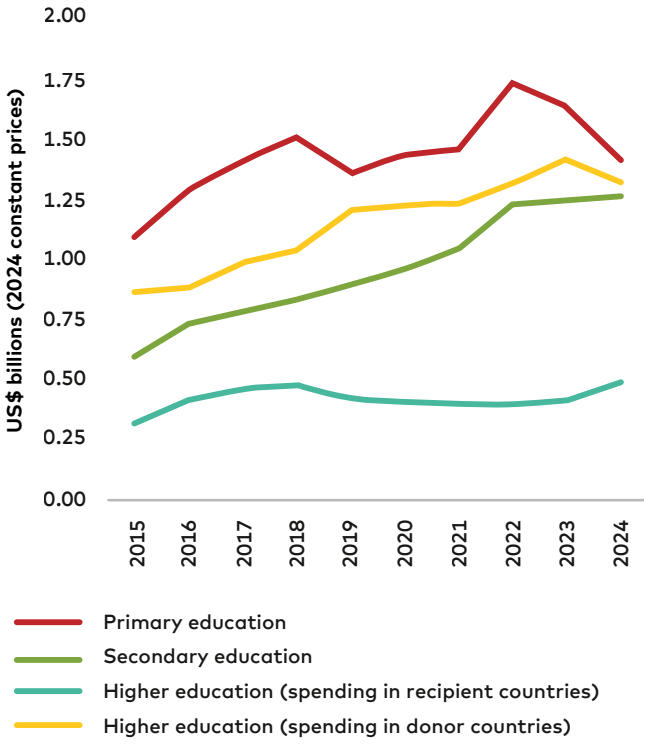
FIGURE 1.19

Aid to secondary education has grown while aid to primary education has declined

a. Education aid by subsector (percent)



b. Education aid by subsector (US$ billions)



Source: Reproduced from Williams et al., *Secondary Education in Africa: Equitable Financing - Progress since 2020* (The REAL Centre, 2026), drawing on OECD Creditor Reporting System, *accessed May 2026*.

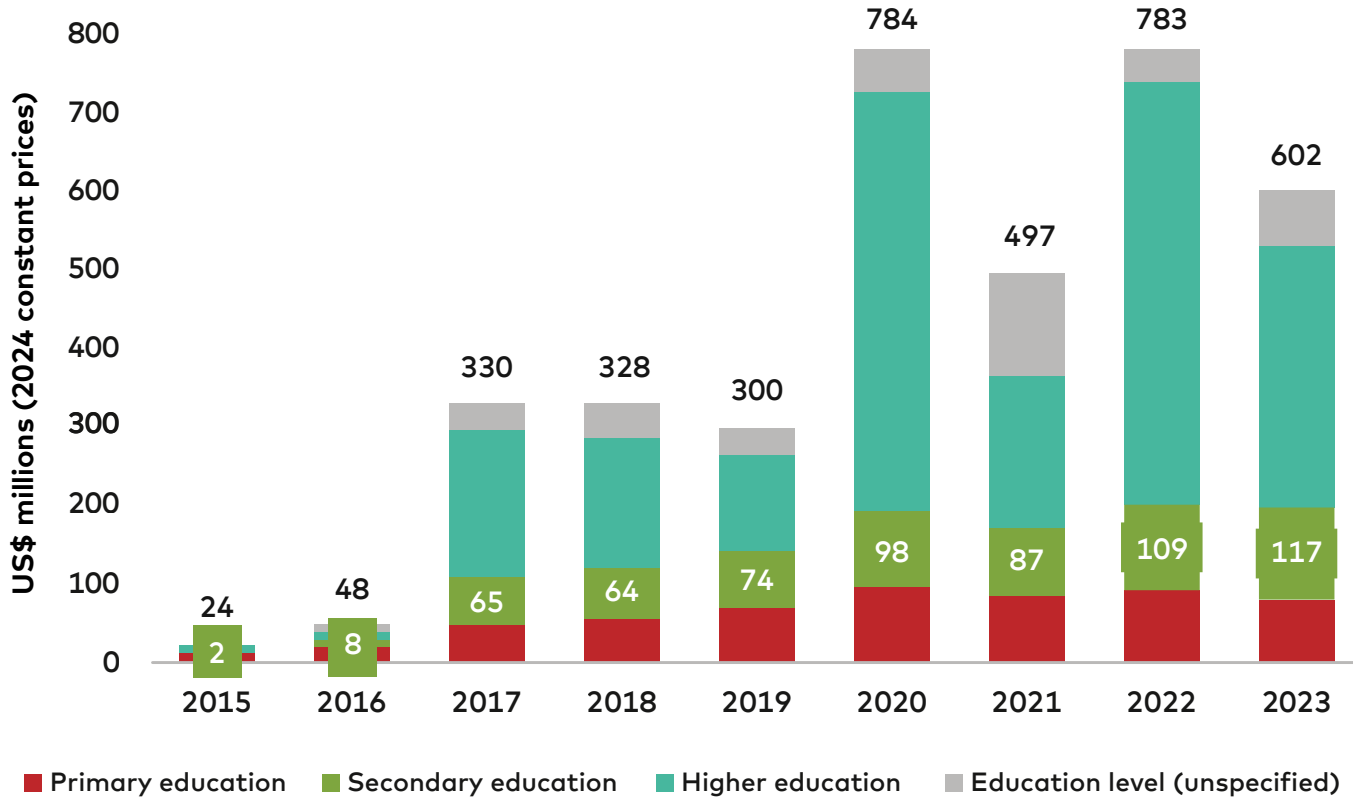
not institutionalized within domestic financing frameworks. Aid is most effective when it strengthens national systems, helps governments build long-term capacity, and complements domestic resource mobilization rather than substituting for it.[124] International support, therefore, should ideally be balanced by stronger domestic financing, improved efficiency, and more equitable allocation of resources, including equity-based financing formulas, bursaries and cash transfers (Chapter 9).[125] While international aid remains crucial for expanding secondary education and promoting equity, particularly in vulnerable contexts, sustainable progress will ultimately depend on strengthening domestic financing systems and reducing long-term dependence on external resources.

Governments are increasingly exploring innovative financing and flexible delivery models, but these remain supplementary rather than transformational. Innovative financing approaches used in the education sector include social impact bonds, results-based financing, blended financing that combines philanthropic and private sources to reduce borrowing costs, private-sector partnerships, and flexible delivery models.[126] For example, while boarding schools have historically played an important role in expanding secondary education, some countries, such as Kenya,

FIGURE 1.20

Philanthropic education funding has grown but remains concentrated in higher education

Philanthropic aid to education (2015 to 2023), US$ millions



Source: Reproduced from Williams et al., *Secondary Education in Africa: Equitable Financing - Progress since 2020* (The REAL Centre, 2026), drawing on OECD Creditor Reporting System, *accessed May 2026*.

Malawi, and Tanzania are increasingly prioritizing lower-cost day schools closer to learners' communities (Chapter 6).[127] The evidence suggests that reducing reliance on costly boarding provision, while targeting bursaries to vulnerable learners who need accommodation, could improve both efficiency and equity.[128] Additional approaches, including equity-based funding models, are explored in Chapter 9. While important, these mechanisms are unlikely to fill large secondary education financing gaps on their own and should instead be viewed as complements to stronger domestic resource mobilization and more efficient use of existing resources.[129] Further assessment is also needed on the effectiveness of these approaches.[130]

Improving the efficiency of existing education spending is increasingly important to alleviate funding shortfalls in secondary education. Expanding secondary education will depend not only on mobilizing additional resources but also on making better use of available funds.[131] Potential areas for improving efficiency include better allocation of spending across education levels, improved teacher management and deployment, stronger system planning and management, and more cost-effective delivery models.[132] These measures, many of which are explored in Chapters 8 and 9, may help governments reach more learners and improve outcomes within existing budget constraints. Nevertheless, improvements in efficiency and innovative financing mechanisms cannot substitute for sustained public investment in secondary education.

Nevertheless, improvements in efficiency and innovative financing mechanisms cannot substitute for sustained public investment in secondary education.

Achieving equitable secondary education expansion will require a whole-system approach that strengthens foundational learning and completion at the primary level while simultaneously investing in post-primary opportunities. The Mastercard Foundation's 2020 report cautioned that secondary expansion should not come at the expense of the "unfinished business" of primary education. This caution remains relevant today. Weak completion and learning at the primary level continue to constrain participation and success at the secondary level. Increased spending on secondary education may put pressure on resources available for primary education, while higher education continues to receive more sizeable funding. Governments should sustain investment across primary and secondary education,[133] with a particular focus on foundational literacy, numeracy, completion, and transition.[134] Strong and sustained investment in both primary and secondary education can create synergies across levels of education through efficiency-driven cost savings and improved learning outcomes.



1.7 Conclusion

Africa has made significant progress in expanding secondary education. More young people are enrolled in and completing secondary education than at any point in the continent's history, with participation reaching more than 110 million learners, and gender gaps have narrowed considerably. Yet this progress has been achieved alongside rapid population growth, creating a demographic treadmill in which education systems must continually expand just to maintain existing participation rates. As a result, while access has improved, 77 million young people remain excluded from education, and many learners continue to struggle with progression, learning, and completion. Gains in participation have not translated into inclusion of the most marginalized or consistent improvements in learning. The next phase of progress will therefore depend not only on enrolling more learners, but also on ensuring that all young people are able to learn, progress through the system, and succeed regardless of their circumstances.

Strengthening secondary education will also depend on continued investment in foundational learning at the primary level. Yet governments are having to do this in constrained fiscal space. An estimated $82 billion annually is needed to achieve secondary education targets.[135] Only 22 of 42 countries with data are investing the recommended share of their GDP in education, while declining external aid to education places additional pressure on already constrained budgets.[136] Enhancing access, quality, and equity, at scale will depend not only on increasing resources, but also on how efficiently existing education financing is allocated.[137]

Endnotes

1 Stoelinga et al., *Enrolment, Progression and Completion*.

2 Stoelinga et al. uses imputation to produce "a coherent country-year panel of enrolment indicators for 2015–2024. The main targets are gross enrolment ratios (GER), reconstructed enrolment counts, and a limited set of net enrolment rates (NER). The panel covers 54 countries and 10 years, giving 540 possible country-year cells per target concept; data on 53 countries are shown in Figure 1. The model uses project-held data only. Direct target series come mainly from UNESCO UIS and World Bank sources, supplemented by verified Laterite grade-by-grade estimates where these fill UIS gaps. School-age population denominators are central to the method, because they allow the analysis to reconcile rates and counts rather than treating them as unrelated series. Historical observations from 2010–2014 can inform trends and lags, but they are not exported as final imputed rows. Rows from 2025 are not used as final outputs."

3 Stoelinga et al., *Enrolment, Progression and Completion*.

4 Stoelinga et al., *Enrolment, Progression and Completion*.

5 Stoelinga et al., *Enrolment, Progression and Completion*.

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7 Stoelinga et al., *Enrolment, Progression and Completion*, 43.

8 Stoelinga et al., *Enrolment, Progression and Completion*.

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12 UNESCO, *SDG4 Scorecard Progress Report*.

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15 Education Cannot Wait's crisis dashboard notes that there are 10.4 million out-of-school young people at the lower secondary level and 15.1 million at the upper secondary level in sub-Saharan Africa, as well as 2.9 million at the lower secondary and 2.8 million at the upper secondary level in Northern Africa. Education Cannot Wait, "Crisis Dashboard," accessed August 2026, https://www.educationcannotwait.org/crisis-dashboard.

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23 Stoelinga et al., *Enrolment, Progression and Completion*.

24 Stoelinga et al., *Enrolment, Progression and Completion*, 22.

25 Stoelinga et al., *Enrolment, Progression and Completion*.

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31 Comparing 2020-2024 with 2015-2019, the median change is close to zero: twelve countries record an increase and twelve record a decrease, and only five move by more than two percentage points in either direction, Stoelinga et al., *Enrolment, Progression and Completion*.

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CHAPTER 2

Reorienting Secondary Education for a Changing World of Work

How demographic, technological, economic, and environmental shifts are transforming prospects for employment



QUESTION THIS CHAPTER ANSWERS

How are demographic, technological, economic, and environmental shifts reshaping the pathways young people will navigate, and what does this mean for the future role of secondary education?

What has changed since 2020

Important characteristics of African labour markets identified in 2020 persist, but the context is evolving. Nearly one in five young people are not in employment, education, or training (NEET), reflecting cumulative pathways shaped by early school exit, gendered care responsibilities, conflict and displacement in some countries, and limited access to quality jobs. Informality remains dominant, accounting for nearly 90 percent of youth employment, while employment is gradually shifting from agriculture toward services. AI and digital platforms, climate change, and the growth of green, care, creative, and other service sectors are creating new opportunities and risks, reinforcing the need to prepare young people for changing rather than fixed occupational pathways.

What is needed now

Secondary education must prepare young people for increasingly diverse and nonlinear pathways through work and livelihoods. Formal wage employment will not be the predominant destination for most young people. Young people will move between informal employment, self-employment, entrepreneurship, and other forms of work, making adaptability and continued learning increasingly important. Improving employment prospects for young people will depend in part on policies and regulation to stabilize employment and protect workers, offer education and training to help them improve their skills, and incentivize sustainable economic growth.



2.1 Informality of work and working poverty will persist for the foreseeable future

Despite strong GDP growth, African economies remain highly informal and are undergoing structural transformation slowly and unevenly. As agriculture declines as a share of total employment (Section 2.3), many African countries are not transitioning to higher-productivity manufacturing, which in other regions has historically offered access to higher-wage, formal-sector jobs.[1] Rather, most African economies are experiencing a declining share of employment in agriculture and a shift toward the services sector, with limited industrialization.[2] At the same time, the continent is facing its worst debt crisis in a generation, constraining the fiscal space for job creation and threatening investments in education and skills training (Chapter 1). Therefore, understanding how work is changing, the economic sectors where opportunities are emerging, and the challenges that shape young people's transitions into work is central to considering how secondary education can prepare young people to thrive.

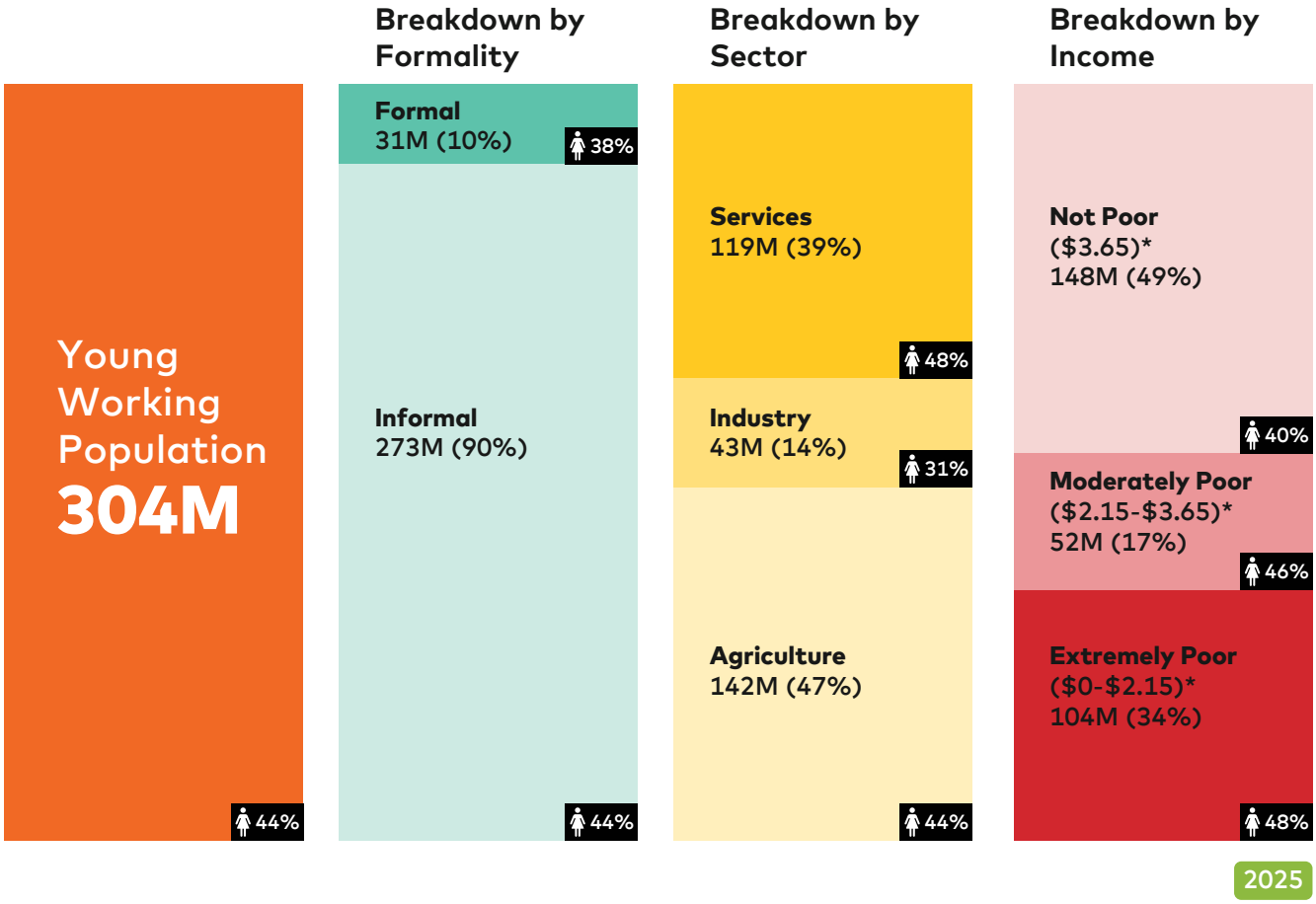
90 percent

While informal employment accounts for approximately 61 percent of global employment of young people, it is substantially more prevalent in Africa, where nearly 90 percent of youth employment occurs outside the formal economy (Figure 2.1).

Informality remains the dominant entry point into the workforce for most young people in Africa and is likely to remain so for the foreseeable future. The Mastercard Foundation's flagship 2020 report *Secondary Education in Africa: Preparing Youth for the Future of Work* anticipated that most African young people would continue to find livelihoods in the informal economy, and evidence

FIGURE 2.1

Nine in 10 employed young Africans work in the informal economy



Source: Reproduced from World Data Lab et al., *Africa Youth Employment Outlook Report* (2026).

Note: The figures represent the average daily consumption (or income) per person in a household measured at 2017 International prices adjusted for purchasing power parity (PPP). Economic class based on the World Bank's International poverty lines, such as $2.15 (2017 PPP) per day for extreme poverty. Note that these figures include youth engaged in entrepreneurship.

since 2020 suggests this prediction remains accurate. Informality functions simultaneously as a constraint and as a practical platform through which millions of young Africans access income-generating opportunities.[3] While informal employment accounts for approximately 61 percent of global employment of young people, it is substantially more prevalent in Africa, where nearly 90 percent of youth employment occurs outside the formal economy (Figure 2.1).[4]

Yet education and training systems remain poorly aligned with the realities of the informal economy in which most young people begin, and will continue, their working lives. Transitions into work often begin well before formal schooling ends, as many young people (aged 15 to 17) combine schooling and income-generating activities.[5] A study in Cameroon found that wage returns for young people with formal technical skills training were 61 percent compared to 21 percent for young people with informal apprenticeships, yet this effect faded with age.[6] At the same time, school-to-work transition programs are weak, offering limited access to structured pathways such as study and career guidance, work-based experiential learning, and apprenticeships and internships (Chapter 4).

Most young people therefore enter the labour force through self-employment, informal household and micro-enterprises, apprenticeships,

and, increasingly, digital platform work, often relying on informal networks and relationships to access opportunities. The scale of informal work varies by sub-region, reaching 93 percent of youth employment in both Central and Western Africa and 92 percent in Eastern Africa, compared with 77 percent in Northern Africa and 79 percent in Southern Africa.[7] The challenge is particularly acute in agriculture, where formal jobs remain scarce. Tanzania illustrates this dynamic: agriculture accounts for most employed young people (66 percent), yet only 5 percent of youth employment is formal, underscoring the limited availability of secure and productive employment pathways for many young people.[8]

Because informal employment is the dominant entry point into the labour market, employment alone is often a poor indicator of economic inclusion; the quality and formality of work matter just as much as access to it. Countries with higher rates of formal youth employment tend to report lower levels of working poverty, highlighting the importance of secure and protected work opportunities.[9] In the Democratic Republic of Congo and the Central African Republic, for example, youth employment rates remain relatively high – 55 percent and 66 percent, respectively – yet fewer than eight percent of jobs held by young people are formal, and roughly two-thirds of employed young people continue to live in extreme poverty.[10]

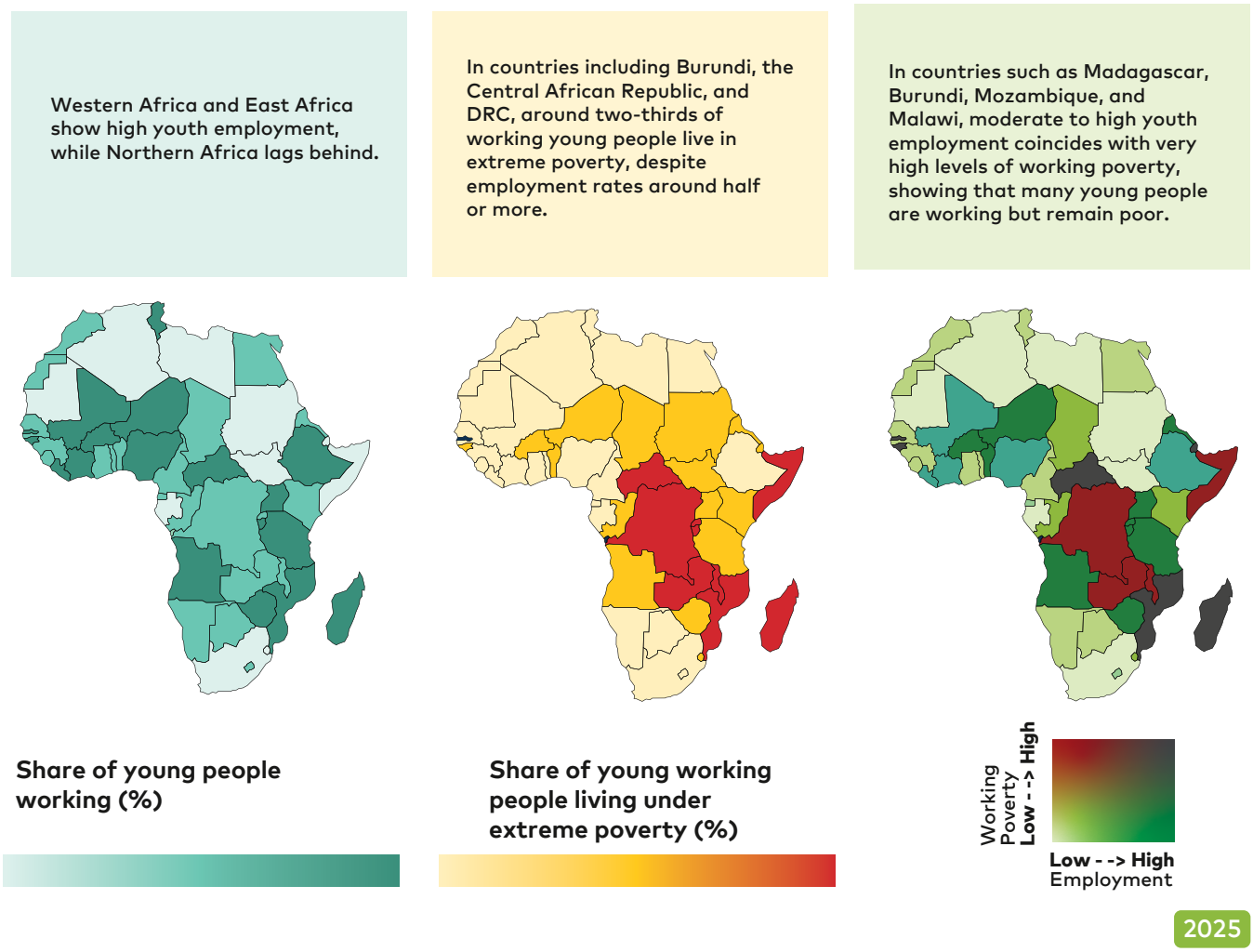
More broadly, informal employment is strongly associated with working poverty among young people.[11] World Data Lab's analysis across 53 African countries found that each one percentage-point increase in informal youth employment is associated with an approximately 0.7 percentage-point increase in working poverty (Figure 2.2).[12] These findings show that high employment rates can coexist with widespread informality, low earnings, and limited access to social protection and opportunities for advancement. As a result, many young people remain concentrated in forms of work that provide an income but offer limited security, stability, or prospects for advancement. While education is an important determinant of future employment prospects, education systems themselves do not shape labour markets. Creating conditions and policies that support job creation and enable entrepreneurship by lowering the barriers to starting a business and easing access to capital is largely in the hands of government.

In the Democratic Republic of Congo and the Central African Republic, for example, youth employment rates remain relatively high – 55 percent and 66 percent, respectively – yet fewer than eight percent of jobs held by young people are formal, and roughly two-thirds of employed young people continue to live in extreme poverty.

Educational progression is associated with access to better quality work, but it is not a guarantee. Figure 2.3 shows that completing primary and lower secondary education improves work outcomes modestly for young people, but that at these levels of education, few progress to better quality work throughout their lives. Young people with upper secondary education access regular and better jobs at higher rates, with their prospects improving as they age. Access to quality work is highest for those with post-secondary education and the returns to education, in terms of quality of work, also accumulate significantly over time. Young people with upper secondary and post-secondary education, therefore, are increasingly likely to access better-quality work as they grow older and progress in their careers, while those with lower levels of education are more likely to remain concentrated in lower-quality employment.[13] The challenge for those with little education is entering work too early, thereby foreclosing future progress. This underscores the importance of creating diverse pathways back into general, technical, and flexible education for reskilling and upskilling throughout life.

FIGURE 2.2

High youth employment can coexist with widespread informality and working poverty



Source: Reproduced from World Data Lab et al., *Africa Youth Employment Outlook Report* (2026).

Young people with upper secondary education access regular and better jobs at higher rates, with their prospects improving as they age.

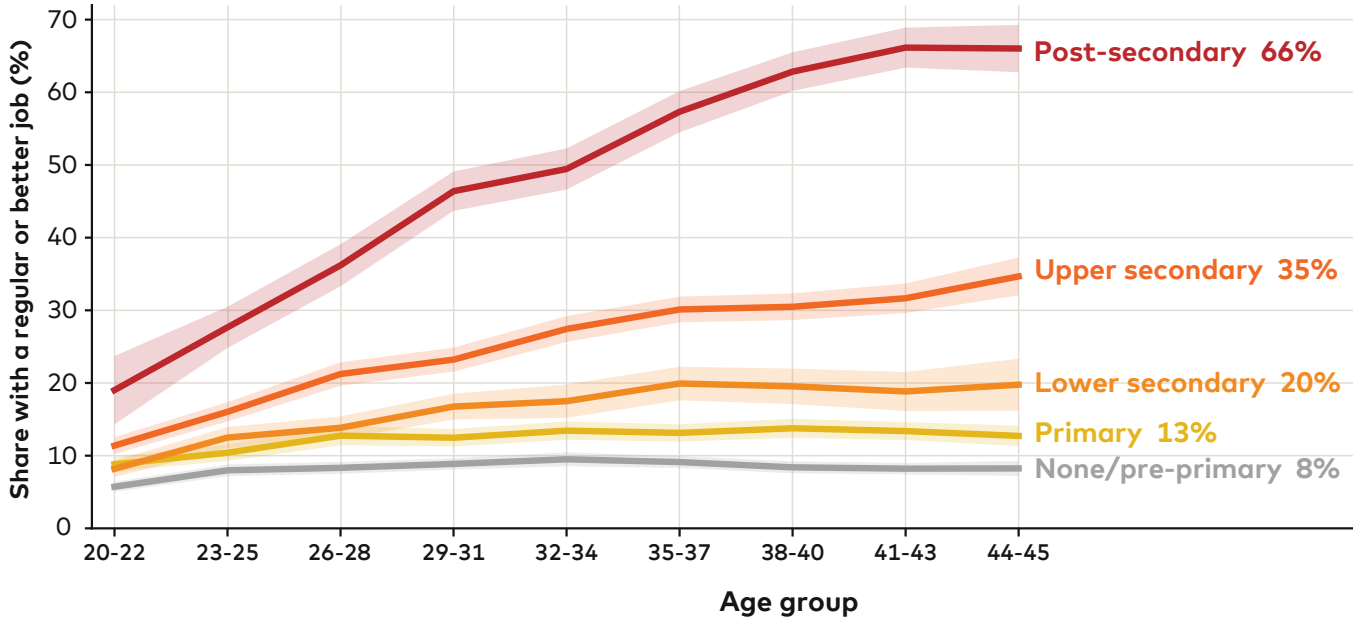
Evidence suggests that having a secondary education is associated with earning higher wages compared to lower levels of education but estimates of the magnitude of this effect vary.[14] Data from select African counties shown in Figure 2.4 suggest a positive relationship between earnings and level of education. Completion of lower secondary education is associated with some improvement, but the larger earnings gains appear after young people progress to upper secondary and beyond. Attention is needed to strengthen progression through and completion of secondary education, as many young people are leaving school before reaching the point where labour market gains become stronger.

Young people themselves recognize that navigating this changing landscape will require more than preparation for a single occupation. Young people consulted for this report and through the AUDA-NEPAD Africa Skills Revolution emphasize digital and green skills,

FIGURE 2.3

Access to quality work increases with age for those with upper- and post-secondary education

Access to regular or better jobs by age and education level



Source: Stoelinga et al., *Secondary Education in Africa: Transitions to Work Aggregate Trends 2015-2024,* (Toronto: Mastercard Foundation, 2026) using harmonised national labour force and household survey microdata. Model-adjusted estimates from pooled equal country-weighted regressions; adjusted for country, sex, and residence. Bands are HC1 95% confidence intervals.

Note: Stoelinga et al. (2026) define quality of work using harmonised labour-force and household survey microdata to construct a six-point job-quality index for people aged 15–35 who are no longer in education. They organize findings by three categories: Not employed covers young people who are unemployed or inactive; Low-quality work covers unpaid family or subsistence work, own-account or vulnerable informal work, and informal, casual or low-skill wage work. Quality work (regular-or-better work) covers regular wage or employer work and, at the highest rung, formal or protected employment with markers such as contracts, benefits, pensions, tax registration or social security.

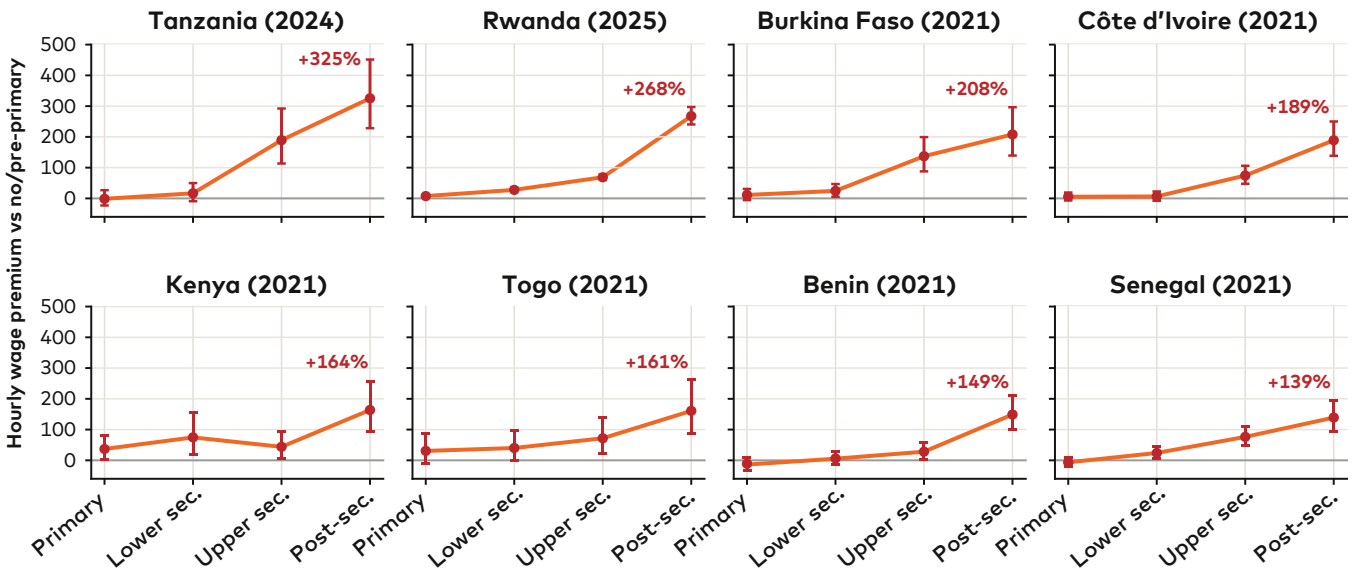
entrepreneurship, adaptability, problem-solving, business literacy, and the capacity to continue learning.[15] Their perspectives reinforce a central message of this report: secondary education should equip young people not simply to enter work, but to exercise agency as they navigate changing opportunities, constraints, and livelihood pathways over time.



FIGURE 2.4

Wage premiums increase by level of education achieved

Estimated returns to education by country (ages 15-35)



Source: Stoelinga et al., *Secondary Education in Africa: Transitions to Work Aggregate Trends 2015-2024*, (2026) using harmonised national labour force and household survey microdata with usable wage measures.

Notes: Weighted country-specific log-hourly-wage regressions. Coefficients are wage premiums relative to none/pre-primary/non-formal education. Controls: age, age squared, gender, and available urban/rural/location dummies. Coefficients with base or education n < 30 are suppressed; countries with fewer than two plottable coefficients are omitted; Niger and Nigeria excluded after data-quality review.





2.2 Most young people are employed, but a fifth are not in employment, education, or training

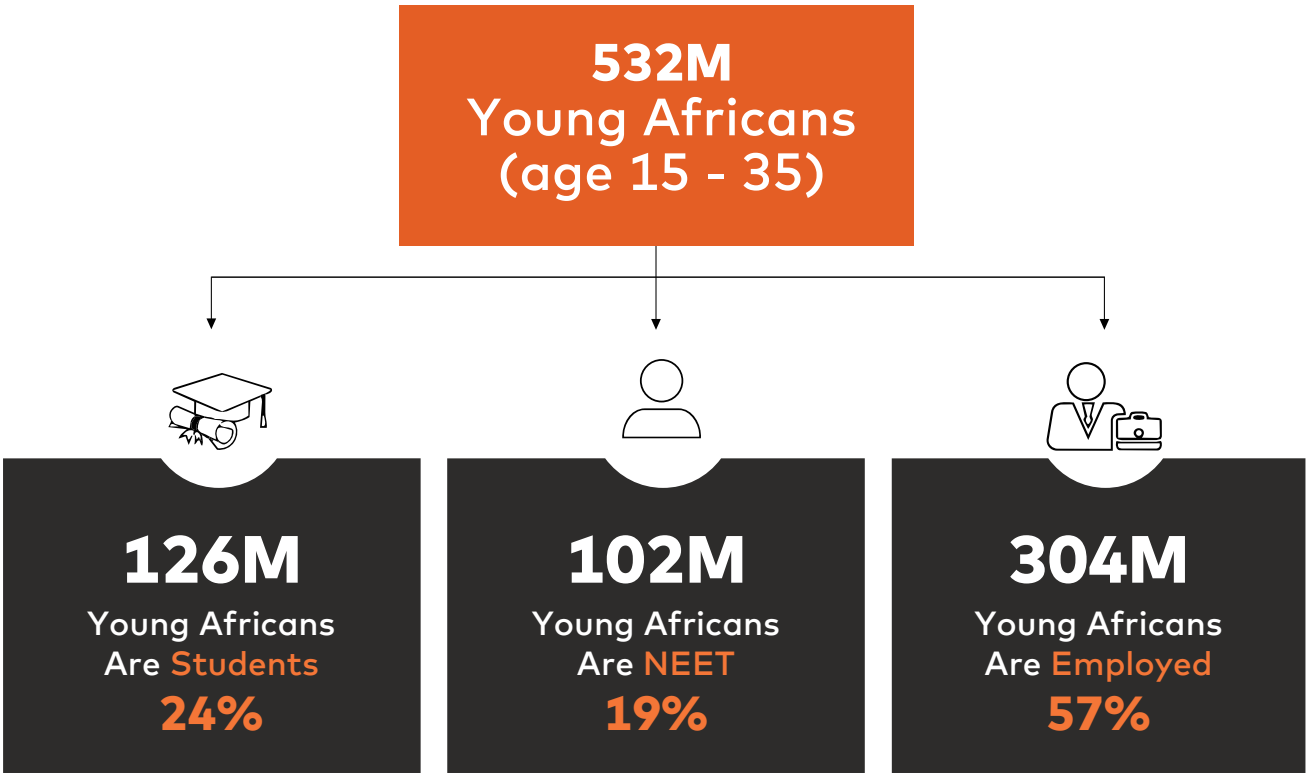
Most young people in Africa are working, but their work does not always lead to higher incomes or better living standards. Estimates suggest that 57 percent of African young people were employed in 2025, equivalent to about 304 million young people.[16] A further 24 percent (126 million) were enrolled in education, while 19 percent (102 million) were classified as not in employment, education, or training (NEET) (Figure 2.5).[17] Self-employment dominates labour market participation in sub-Saharan Africa, accounting for an estimated 78 percent of total employment.[18] This aligns with available data on young people across 18 countries in sub-Saharan Africa, where 75 percent of young adults aged 25 to 29 were self-employed or held a temporary paid job.[19]

Young women continue to face disproportionate risks of exclusion from both education and labour markets across Africa. In 2022, estimates from the International Labour Organization (ILO) indicated that young women make up approximately two thirds of the 72 million young people in Africa not in employment, education, or training (NEET).[20] More recent estimates from the World Data Lab suggest that young women account for approximately 61 percent of all NEET young people across the continent, equivalent to roughly 62 million young women (Figure 2.6).[21] Together, these findings underscore the extent to which educational and labour market exclusion remain gendered, with young women facing greater barriers to accessing productive work opportunities than young men.

More than four in five young African women who are NEET are classified as economically inactive rather than unemployed, suggesting that gender barriers to labour force participation extend beyond the availability of jobs.[22] Unpaid care responsibilities, unequal access to productive assets, discriminatory social norms, and occupational segregation are the key drivers of these disparities. In sub-Saharan Africa,

FIGURE 2.5

Nearly one in five young Africans is not in employment, education, or training



Source: Reproduced from World Data Lab et al., *Africa Youth Employment Outlook Report* (2026).

28 percent of women outside the labour force cite caregiving responsibilities as their primary reason for nonparticipation, compared with just three percent of men.[23] Across the seven sub-Saharan African countries examined in a recent ILO study, young women (aged 15 to 29) consistently recorded both higher NEET rates and lower employment rates than young men, with the gender gap particularly high in Ethiopia and still significant in Nigeria, Senegal, and Uganda.[24] Persistent gender gaps in employment outcomes must also be interpreted in light of how productive work is defined and measured, particularly where women are concentrated in unpaid and subsistence activities. Higher NEET rates for girls underscore that increases in access and completion of secondary education by girls are not translating into comparable increases in transitions to the labour force.

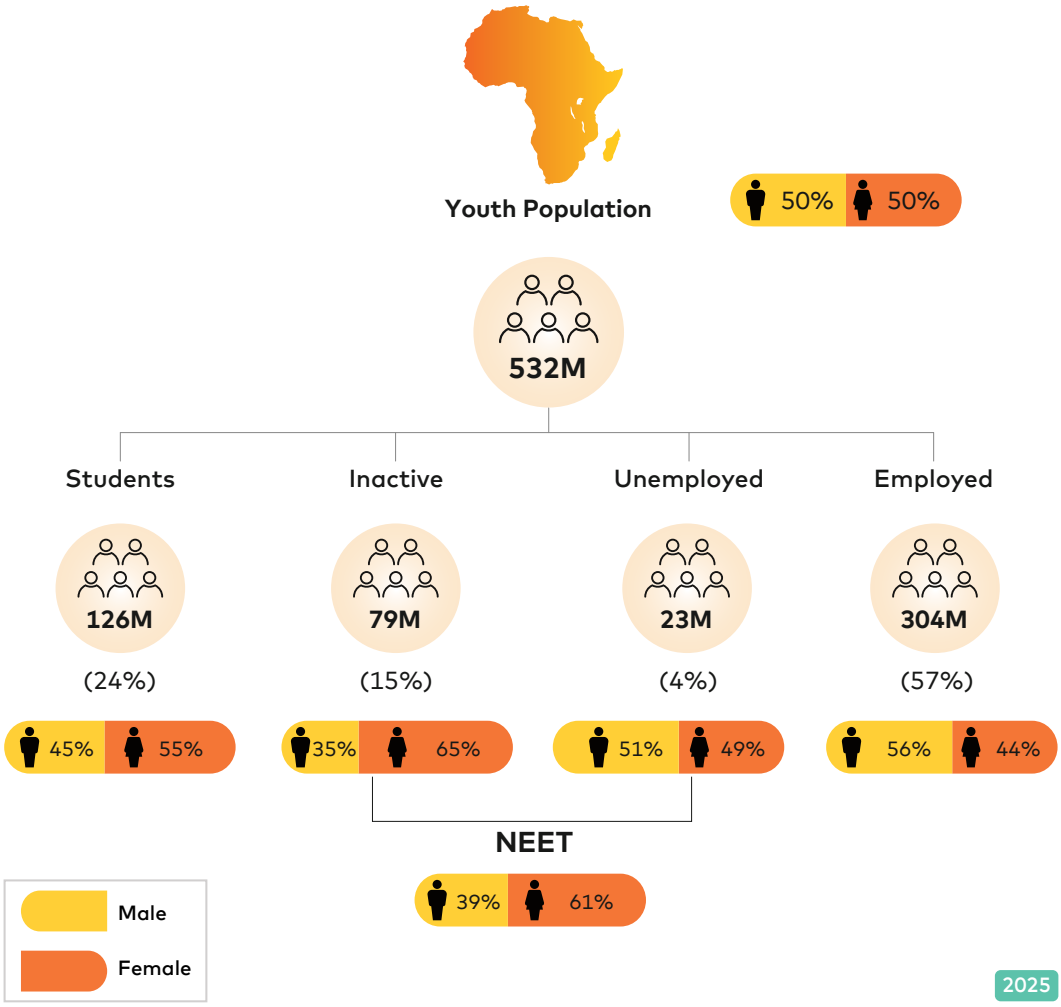
The gendered patterns of NEET often intersect with disability and location, creating multiple reinforcing barriers to successful transitions from education into work. Young people with disabilities face particularly high risks of exclusion: in Ethiopia, Nigeria, Rwanda, and Senegal, they are two to three times more likely to be NEET than their peers without disabilities, and these disparities widened during the COVID-19 pandemic.[25] Location also matters, with NEET rates higher in rural areas in some countries, and in urban areas in others.[26]

62 million

Estimates from 2026 by the World Data Lab suggest that young women account for approximately 61 percent of all NEET young people across the continent, equivalent to roughly 62 million young women (Figure 2.6).

FIGURE 2.6

Young women account for the majority of young people not in employment, education, or training



Source: Reproduced from World Data Lab et al., *Africa Youth Employment Outlook Report* (2026).

Prolonged disengagement from both education and employment can reinforce vulnerability across the transition from adolescence into adulthood. Young people who experience educational disruption, weak school-to-work transitions, or extended periods outside learning and/or work often miss opportunities to build skills, gain work experience, and accumulate the networks and earnings that support long-term mobility. Research suggests that difficulties establishing an early foothold in the labour market can have lasting consequences for employment quality, earnings growth, and future labour force participation.[28]

Education can improve access to higher-productivity employment, but educational attainment alone is often insufficient to overcome the structural barriers that shape young people's transitions into work. Gender, disability, location, and displacement can interact to influence participation in education, training, and employment, limiting access to both current labour market opportunities and emerging opportunities in the digital, creative, and green sectors, which are expected to expand by 2040.[29] The economic costs of exclusion are substantial. World Data Lab estimates that achieving gender parity in NEET rates could result in 23 million fewer young women being NEET, 15 million more young women in employment, and approximately

$172 billion in additional economic activity.[30] These findings underscore the importance of strengthening education-to-work transition systems while addressing the structural and societal barriers that disconnect young people from learning, skills development, and access to quality employment opportunities.



> "Most young people enter the workforce through informal, low-productivity work. Without intervention, this starting point tends to become a long-term trap, limiting skill development, earnings growth, and upward mobility."
>
> **African Center for Economic Transformation**[27]



2.3 The structure of African economies is shifting as services rise and agriculture declines

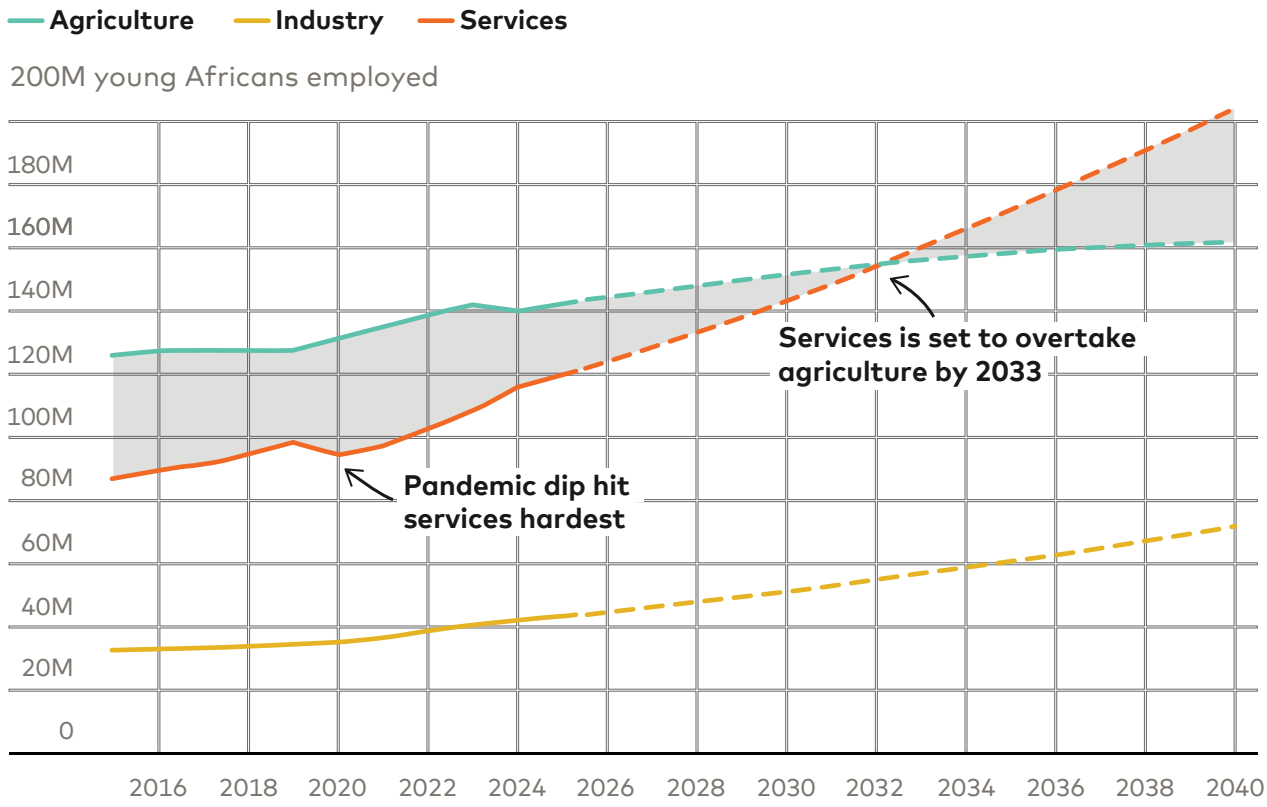
Employment in agriculture in Africa is slowly declining, while employment in services is growing, driven by urbanization, informal urban commerce, and small enterprises.[31] Structural change and economic growth are gradually shifting the sectors and platforms in which young people will find, or create their own, jobs. By 2033, services are projected to overtake agriculture as Africa's largest source of employment (Figure 2.7); by 2040, 11 African countries will have transitioned from agriculture to services as the primary sector for employment among young people (Figure 2.8).

At the same time, young men are more likely to work in better-paying service and industrial roles, while young women remain disproportionately concentrated in lower-paying and more precarious agricultural and care work (Section 2.6). Figure 2.9 demonstrates the steady shift from agriculture into services from 2010 through 2025 for both men and women.[32] While participation in the services sector has grown for all young people, women are less likely than men to work in both services and industry sectors. Indeed, an analysis of employment across Africa found that, in addition to facing lower labour force participation and higher unemployment rates, women also earn less than men.[33] Gender inequality, therefore, shapes not only whether young women access employment but also the types and quality of opportunities available to them.

Educational attainment is becoming increasingly important for accessing higher-productivity sectors, yet expanding education alone has not resolved the employment challenges facing African young people. Higher levels of education and skills are associated with greater productivity and higher earnings, when demand for such skills exists in the broader economy.[35] However, participation in post-secondary education remains limited, skills mismatches persist, and the growth of higher-productivity sectors has not kept pace with the rising number of educated young people

FIGURE 2.7

Services are projected to overtake agriculture as the largest source of youth employment



Source: Reproduced from World Data Lab et al., *Africa Youth Employment Outlook Report* (2026).

entering the labour market. As a result, many young people continue to struggle to secure the formal-sector opportunities they associate with educational attainment.[36]

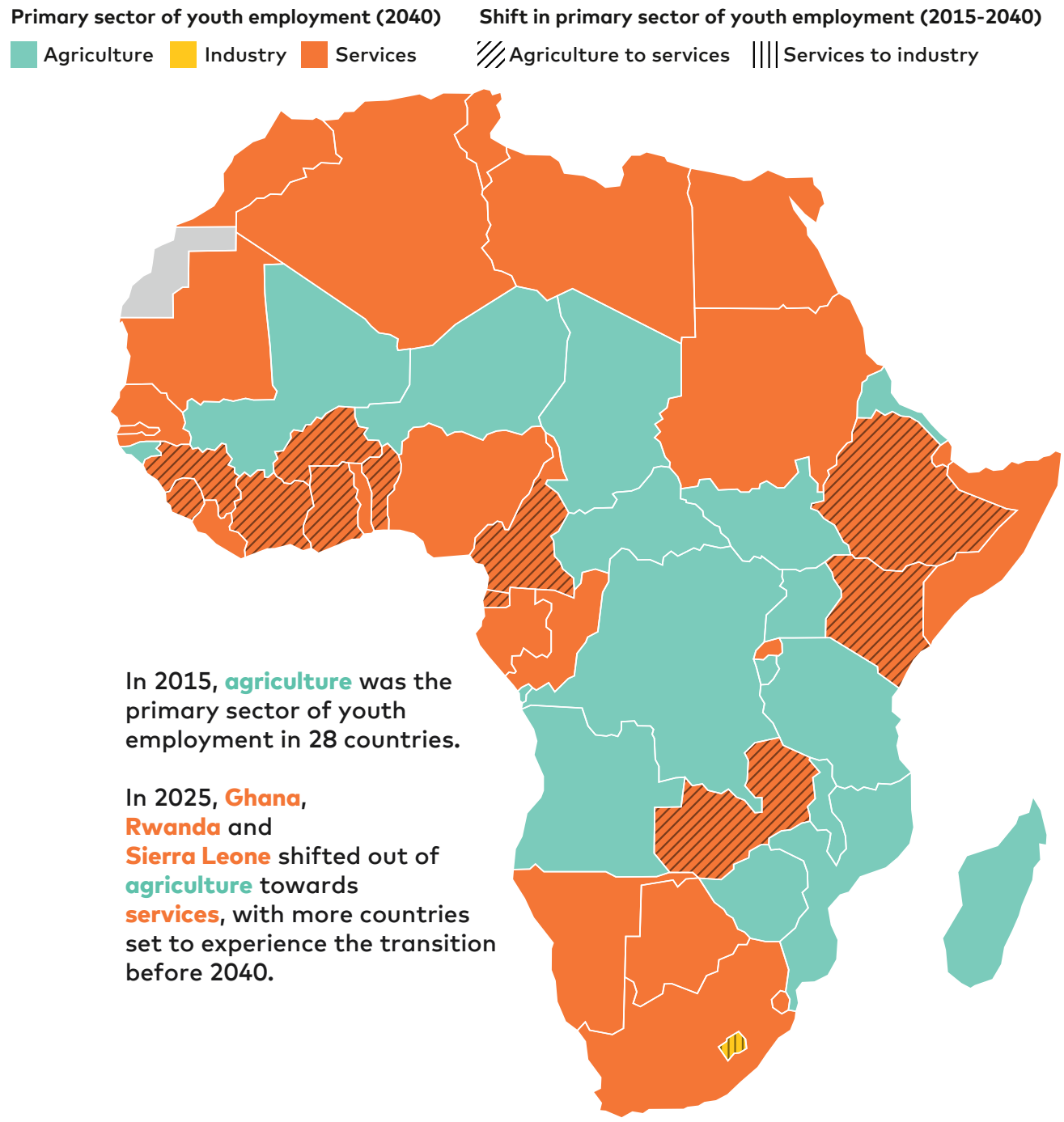
By 2033, services are projected to overtake agriculture as Africa's largest source of employment (Figure 2.7); by 2040, 11 African countries will have transitioned from agriculture to services as the primary sector for employment among young people (Figure 2.8).

Alongside the decline in agricultural employment, Africa has become the world's fastest urbanizing region, with its urban population expected to double from 700 million to 1.4 billion by 2050.[37] This shift is creating access to opportunities for youth employment in the services sector, as urbanization fuels increasing consumer demand. Growth in urban youth employment is occurring in "industries without smokestacks," including tourism, horticulture, agricultural processing, and related services that can absorb young people even in the absence of large-scale manufacturing growth.[38] Agriculture remains an important sector, however, nearly 15 percent of youth employment in agriculture is in urban areas.[39]

While urbanization is concentrated in the continent's largest cities, some regional development strategies call for policies to support the growth of jobs in secondary and tertiary urban hubs. Policies to foster the growth of industry and services in these smaller cities could help ensure the shift away from agriculture benefits young people nationwide, especially those coming

FIGURE 2.8

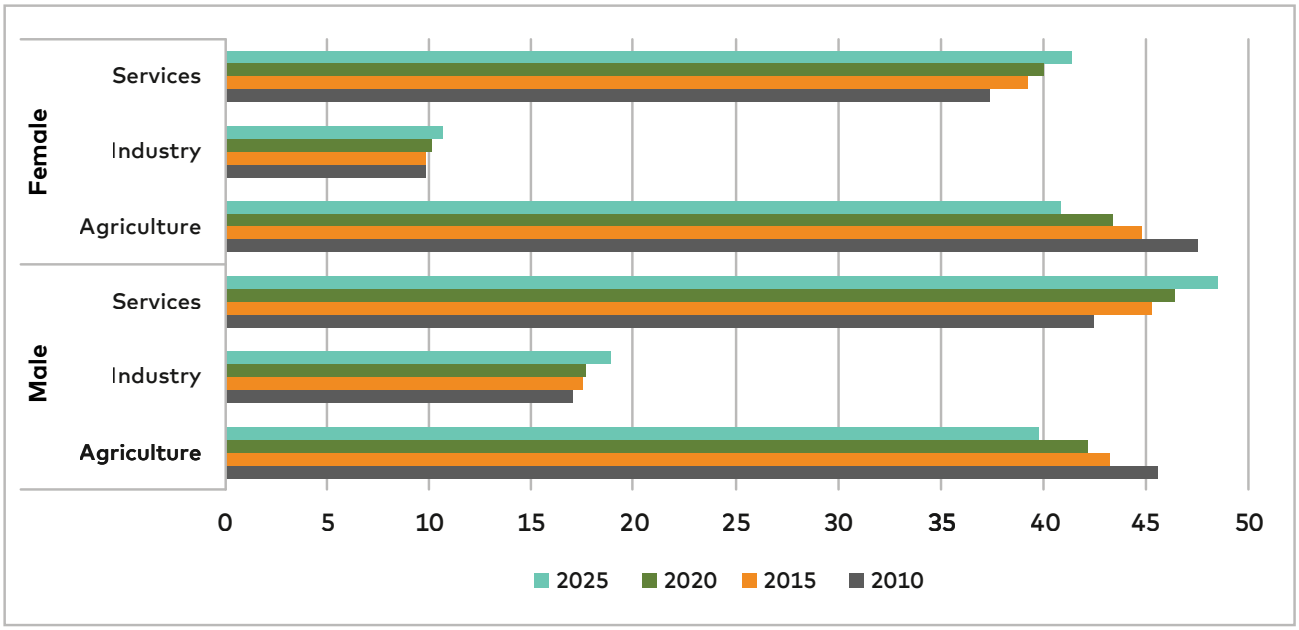
The main source of youth employment may shift from agriculture to services in 11 countries



Source: Reproduced from World Data Lab et al., *Africa Youth Employment Outlook Report* (2026).

FIGURE 2.9

Young women are less likely than young men to work in services and industry sectors



Source: Reproduced from African Center for Economic Transformation, *Secondary Education in Africa: The Changing Nature of Work in Africa* (2026) drawing on World Bank World Development Indicators.[34]

from rural areas far from capital cities.[40] Wages in major cities can be as much as double those in rural areas, and urban workers work on average nearly one-third more hours.[41] Yet urban jobs remain precarious and are mostly informal.[42] Further, over half of Africa's urban residents live in slums,[43] where there are fewer schools relative to non-slum areas. Compounding learners' vulnerability, schools in informal settlements have fewer resources and learning materials than those in other parts of the city.[44]





2.4 Entrepreneurship and self-employment account for half of the employment opportunities in Africa

Self-employment and entrepreneurship will remain central to the livelihoods of young people across Africa. Unlike many other regions where young people are gradually moving from self-employment into wage employment, self-employment among African young people has increased slightly over time, partly reflecting rapid demographic growth and limited expansion of formal employment opportunities.[45] ILO evidence further suggests that self-employment accounts for roughly half of the total employment in sub-Saharan Africa, while micro-enterprises contribute an additional one-third, highlighting the central role that small-scale economic activity plays in shaping livelihoods across the region.[46] These patterns shift emphasis toward how to make youth entrepreneurship more productive, resilient, and capable of supporting fulfilling livelihoods.

For many young people, entrepreneurship is not a distinct destination but one component of complex and non-linear transitions to livelihoods and work. Rather than functioning as a straightforward substitute for wage employment, entrepreneurship often forms part of a broader portfolio of livelihood strategies that young people in Africa use to generate income, gain experience, and respond to changing economic circumstances.[47] Evidence from the Human Sciences Research Council's *Imprint of Education* longitudinal study of secondary school and tertiary alumni from the Mastercard Foundation Scholars Program in Africa suggests that transitions into livelihoods are rarely linear.[48] Most surveyed alumni followed multidimensional pathways after completing their studies, with young people frequently moving between education, wage employment, entrepreneurship, and periods of unemployment over time. Consistent with this pattern, 31 percent of secondary school alumni and 66 percent of tertiary education alumni followed multidimensional pathways, while only a very small minority (two percent and one percent,

respectively) moved directly from education into entrepreneurship alone.[49]

The widespread participation of young people in entrepreneurship does not necessarily translate into productive or secure livelihoods. While self-employment and enterprise creation provide important entry points into economic participation, many youth-led enterprises operate in highly informal segments of the economy characterised by limited incomes and growth prospects.[50] Young entrepreneurs frequently face barriers, including constrained access to finance, business development services, digital infrastructure, formal markets, and pathways to business formalization.[51] These challenges are often compounded for young women as they have unequal access to productive assets, face mobility constraints, and are tasked with unpaid care responsibilities.

Self-employment and entrepreneurship will remain central to the livelihoods of young people across Africa.

Many youth-led enterprises also remain highly vulnerable to economic and climate-related shocks and conflict, with limited mechanisms to support resilience and recovery. This vulnerability is becoming more consequential as conflict and climate, economic, and other shocks become increasingly frequent and overlapping across the continent.[52] Young people often lack an understanding of the impacts of climate change and practices that can help them and their businesses adapt.[53] Additionally, small businesses often lack access to the financial buffers, social protection systems, and risk-management tools needed to withstand disruptions, while governments' ability to provide protective support is frequently constrained by other fiscal pressures.[54] Addressing these challenges requires both crisis-responsive training for young entrepreneurs and a stronger ecosystem for building resilient and meaningful livelihoods.

Strengthening the productivity and resilience of self-employment and entrepreneurial opportunities is therefore likely to be as important as expanding access to work itself. Evidence from several African countries suggests that targeted investments in entrepreneurship training, finance, business development support, social protection, and pathways to formalization can improve enterprise sustainability and productivity. Rwanda, for example, has supported more than 31,000 households to launch businesses through programs that combine entrepreneurship training with seed capital.[55] Ghana's *National Entrepreneurship and Innovation Programme* provides entrepreneurs with training, mentorship, and access to finance to support the creation of thousands of new businesses annually.[56] As African economies shift toward services, improving young people's livelihoods will depend on expanding access to higher-productivity opportunities in sectors such as retail and digital services, creative industries, and the green economy.





2.5 Global and continental trends create new opportunities as well as risks for young people

While most jobs for young people in Africa will remain informal for the foreseeable future, key global trends that shape the nature of work present new opportunities, as well as risks. These global trends include demographic growth in Africa, which contrasts with declining populations in many other regions, the rise of AI, and intensifying climate change. Meanwhile, these changes are occurring against a backdrop of fiscal strain for many African governments that is compounded by growing indebtedness, as well as conflict in many parts of the continent. The ability of young people and the societies they live in to meet these challenges while capturing the emerging opportunities they present, will depend on their ability to strengthen a critical resource: human capital. Meanwhile, governments can provide crucial support for job creation through targeted policies and incentives for business expansion.

10 million

Each year, more than 10 million young people enter the African labour market, yet current economic trajectories are projected to create only three million formal jobs each year.

Demographic growth

Rapid demographic growth is the most significant social force shaping work across Africa. Since 2020, Africa's population has increased by over 200 million people.[57] With a population of nearly 1.6 billion, it is the world's fastest-growing and youngest continent, with 60 percent of its population under 25.[58] By 2035, there will be more young Africans entering the workforce than in the rest of the world combined.[59] Each year, more

than 10 million young people enter the African labour market, yet current economic trajectories are projected to create only three million formal jobs each year.[60] Africa's population is thus growing far faster than the number of formal jobs being created, leaving a growing number of young people working in largely low-productivity and precarious informal jobs, creating their own livelihoods, or marginalized in unpaid work, often at home or in domestic agriculture.

Africa's growing youth population presents an opportunity to capture a demographic dividend that could drive economic growth and prosperity. This dividend will only be possible if countries invest in human capital by supporting the development of skills and competencies that boost young people's productivity. These investments can also reduce unsustainable population growth by placing more educational and employment opportunities, as well as greater power over personal decisions, in the hands of young people, especially young women.

Increasing Migration Due to Push and Pull Factors

Africa's demographic growth also makes it a crucial source of workers in a world where some regions are experiencing declining populations and rising labour demand. While this demand creates a pull factor for the migration of talent from the continent, it also offers opportunities for young people to gain valuable experience and to access employment abroad. Approximately 25.1 million Africans live in another African country, and 20.7 million more live outside the continent as of 2024 (Figure 2.10).[61] Half of all Africans have considered leaving their country due to a lack of jobs in their region.[62] Migrants often make the difficult choice to leave their countries to pursue greater opportunities, illustrating the "push" factor that also drives these flows.[63]

African nations are increasingly entering into bilateral labour agreements with countries in the EU and the Middle East to regularize migration and address skills shortages in destination countries, while providing opportunities for African young people. The 2023 Southern African Development Community Protocol on Employment and Labour, signed by Angola, Eswatini, Malawi, and other member states, establishes legal frameworks for managing labour migration and guaranteeing that migrant workers can carry their social security benefits across borders.[64] The United Kingdom has established a partnership with Kenya to support temporary agricultural jobs for young people, while African TVET institutions are developing specialized training programs to meet this demand, in partnership with Germany and other countries.[65] As these opportunities expand, education and training systems will need to prepare young people with the skills and portable qualifications they need to enable them to effectively navigate regional and global labour markets.

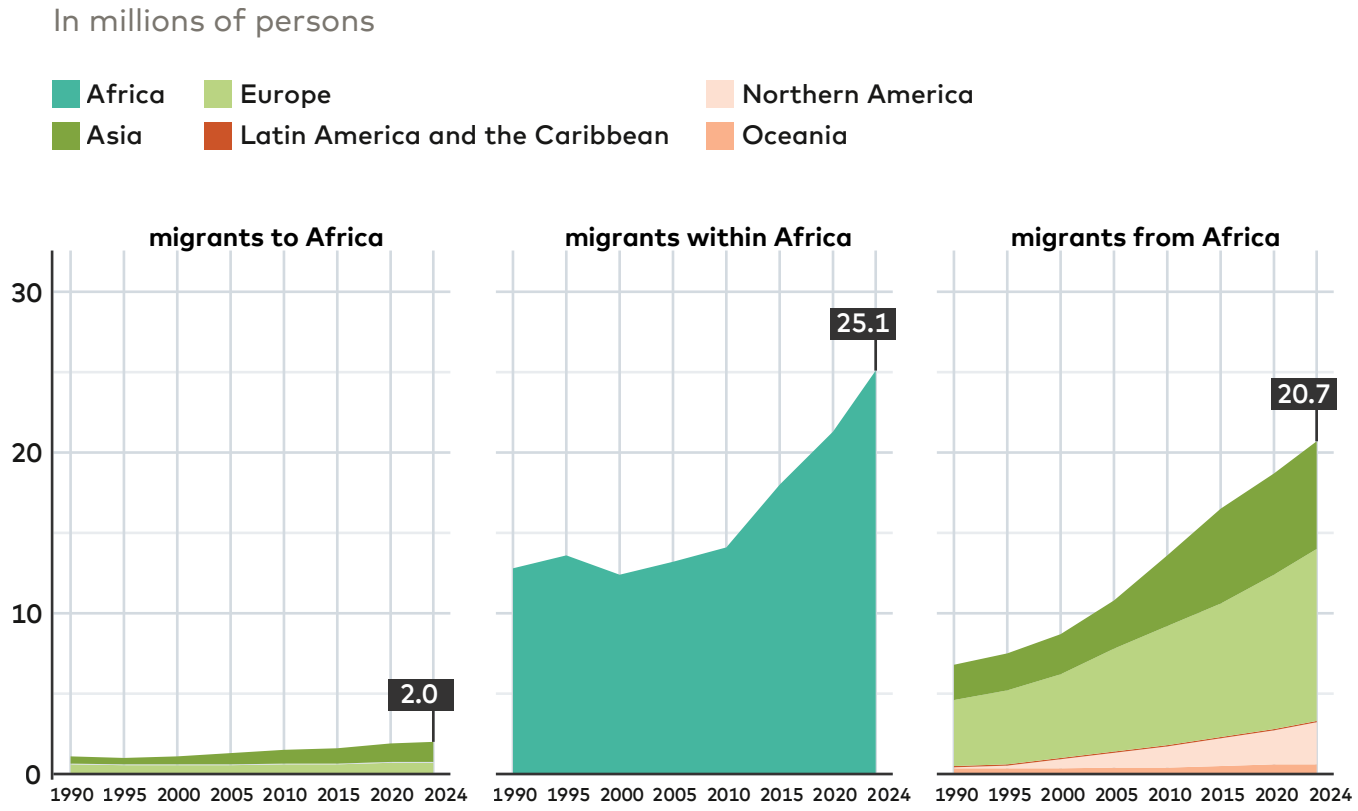
Artificial Intelligence and Digitization of Work

The rapid rise of AI is profoundly transforming the nature of work, with nearly every occupation potentially becoming AI-enabled, helping to generate access to new jobs and shift roles within existing jobs. AI can positively shape work in Africa through three related channels: 1) by creating new livelihoods that increase demand for digitally skilled workers who can use digital tools, solutions, platforms, and services; 2) by expanding existing roles and making workers more productive; and 3) by enabling career transitions across professional boundaries, for example, from administrative work into customer service or technical positions.[66] In sub-Saharan Africa, 39 percent of businesses expect AI to transform their operations, which is lower than the global rate of 86 percent but still significant.[67] AI's potential to generate substantial productivity gains across sectors could spur economic growth and job creation.[68] Because AI requires internet access and digital infrastructure, this appears consistent with the findings of two World Bank empirical studies that demonstrate internet availability has a clear, positive impact on jobs and welfare in Africa.[69]

At the same time, AI is likely to remove some jobs, especially in urban, entry-level positions that provide a foothold for young, educated job entrants. The types of jobs most likely to be affected are concentrated in the service

FIGURE 2.10

Migration within and beyond Africa has grown rapidly since 2010



Source: Reproduced from Biehler et al., "Mapping African Migration," Stiftung Wissenschaft und Politik -Working Paper 03, (2025) drawing on United Nations Department of Economic and Social Affairs, Population Division, International Migrant Stock 2024. In alignment with CC BY 4.0 this figure has been modified from its original format to align with the design specifications of this report.

Note: 'Migrants to Africa' refers to migrants residing in Africa who were born in or hold citizenship of another world region (e.g. Europe or Asia). 'Migrants within Africa' refers to migrants born in, or holding citizenship of, an African country who reside outside their country of origin but remain within the region. 'Migrants from Africa' refers to people born in, or holding citizenship of, an African country who reside outside the region (e.g., in Europe or North America).

economies of growing cities and towns and include clerical workers, accountants, and customer support workers.[70] At the same time, the vast majority of young people who work in the informal sector in agriculture and related value chains are less susceptible to automation and less likely to see their jobs eliminated.[71] AI, however, may impact these workers' livelihoods through its effects on prices, productivity, and ways of working. Overall, AI's net impact on employment in Africa remains uncertain and points to the importance of investing in the human capital needed to capitalize on these trends and increase resilience and flexibility, a topic further addressed in Chapter 3.

Growing digitization and automation of work, accelerated by AI, continue to alter the landscape of work, but those with the right skills can benefit. AI-empowered automation is now affecting a wider range of occupations, including white-collar sectors and knowledge services, yet it has proven less disruptive than expected due to investments in workforce upskilling in Africa.[72] Growing automation in China, including the use of 3D printers and robots, has lowered China's production costs. This, in turn, makes it less likely that manufacturing jobs will migrate on a large scale to Africa to capitalize on lower costs of labour, as some had predicted.[73] Young people with the skills to serve as managers and service

providers for digital processes and technologies, however, stand to benefit from new or enhanced employment opportunities.

39 percent

In sub-Saharan Africa, 39 percent of businesses expect AI to transform their operations, which is lower than the global rate of 86 percent but still significant.

Climate Change

Africa is the continent most vulnerable to climate change.[74] Intensifying climate change is taking a growing toll on work and workers in Africa, with 58 percent of employment concentrated in sectors that depend directly on healthy ecosystems.[75] Climate disruptions, including extreme weather events, temperature increases, water scarcity, and floods, directly threaten food security and livelihoods. This is particularly true for workers in exposed sectors such as agriculture, fisheries, livestock, hydropower, infrastructure, and tourism. The Intergovernmental Panel on Climate Change has estimated that crop yields in Africa could decline by 10 to 33 percent by 2050 under current warming trends, depending on the adaptation measures adopted.[76] In Uganda, for example, rising temperatures could cripple the coffee industry, which supports more than 12 million workers.[77] Commercial fish catches in West Africa are expected to decline by half by the 2050s.[78]

African countries are losing two to five percent of GDP annually due to climate-related pressures, reducing the funding available for building human capital and other investments.[79] Many countries on the continent are diverting up to nine percent of their budgets to respond to climate crises,[80] creating fiscal pressures that can negatively impact spending on education and other public goods. Education and climate-specific skills can increase the ability of populations to adapt to the impacts of climate change through the adoption of climate-smart practices in agriculture, water conservation, and disaster preparedness.

The impacts of climate change are borne disproportionately by young people and vulnerable populations. Individuals with lower levels of education and income are more likely to lack the knowledge and resources to adapt to climate-change-related disruptions.[81] Climate pressures can compound vulnerability, particularly in the growing season, when children may be removed from school to support income generation. Undernutrition during a child's early years, associated with low harvests or climate-related interruptions to the food supply, can irreparably impair cognitive development and future learning. Women and girls, persons with disabilities, Indigenous communities, and poor and rural populations can face additional barriers to the information, resources, and services needed to adapt.[82] These risks underscore the importance of preparing young people, particularly those already marginalized, with the appropriate knowledge and skills to adapt to climate change.

African countries are losing two to five percent of GDP annually due to climate-related pressures, reducing the funding available for building human capital and other investments.

At the same time, secondary education, especially for girls, has been found to significantly increase an individual's and society's resilience to climate change. Evidence shows that countries that have invested more strongly in girls' education have suffered far fewer losses from droughts and floods than those with lower levels of girls' education.[83] Education can also help communities become more productive in the face of climate stressors. In Zambia, young women who completed school with CAMFED's support were given specialized training in climate-smart agriculture and then became Agriculture Guides who transferred acquired knowledge and practices to 8,500

women through demonstration farms, including use of water conservation and drought-resistant crops.[84] Education can empower young people as a voice for greater climate action within communities and at the policy level.[85] Access to education increases awareness of climate change as well as measures to improve adaptation for individuals, families, and communities, including adopting climate-smart agricultural practices and livelihoods, accessing resources in times of crisis, and the ability to move and/or pursue alternative sources of employment.





2.6 New and diverse economic sectors and pathways offer potential for youth employment

Africa's changing economies are creating new pathways for youth employment and entrepreneurship, but accessing these opportunities will depend on having the right skills. Within the broader context of global trends such as demographic change, the rise of AI, and intensifying climate change, several economic sectors and pathways in Africa offer viable routes for youth employment. The growth rates of these sectors and the nature of the work they offer vary significantly across and within countries. Nevertheless, evidence indicates that sectors such as information and communications technology (ICT) and digital work, green jobs, and services in the retail, hospitality, care, and creative industries offer potential for youth employment and entrepreneurship, conditional on young people possessing the skills needed to access these opportunities.

Information and Communications Technology, Digital Services, and Gig Work

The COVID-19 pandemic accelerated the adoption of digital platforms for employment, education, and social activity, creating new opportunities for gig work, entrepreneurship, content creation, and connection to wider markets. Digital work and retail trading platforms continue to proliferate across Africa, with hundreds of unique platforms on the continent.[86] Gig work, or one-time task- or project-based jobs that individuals can take on facilitated by digital platforms, can enhance livelihoods for large numbers of young people and informal-sector workers. By standardizing search processes and payment systems and offering access to broader markets, digital platforms can reduce transaction costs and raise productivity and returns for workers, thereby making work more secure and remunerative, if not formal.[87]

Spurred by growing internet penetration, smartphone adoption, advances in AI, rapid

urbanization, and a demand for flexible employment, Africa's gig economy is growing rapidly, especially among young people, women, and urban workers.[88] A study in Nigeria, Ghana, South Africa, Uganda, and Kenya found that online retailing was the most common source of informal gig work for young people and included online sales of mobile airtime, SIM cards and data, mobile money services, and retail goods and services. Women were more likely to be engaged in this work, given the flexibility it offers for schooling, family care, and other responsibilities, while not necessarily reducing women's care burdens.[89] Yet young women in East and Southern Africa also have lower levels of internet access than young men, restricting their ability to seize the opportunities that digital platforms provide (Chapter 8).[90] For those with access, digital platforms offer a venue for efficiently marketing services. Kobo 360, an African e-logistics platform, allows truck drivers and fleet operators in Ghana, Kenya, Nigeria, Togo, and Uganda to find work, access financing to purchase vehicles, and qualify for working capital, in part based on digital records of their past work and sales.[91] Some tasks that offered livelihoods in the past through digital platforms, such as writing and aspects of graphic design, are now being completed by AI, reducing demand for these skills.[92]

Digital platforms can help young people with disabilities access labour markets by bypassing physical barriers, allowing them to compete on merit rather than physical or sensory ability.[93] These platforms also provide flexible forms of communication that can empower young people with speech or hearing impairments, and may help young people transition beyond gig work into more formal roles in digital marketing, social commerce, or retail sales. Yet residents of rural areas and young people with disabilities face barriers to accessing the technologies and devices needed to make use of digital jobs platforms (Chapter 8). Realizing this potential will require addressing the accessibility barriers, including to young people with disabilities, that still limit participation.[94]

The rise of certain global platforms has extracted value from gig workers and led to calls for greater government regulation to ensure that these platforms protect and benefit those who use them to sell their services and products. In other regions, conditions for gig workers have improved after the passage of laws designating these workers as employees of the digital platforms. For young people to fully benefit from digital platforms, they will require internet access, digital literacy, and relevant technical skills such as coding skills, familiarity with using AI tools, and data analysis, alongside broader transferable skills.

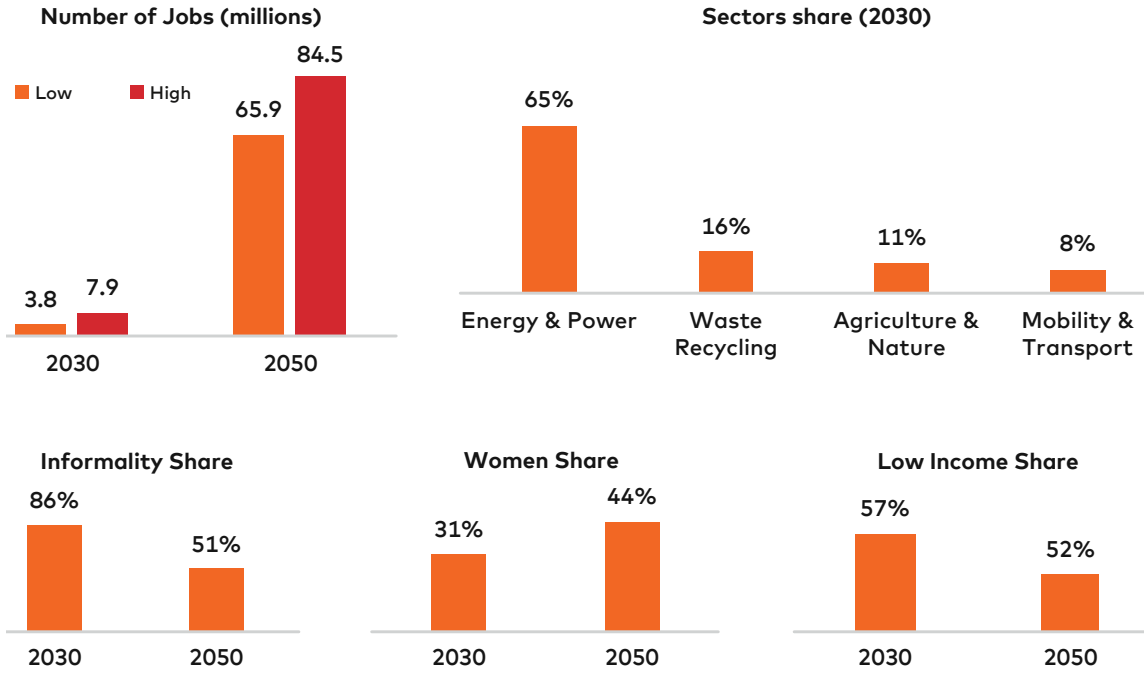
Green Jobs

As African economies transition away from fossil fuels toward renewable energy and climate-smart agriculture, new "green jobs"[95] are being created. Green infrastructure generates more employment than equivalent spending on fossil fuels.[96] A recent study estimated that three million direct jobs could be created across Africa in green subsectors, including solar energy and climate-smart agriculture, with 60 percent of these jobs being technical or skilled in nature (Figure 2.11).[97] Yet the speed of job creation varies across contexts and depends on country-level policy and implementation to support this green transition.[98] Uganda's Green Growth Development Strategy targets more than four million green jobs by 2030. In Ethiopia, green jobs accounted for an estimated 10.6 percent of existing national employment, with another 26 percent classified as partially green. In South Africa, green jobs accounted for more than 10 percent of employment.[99] Governments such as Rwanda, Ghana, Senegal, Ethiopia, Morocco, Kenya, and South Africa are developing national Green Jobs Strategies to foster green job creation and ensure young people have the skills needed to benefit from the transition to a less carbon-intensive economy.

Green jobs in Africa range from low-paid waste collection and recycling to semi-skilled climate-smart agriculture and eco-tourism, to highly skilled jobs in renewable energy, green manufacturing, and climate-related professional services. An analysis of job postings across ten African countries identified more than one million active green job listings, highlighting rising demand for green skills.[100] Yet a study across four

FIGURE 2.11

Green jobs are projected to be concentrated in energy and power by 2030



Source: Reproduced from African Center for Economic Transformation, *Secondary Education in Africa: The Changing Nature of Work in Africa* (2026) based on data from FSD Africa and Shortlist, *Forecasting Green Jobs in Africa: Main Report Final,* (July 2024)

Note: Number of jobs (millions), skill level, and sector share

African countries found that while Africa's green transition offers real opportunities for youth employment, green jobs are not being created at sufficient scale or quality needed, and that young people do not always have knowledge of these options.[101] The time frame by which green jobs may become available could be extended if African countries delay reducing their greenhouse gases. Currently, many have set targets for significant reductions by 2030. South Africa and Nigeria have committed to achieving fully net-zero emissions by 2050 and 2060, respectively. Further, education and training systems have not yet adapted to teaching the skills needed to access many of these jobs, as explored in Chapter 3.

> *"Done right, the green transition could offer young Africans a growing and resilient employment base. Turning the green transition into a genuine opportunity for young people, instead of another source of inequality, requires public policy to embed environmental stewardship, green apprenticeships, and dedicated career guidance into the core of secondary education."* — **African Centre for Economic Transformation, Ghana**

Some evidence shows that young people in Africa are enthusiastic about green job opportunities once they become aware of them. Across Uganda, Ghana, South Africa, and Ethiopia,[102] awareness of green job opportunities varied significantly. As awareness increased, young people expressed positive attitudes and interest in these opportunities, yet they emphasized the need for pathways into green jobs that are economically viable, socially valued, and supported by skills training. Additionally, young people in Uganda and Ghana were particularly interested in practical activities to restore the environment while earning

a livelihood. In Uganda, nearly 600 individuals were surveyed, and young people were most interested in organic agriculture (51 percent), recycling (34 percent), and tree planting (20 percent).[103] Young people in Mozambique and Rwanda additionally reported using green technologies and climate-smart approaches to create enterprises that address local challenges.[104]

Green entrepreneurship is a growing subsector in many African countries, with young green entrepreneurs creating access to jobs that can help drive more sustainable development.[105] Young African entrepreneurs have developed growing companies that offer solar home systems, water-intelligence platforms for homes, climate-smart hydroponics, and ecological packaging.[106] Governments can support the growth of sustainable businesses and green job creation by removing regulatory and trade barriers, providing incentives for green entrepreneurship, and supporting skills training.

Services – Retail, Hospitality, Care, and Creative Industries

As employment in agriculture slowly declines and urbanization increases, retail, hospitality, care, and creative services are absorbing a growing share of working young people. Services already account for 46 percent of employment in Africa, making the quality, productivity, and accessibility of these jobs increasingly important to young people's livelihoods.[107]

Retail, Hospitality, and the Care Economy

Retail trade in goods and services, largely in the informal economy, is a pathway to livelihoods for many young people, but it can become a trap as many of these jobs are characterised by low earnings, limited skills growth, and weak upward mobility. Retail work may include street vending, micro, small, and medium size enterprise development, repair services, and both low- and higher-end commercial retail jobs. Retail trade and motor repair constitute the largest subsector in the service economy, employing 50 million young people in Africa, or 16 percent of all employed young people.[108] While entering the retail market can allow young people to create their own employment and livelihoods, achieving greater stability and prospects will require young people to equip themselves with skills such as entrepreneurship, marketing, and financial literacy, as well as transferable skills like communication and resilience.[109]

Jobs in accommodation and food services experienced the fastest growth from 2015 to 2025, rising 57 percent during this period (Figure 2.12).[110] Women make up nearly three-quarters of employment in this subsector.[111] Tourism on the continent is growing due to a trend of visa liberalization across Africa. In 2025, it accounted for seven percent of the region's GDP, growing by five percent and significantly outpacing the wider economy.[112] It supported more than 30 million jobs in 2025, and is forecast to reach 31.5 million jobs in 2026.[113] Ethiopia, South Africa, Morocco, Egypt, and Sierra Leone experienced some of the fastest growth in visitor numbers in 2025.[114] Rwanda has focused on higher-priced tourism that aligns with its environmental and wildlife conservation goals, while channeling a portion of its tourism revenue back into local communities, including education, training, youth empowerment, and livelihoods.[115] While the data shows job growth, it does not tell us about the quality of the jobs and their remuneration.

The care economy is "a distinct and under-recognized employment frontier" within Africa's expanding service sector, offering a path to more structured and socially valued work.[116] The care economy encompasses formal and informal roles in health care, elder care, child care, education, and community-based support, and is currently predominantly filled by young people and women.[117] Demand for care services is expected to grow given demographic change and expansion of health care and social protections, providing promising work opportunities for young people if gaps in regulation, oversight, and training can be addressed. Caregiving also offers an entry point into the labour market that is relatively shielded from technological and AI-driven changes, as it is difficult to offshore or automate and has few barriers for lower-skilled workers.[118]

FIGURE 2.12

Job growth has been largest in accommodation and food services

Subsector	2015	2025	% Growth (2015-2025) ▼
Accommodation and food service activities	6M	9M	57%
Activities of households as employers; undifferentiated goods and services producing activities of households for own use	6M	10M	54%
Transportation and storage	8M	12M	53%
Wholesale and retail trade; repair of motor vehicles and motorcycles	34M	50M	47%
Financial and insurance activities	1M	2M	46%
Administrative and support services activities	3M	4M	46%
Professional, scientific and technical activities	2M	2M	44%
Real estate activities	414K	586K	42%
Information and communication	1M	1M	25%
Activities of extraterritorial organizations and bodies	434K	512K	18%

Source: Reproduced from World Data Lab et al., *Africa Youth Employment Outlook Report* (2026).

The growth of care work also presents an important gender equality challenge. Women already make up most care workers across many African countries.[119] Without adequate protections and opportunities for advancement, growth in the sector risks reinforcing existing gender inequalities and concentrating women in lower-paid and less secure work. Policies that protect care workers and expand access to training and career progression will therefore be important for translating sector growth into higher-productivity and better paid positions and access to more secure employment.

Several countries offer examples of ways to improve the attractiveness and security of the care economy as a source of employment. Botswana is beginning to identify the care economy as an emerging area for skills development and employment, including occupations in health, wellness, and person-centred care. The country is also expanding specialized training in areas such as basic emergency care, with 181 providers and seven master trainers trained by mid-2023.[120] In Egypt, the government has implemented specialized training for refugees so they can access employment as care workers in Europe. General and technical secondary education can help provide a pathway into such opportunities through training and dedicated programs, including courses and certification for positions such as Nurse Assistant.[121] For Ghanaians returning from working in the United Kingdom, a Returnee Education and Entrepreneurship Fund offers support for vocational training and further education.[122]

The Creative Sector

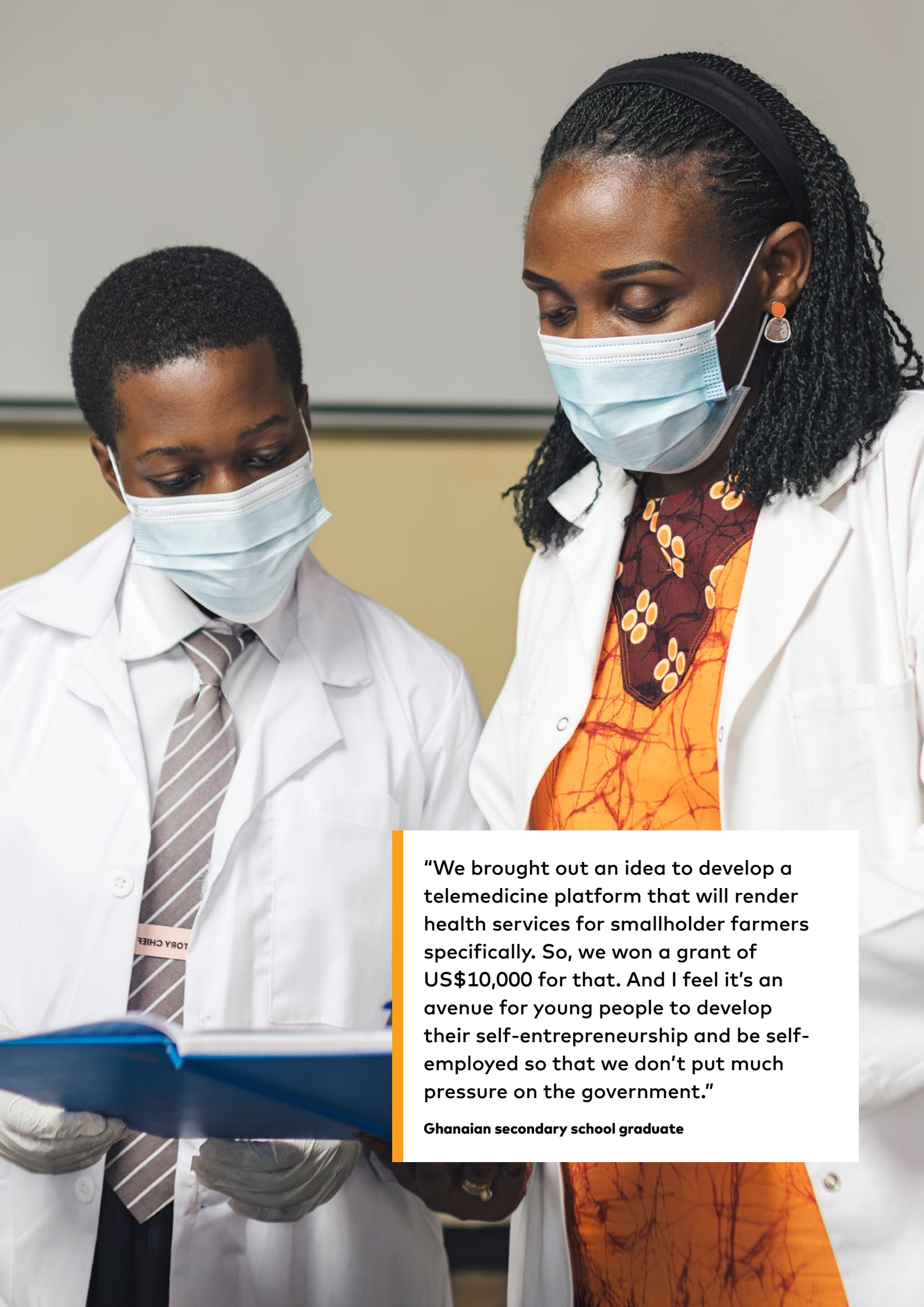
The creative sector, including film, digital media, fashion, gaming, performing and visual arts, and heritage and culture, is expanding rapidly, with significant potential for youth employment. Africa's music industry, for example, is the fastest growing in the world. Africa's gaming industry is also growing rapidly, reaching $1 billion in 2024, and projected to grow to $3.7 billion by 2030.[123] Africa's film industry contributes $5 billion to GDP and employs some five million workers.[124] Sony and the International Finance Corporation (IFC) have established a $19 million innovation fund targeting African start-ups in creative sectors.[125] By 2030, the creative market in Africa could be valued at $200 billion,[126] accounting for 10 percent of global exports of creative goods,[127] driven by burgeoning digital platforms and rising investment in the sector.

Digitization allows young creatives to access markets directly across a range of media, reaching domestic, regional, and even global audiences. Opportunities exist for young people to build livelihoods that involve sharing creative content with diverse audiences. African creatives can also draw on the diverse and wide-ranging cultures and heritage within African countries that, until recently, have not been widely available to international audiences. To harness these opportunities, young people will require foundational skills and digital literacy alongside capabilities particularly relevant to creative work, including creativity, communication, problem-solving, entrepreneurship, and storytelling.[128]

Young people recognize the need for skills that prepare them for increasingly dynamic and evolving careers as they navigate the rapidly changing nature of work in Africa and globally. They identify digital skills, green skills, entrepreneurship, adaptability, problem-solving, business literacy, and lifelong learning as critical for success. Young people participating in the Africa Skills Revolution, an African Union Development Agency initiative to promote technical and vocational training for young people, highlighted growing opportunities in the digital, green, and creative sectors.[129] Young people in Ghana emphasized that realizing these opportunities will require stronger links between education, skills development, employers, and entrepreneurial ecosystems to support successful transitions into work (Chapters 3 and 4).[130] How education systems can support these aspirations is an important question that the following chapters will examine.

Both the quantity and quality of jobs in the creative industry can be improved through regulation and policies that protect workers while also incentivizing growth. The creative sector is characterised by widespread informality, with a general lack of standards for work safety and social protection. It is also vulnerable to intellectual property violations and weak contract security. Further, AI is impacting the sector and has the potential to enhance productivity while also eliminating some creative roles. Growth of this industry can be supported through legal protections for intellectual property, incentives to attract global and regional investors, and the availability of the internet and digital infrastructure, ensuring that young people and other creatives can access these opportunities.[131]





"We brought out an idea to develop a telemedicine platform that will render health services for smallholder farmers specifically. So, we won a grant of US$10,000 for that. And I feel it's an avenue for young people to develop their self-entrepreneurship and be self-employed so that we don't put much pressure on the government."

Ghanaian secondary school graduate



2.7 Conclusion

Africa's changing world of work presents young people with increasingly diverse opportunities, as well as significant challenges. More than 10 million young people enter Africa's labour market each year, yet only three million formal jobs are projected to be created annually, making the transition from learning to sustainable livelihoods one of the continent's most urgent priorities.[132] Employment is gradually shifting toward the services sector; entrepreneurship and self-employment remain important pathways to livelihoods, and growth in the digital, green economy, care, creative industry, tourism, and other sectors is opening new possibilities for young people.

At the same time, informality will remain a defining feature of work for the foreseeable future, and technological, demographic, and environmental change will continue to reshape opportunities available. Informal work therefore needs to be recognized not as a transitional stage but as a defining feature of labour markets for many young Africans, while strengthening protections, earnings, resilience, and economic mobility within informal and hybrid livelihood systems. The challenge for secondary education is not to prepare young people for a single pathway or type of job, but to equip them with the skills, agency, and adaptability to navigate multiple pathways and pursue more productive, resilient, dignified, and fulfilling livelihoods.

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Part II

What a Transformed Secondary Education System Must Provide

CHAPTER 3 Strengthening Skills and Reforming Curricula for Work and Productive Livelihoods

CHAPTER 4 Embedding Transition to Work Support in Secondary Education

CHAPTER 5 Empowering Teachers and School Leaders to Deliver Transformation

CHAPTER 6 Making Formal Secondary Education Work for Marginalized Learners

CHAPTER 7 Building Flexible Pathways Beyond Formal Education

CHAPTER 8 Using Technology to Strengthen Teaching, Learning, and System Efficiency


Excel & Succeed
Senior Secondary
Physical Science
Form 4
E&S
LONGHORN

CHAPTER 3

Strengthening Skills and Reforming Curricula for Work and Productive Livelihoods

How secondary systems are designing and delivering competency-based curricula



QUESTION THIS CHAPTER ANSWERS

What knowledge, skills, mindsets, and capabilities do young people need to navigate diverse and changing pathways, and how can secondary education curricula be reformed to help young people develop them?

What has changed since 2020

Competency-based curriculum reform has expanded since 2020, moving from strategy and policy to implementation in most cases, while the skills agenda has broadened. Countries are placing greater emphasis on socio-emotional skills, digital and AI literacy, green skills, entrepreneurship, and practical and technical learning. At the same time, experience since 2020 has made the implementation gap clearer: curriculum reform frequently advances more quickly than reforms to teacher preparation, pedagogy, assessment, and infrastructure.

What is needed now

Young people need interconnected foundational, transferable, and technical skills that allow them to work, adapt, and continue learning. Competency-based curricula offer an important way of making learning more relevant and applied, but curriculum change alone cannot transform learning. Curricula need to be aligned with pedagogy, teacher development, assessment, infrastructure, and learning resources.



3.1 Secondary education prepares young people to navigate multiple pathways to work

Secondary education is the last structured opportunity for many young people to build the knowledge and capabilities they need to prepare for work, self-employment, further training and education, or informal livelihoods. This chapter examines the skills needed to follow those pathways in the changing world of work described in Chapter 2. It also reviews competency-based curriculum (CBC) reforms across the continent that are intended to support learners in developing those skills. It argues that although these reforms have largely begun to address relevant skills for work and life, broader efforts in teacher development, assessment, and school infrastructure have not kept pace, limiting CBC's implementation and, ultimately, its impact on learning and skills acquisition.

While secondary education remains the main platform to access work for most young people, for some, it is a crucial gateway to post-secondary education. Across sub-Saharan Africa, only nine percent of young people are enrolled in tertiary education, far lower than the global average of 38 percent.[1] While demand for higher education among Africa's young people far exceeds the available places for them, post-secondary education is crucial for developing the advanced knowledge that drives innovation, technological advancement, and economic growth. Post-secondary education can fuel job creation and help reduce poverty across the continent. Preparing young people to access and succeed in higher education and in their future careers remains an important function of secondary education systems.

For most young people, however, secondary education is their final stage of formal schooling before entering the world of work. Rapid demographic growth, climate change, and AI are all reshaping work, which remains characterized by high levels of informality. As described in Chapter 2, these trends mean that young people

will require a range of skills and competencies that make them sufficiently adaptable, flexible, and prepared to navigate multiple employment pathways. The same skills and competencies needed for work also enable young people to become lifelong learners, equipped to respond to shifts in labour demand, fulfill their aspirations, and contribute to their family, communities, and society as informed and engaged global citizens.





3.2 Foundational, transferable, and technical skills are critical for work and life, and are being integrated more deeply into general and technical secondary education

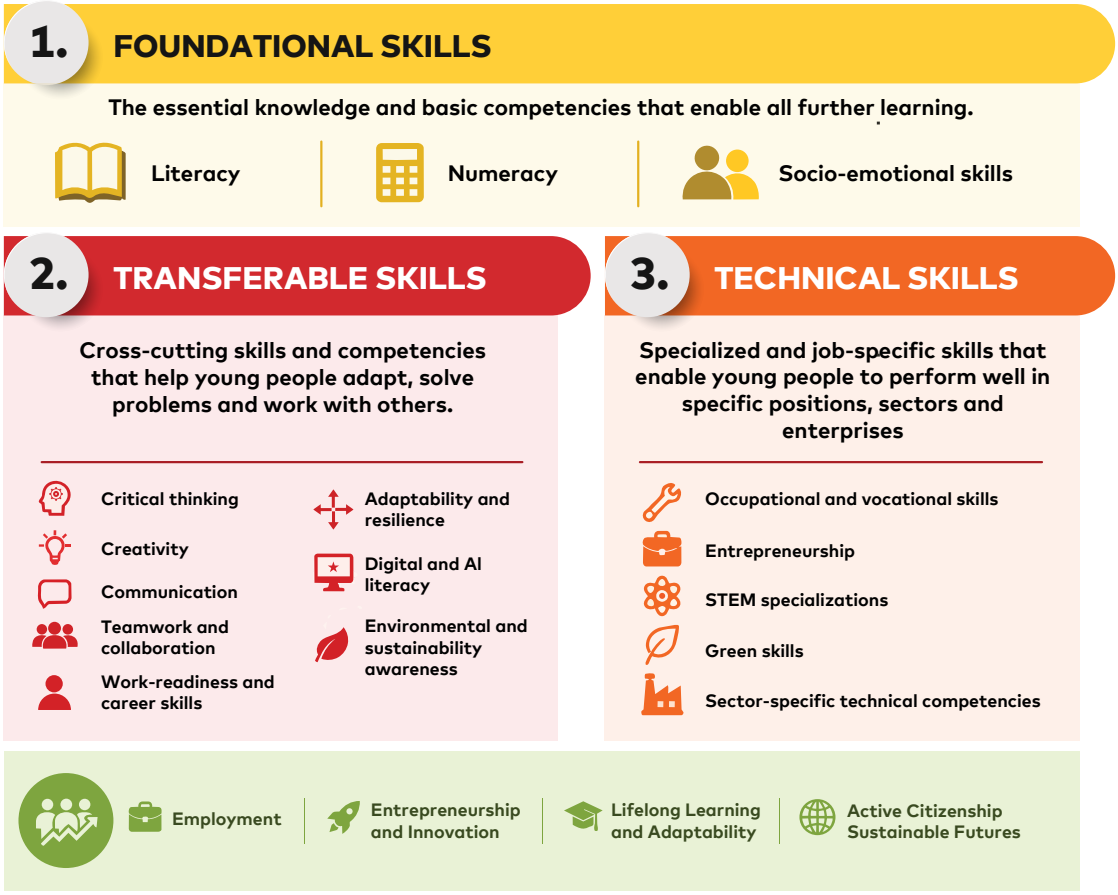
Young people need an interconnected foundation of knowledge, skills, values, and competencies that enables them to pursue work and livelihoods, continue learning throughout their lives, participate meaningfully in their communities and societies, and exercise agency over their futures. The first Mastercard Foundation *Secondary Education in Africa* report highlighted seven key skills that remain crucial for secondary school-age learners today: foundational, 21st century (also known as transferable), digital, STEM, technical and vocational, entrepreneurship, and work-readiness skills. For the purposes of this report, it is useful to group these skills into three overlapping domains: (1) foundational skills; (2) transferable skills; and (3) technical skills (Figure 3.1). These domains should not be understood as serving employment alone: foundational and transferable capabilities underpin technical learning while also supporting personal development, citizenship, social participation, and lifelong learning.

Although these three domains provide a useful framework for organizing the discussion, they are not mutually exclusive. Their potential impact on education and employment outcomes is greatest when developed together. Socio-emotional skills, for example, underpin foundational skills while also helping young people apply knowledge across different work and life contexts. Technical and job-specific skills are most valuable when bundled with foundational knowledge and transferable skills, where they can command access to wage premia.[2] Studies by the World Bank, UNESCO, and ILO, across countries of varying levels of development, found that technical skills are most effective when complemented by cognitive and socio-emotional skills, while TVET programs that combine classroom instruction with practical workplace experience can improve young people's employment and earnings outcomes.[3]

A broader normative framework for secondary education connects the skills young people acquire

FIGURE 3.1

Young people need foundational, transferable, and technical skills to navigate work and life



Source: Authors, using ChatGPT (OpenAI), 2026.

with the purposes those capabilities enable them to pursue. Foundational, transferable, and technical skills reinforce four complementary outcomes: the capacity to learn; to work and create; to participate and contribute; and to exercise agency and adapt. Framed in this way, preparation for work, lifelong learning, citizenship, and personal agency are not competing goals of secondary education, but mutually reinforcing dimensions of preparing young people to thrive.

The following sections examine the importance of foundational, transferable, and technical skills. They explore approaches to integrating them into general secondary education and TVET curricula, before turning to the conditions needed for implementing them effectively.

Foundational Skills

Foundational skills underpin subsequent learning, including the acquisition of transferable and technical skills.[4] They comprise the fundamentals of literacy, numeracy, and socio-emotional skills.[5] Fluency in the language of instruction is important for acquiring foundational skills and progressing to higher levels of education.[6] Foundational skills enable learners to acquire more advanced knowledge at the secondary level in subjects such as science, math, language, and history, while also preparing them to develop the core transferable and technical skills and competencies needed for the future of work and lifelong learning.[7]

Strengthening foundational skills also requires attention to the language of instruction. As students progress through secondary education, they need sufficient proficiency in the language

of instruction to develop literacy, numeracy, and increasingly complex academic and technical competencies. However, this does not require abandoning their home or local languages. Evidence supports multilingual approaches that build on students' existing language skills while systematically strengthening proficiency in English, French, or other official languages of instruction.[8] Promising practices include using familiar languages to explain difficult concepts, teaching subject-specific vocabulary explicitly, providing targeted language support, and preparing teachers to use multilingual pedagogies effectively. Such approaches can help ensure that students continue developing foundational and subject-specific competencies while acquiring the language skills needed for further education, work, and participation in society.[9]

Socio-emotional skills are one important foundational skill increasingly embedded into secondary education curricula. They include managing emotions, developing empathy, relating well with others, building healthy relationships, and working toward individual and collective goals.[10] In Zambia and Uganda, supporting girls' learning in negotiation, leadership, and critical thinking improved both enrolment rates and labour market participation.[11] Yet as of 2025, only 50 percent of 52 African countries for which data were available had successfully integrated structured socio-emotional learning into their national curricula.[12]

Despite the importance of foundational learning, the gulf between what learners need to succeed and the instruction they receive in primary school remains substantial. Chapter 1 of this report illustrates how many learners fail to reach minimum proficiency levels in foundational literacy or numeracy at the primary level. This lack of strong foundational learning at earlier grade levels leaves students with significant learning deficits at the secondary level, making it difficult for them to engage with advanced academic curricula. It also creates significant inefficiencies in the education system as many students lacking foundational skills repeat grades or leave school.

African countries are increasingly introducing assessments, targeted instruction, and remedial learning opportunities at the secondary level to help students catch up. This growing emphasis on foundational learning reflects a broader continental priority. At the 2025 Association for the Development of Education in Africa (ADEA) Triennale, African leaders identified foundational reading and mathematics as essential to the region's economic transformation. UNICEF's Foundational Learning Action Tracker found that between 2023 and 2024, the share of African countries providing nationwide support to teachers in assessing foundational learning more than doubled, reaching 42 percent, although significant gaps remain.[13] At the secondary level, Rwanda introduced a remedial program to help learners recover learning and strengthen foundational skills lost during the COVID-19 pandemic (Box 3.1). In Sierra Leone, TVET institutions established remedial programs for secondary school leavers and graduates who lack foundational literacy, numeracy, and communication skills. These efforts recognize that addressing foundational learning deficits is essential if students are to acquire the more advanced and practical skills needed for further education, vocational training, work, and life.[14]

Framed in this way, preparation for work, lifelong learning, citizenship, and personal agency are not competing goals of secondary education, but mutually reinforcing dimensions of preparing young people to thrive.

Transferable Skills

While definitions vary, transferable skills are widely considered to include a mix of skills that can be applied across economic sectors, academic subjects, and throughout life, and are among the most highly valued by employers.[17] They include communication, critical thinking, creativity, and civic mindedness; skills such as self-regulation,

BOX 3.1

Rwanda: Remedial education improves learning and reduces grade repetition

Following the COVID-19 pandemic, Rwanda implemented the national Remedial and Catch-Up Program for Learners at Risk of Repetition and Dropping Out in both primary and lower secondary schools.[15] A government mandate ensured all learners were assessed during the first month of school. Weekly remedial classes were provided to help learners catch up based on their individual learning needs. In secondary schools, this often meant dedicating the first period of the week in all core subjects to remedial classes, as well as blocking out periods on Friday mornings for remedial sessions in mathematics and English. The Rwanda Education Board distributed remedial and catch-up teacher guides to facilitate these remedial classes. While no systematic evaluation of Rwanda's remedial learning program in secondary schools exists, some evidence suggests that in secondary schools where the program was effectively implemented, repetition rates decreased.[16]

empathy, teamwork, and persistence; digital and AI skills; and environmental and climate change skills, and environmental-awareness. Transferable skills also play a crucial role by supporting the development and use of more complex work-related skills, including project management, people management, and the acquisition of advanced technical knowledge and skills.[18]

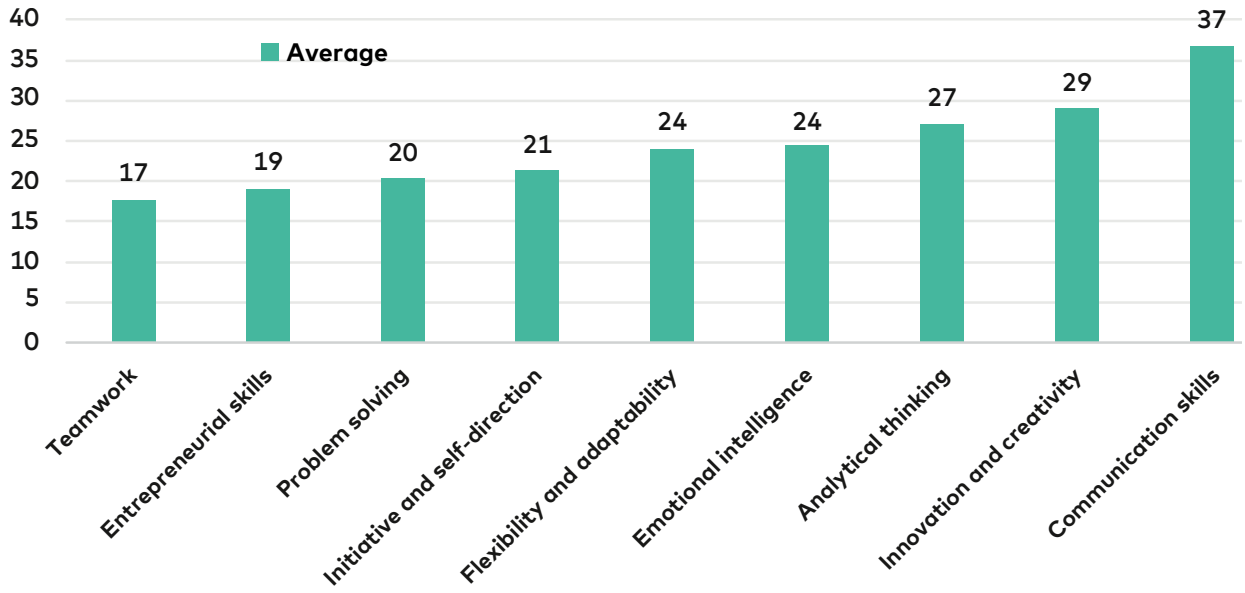
Young people value transferable skills because they can apply them across occupations and adapt them as labour market conditions change.[19] Evidence from consultations with young people in Africa suggests that they highly value transferable skills and find current coverage in secondary education inadequate, with curricula overloaded and overly theoretical. They express a desire for more and earlier opportunities (as early as lower secondary) to acquire transferable skills through practical activities. In Senegal, young people emphasized self-confidence and the ability to express ideas, negotiate, and manage conflict.[20] In Ghana, they emphasized problem-solving, leadership, and creativity.[21]

African employers also prioritize transferable skills when seeking employees. A survey conducted across nine African countries found that the skills most prioritized by employers include communication (37 percent), innovation and creativity (29 percent), and analytical thinking (27 percent) (Figure 3.2).[22] African employers interviewed highlighted the demand for numeracy, listening, socio-emotional, business planning, digital, and entrepreneurship skills.[23] Recent research by the World Economic Forum ranks cognitive, socio-emotional, and digital skills among the most valued in the current global work environment, helping workers adapt, move between economic sectors, and acquire new skills as labour demands change.[24] Transferable skills also offer pathways to higher-skilled jobs and higher wages, especially when combined with more complex technical skills.[25] Importantly, however, these examples may inadvertently overrepresent the formal labour market, which covers only a small minority of young people, as described further below.

Such skills are also highly relevant for resilience in the face of conflict and emergencies. As climate shocks, conflict, displacement, and public-health emergencies increasingly disrupt education across Africa, secondary curricula also need to equip learners with the knowledge, skills, and dispositions needed to navigate uncertainty and disruption. Emerging Education in Emergencies literature highlights the importance of resilience, climate adaptation, socio-emotional skills, peacebuilding, and problem-solving skills that can support learning continuity and adaptation during crises.[26]

FIGURE 3.2

Employers value transferable skills in communication, creativity, and critical thinking



Source: Reproduced from African Center for Economic Transformation, *Secondary Education in Africa: The Changing Nature of Work in Africa* (2026) based on data from African Leadership University Africa Workforce Readiness Survey Report (2025).

Note: The nine African countries with participating survey respondents are: Côte d'Ivoire, Ethiopia, Ghana, Kenya, Nigeria, Rwanda, South Africa, Uganda, and Zimbabwe.

Young people value transferable skills because they can apply them across occupations and adapt them as labour market conditions change.

Secondary education has an important role in developing the values and civic capabilities young people need to participate in their communities and societies. Critical thinking, communication, empathy, collaboration, respect for others, environmental responsibility, and the ability to engage constructively across differences are relevant not only to employment but also to citizenship and social cohesion.[27] Personal agency connects these capabilities: young people need opportunities not only to learn about participation, leadership, and responsibility, but also to practice them by expressing their views, making choices, solving problems, and contributing to decisions and activities in their schools and communities. These capabilities are increasingly important as young people navigate rapid social, technological, and environmental change.

Schools can develop these capabilities through both curricula and opportunities for participation. Youth-led clubs, community-service and entrepreneurial activities, peer education, environmental initiatives, and student organizations can provide opportunities to develop leadership, confidence, teamwork, and belonging, while enabling young people to contribute to healthier, safer, and more sustainable schools and communities.[28] These experiences position young people not only as learners acquiring competencies for later life, but as actors capable of applying them now.

Digital and Artificial Intelligence Skills

Digital literacy is a key transferable skill and is no longer "optional" for secondary learners. Recent advancements in digitization, automation, and AI have touched every economic sector in Africa, and their importance is expected to increase in the coming years. As AI is increasingly incorporated

into administrative and business processes, digital literacy will become increasingly important across a growing range of occupations.[29] In Africa, such positions often involve entrepreneurship, including informal e-commerce enabled through digital platforms accessed via cell phones.[30] Digitization and AI create opportunities for young people to increase their productivity, but only if they can attain the higher-level skills to use these technologies and capitalize on their benefits. The capacity to evaluate and apply information and data to solve problems and create something new can allow learners to capture greater returns in wages or income.[31]

Secondary education has an important role in developing the values and civic capabilities young people need to participate in their communities and societies.

Most African secondary school systems teach basic digital skills, albeit with limited infrastructure, yet only a few secondary systems cover coding, robotics, and AI. Basic ICT courses available to secondary learners typically address computer hardware and software, basic digital literacy, internet use, and productivity applications such as word processing and spreadsheets, often without access to computers. More advanced topics, such as online safety, data privacy, and ethics, are present in some curricula but are not widespread or comprehensive. A review of curricula across African countries suggests that explicit integration of AI remains limited, with only a small number of documented examples identified, including in Kenya, Nigeria, and Zambia.[32] South Africa has introduced more advanced subjects such as robotics, while Kenya and Rwanda offer computer programming. The Rwandan Coding Academy, a new TVET Centre of Excellence, trains students in software engineering using advanced equipment and industry-relevant curricula.[33] Such models, however, are not the norm.

While AI literacy training is present in a handful of countries, it is often limited to pilot projects or recent curriculum revisions, as is the case in most countries worldwide, given the recent nature of AI advancements. In July 2025, the Rwanda Ministry of Education and the Rwanda Basic Education Board (REB) launched a national initiative to embed AI literacy within the country's basic education ICT curriculum, available in primary and lower secondary schools.[34] Most AI-focused initiatives have not yet been scaled nationally. Challenges include limited teacher readiness, infrastructure deficits, financing constraints, and lack of regulatory frameworks, as well as broader concerns regarding the impact of AI on learning.[35] These issues are further explored in Section 3.4 on curriculum implementation.

Climate and Environmental Awareness

Climate and environmental awareness are important transferable skills as climate change dramatically impacts work and life across Africa. These skills include a general awareness of challenges facing the environment, climate literacy, and sustainable practices. They often serve as a basis for building technical skills across many sectors. In agriculture, for example, climate literacy ensures that young people understand the impacts of climate change on weather and livelihoods and can access resources and information needed to support the adoption of climate-smart practices. Increasing climate literacy can also create synergies with individuals' perceptions of change and risk, leading to improved climate responses within countries.[36] Greater environmental and climate awareness can improve adaptation, including the adoption of climate-smart agricultural practices and livelihoods, understanding resources available in times of crisis, and the ability to move or pursue alternative sources of employment.

Secondary education curricula across Africa are beginning to incorporate teaching of climate and sustainability. The general, non-technical capabilities required to tackle environmental challenges and support sustainable development across all labour sectors and job roles, known as cross-cutting skills, are generally taught

through existing subjects such as secondary-level science and agricultural curricula rather than as a separate green skills curriculum. Ghana has introduced a competency-based agriculture curriculum. Tanzania has taken steps to integrate green skills into secondary schools through its 2023 CBC, but training has not yet been meaningfully linked to emerging green economy opportunities such as sustainable agriculture, renewable energy, or climate-resilient production.[37] Kenya offers one of the most advanced approaches to teaching cross-cutting green skills. It has developed Education for Sustainable Development guidelines for primary, secondary, and tertiary education, trains teachers to implement the curriculum, established model institutions to demonstrate practices, and awards institutions that demonstrate strong programs. School gardens are also used to illustrate these principles.[38]

Digital literacy is a key transferable skill and is no longer "optional" for secondary learners.

Ghana and Rwanda illustrate how schools can develop climate literacy and environmental awareness in specialized schools and through extracurricular activities. Rwanda launched an experimental eco-schools initiative in 2020 through a partnership between the Rwanda Basic Education Board, the Rwanda Environmental Management Authority, and the Albertine Rift Conservation Society.[39] In these schools, learners undertake climate-action projects in their communities, with teachers and parents reporting greater learner curiosity and engagement on the environment.[40] In Ghana, young people report participating in climate resilience and environmental clubs, with activities addressing sanitation, green energy, environmental care, and tree planting; however, they described these clubs as fragmented and not always connected to climate change concepts.[41]

TVET systems are integrating climate and environmental awareness and technical green skills through several complementary approaches: making institutions more sustainable, embedding sustainability and environmental concepts across curricula and trades, and introducing dedicated employment-oriented courses in areas such as renewable energy.[42] This allows green skills to be developed both as specialized technical competencies and as cross-cutting capabilities relevant across occupations. Indeed, UNESCO defines green skills as including both cross-cutting green skills and technical green skills.[43] Higher-level, technical green skills taught in African TVET institutions extend beyond climate literacy and environmental awareness to include skills related to specific occupations, such as geothermal technologies; solar installation, maintenance, and repair; renewable energy; and sustainable construction.[44] Ethiopia provides one promising example of how cross-cutting green skills can be embedded within both secondary schools and TVET (Box 3.2). However, evidence on how to effectively integrate green skills into TVET in Africa remains extremely limited, particularly at the secondary level.[45]

Technical Skills

Technical skills are associated with one or more occupations and can foster young people's transitions into the workforce and higher earning potential.[46] They include vocational skills such as carpentry and plumbing, entrepreneurship training, and technical green skills such as climate-smart agriculture and renewable energy. Technical skills are increasingly offered in both general and technical secondary education, either through integration of technical subjects into general secondary education or via separate, secondary-level technical schools.

Technical and Vocational Skills

Research demonstrates that technical and vocational skills training aligned with labour market demand can effectively improve employment outcomes for young people. In Rwanda, a study found that TVET graduates have higher employment rates compared to general secondary school graduates. In Cameroon, an

BOX 3.2

Ethiopia: Green skills are developed through curricula and practical experiences

Ethiopia has integrated green skills into secondary education and TVET to help address the dual challenges of youth unemployment and climate change, while advancing the country's transition to a low-carbon, climate-resilient economy. These green skills include sustainability, climate literacy, and green economy competencies. Yet implementation of green skills training is not evenly distributed due to challenges in teacher capacity, learning resources, outdated facilities, and a lack of strong industry partnerships. Nevertheless, the country has made progress in incorporating green skills within curriculum reforms, while also launching environmental clubs and sustainability projects. Ethiopia's experience demonstrates that green skills are most effective when they are embedded across subjects while also incorporating practical learning and strong industry partnerships. The latter allows green skills to be tailored to market demand, improves employability of young people, and fosters sustainable development.

Source: Demissie et al., *Secondary Education in Ethiopia: Country Case Study* (Toronto: Mastercard Foundation, 2026).

econometric analysis of household survey data found that returns to formal vocational secondary education are well above returns to informal on-the-job training, although this benefit was concentrated at the time of starting employment and eroded with age.[47] The ILO finds that cognitive and technical training, including business, management, digital, and sector-specific training, can further improve employability when aligned with labour market demand.[48]

Young people consistently associate high-quality TVET with tangible pathways to employment, income generation, self-employment, further education, and upward economic mobility. Among 352 young people surveyed through the African Union's *Africa Skills Revolution* campaign, nearly three-quarters agreed that TVET was relevant for their transitions into the job market.[49] This is further reflected in individual motivations for participation. For example, a young female apprentice in Ghana described choosing hairdressing because it offered opportunities for higher earnings through either migration or local self-employment.[50]

Young people consistently associate high-quality TVET with tangible pathways to employment, income generation, self-employment, further education, and upward economic mobility.

Young women are underrepresented in secondary-level TVET in most African countries, in part because schools' processes for assigning students to general or technical education tracks often channel young women into general academic pathways rather than technical and vocational education.[51] Female learners accessing technical training are also concentrated in trades traditionally considered feminine, reproducing existing labour market segregation.[52] Young women tend to pursue training in fields such as catering, hairdressing, and tailoring that offer lower earnings and are often saturated in informal markets, while young men remain the majority in higher wage trades such as construction, manufacturing, telecommunications, engineering, and auto mechanics.[53] Some African countries are adopting quotas to increase

women's participation in TVET, with targets of 30 percent female participation in Mali and 50 percent in Niger. While participation of girls increased in these cases, young women faced challenges in accessing post-training internships and employment, with low wages and marriage constraining labour market entry.[54]

Recognizing the importance of technical and vocational skills, some governments have expanded access to TVET, though progress is not evenly distributed. As illustrated in Chapter 1, secondary TVET participation remains low across much of Africa compared with global levels.[55] Some countries, such as Senegal and Rwanda, have successfully expanded TVET enrolment by setting bold targets and investing in facilities and upgraded curricula. (Box 3.3).[56] Social norms, tracking in general secondary school, gender-based segregation in occupations, employer bias, and unequal advancement opportunities continue to restrict women's access to training and post-training opportunities in technical and vocational fields.[57]

TVET participation, especially among girls and young women, is also constrained by negative perceptions and high costs of infrastructure and equipment. TVET has historically suffered from low social status across many African countries, often perceived as a less prestigious pathway for lower-performing students, contributing to lower demand and enrolment than in general secondary education.[58] Expansion of TVET in many countries is also constrained due to the higher costs of facilities, equipment, and instructor training compared to general secondary education. The quality of TVET education is also often severely hampered by a lack of up-to-date facilities and equipment, helping to explain negative perceptions.[59] Countries such as Rwanda and Tanzania have addressed some of these challenges as part of their secondary-level TVET expansion. Rwanda raised entrance requirements for TVET institutions in part to address perceptions that associated TVET students with lower academic achievement.

General secondary schools within Africa are also increasingly embedding technical skills into general education curricula, with mixed initial results, according to early and limited evidence. Incorporation of some technical subjects and training within secondary schools can bring technical skills to more young people at a lower cost than through the TVET system.[60] Secondary schools in Africa are increasingly exposing students to basic technical concepts.[61] Examples of technical subjects offered in general secondary schools range from agriculture and soil science to woodworking, tailoring, basic electricity, and catering. Integrating technical skills earlier in general secondary education could also help reduce the gender disparities in TVET training at higher secondary levels noted above. Tanzania has integrated technical skills into both general and vocational pathways (Box 3.4). These reforms are promising, but early evidence suggests implementation remains inconsistent in practice, with persistent challenges in providing sufficiently practical and labour market-relevant training, as discussed in greater detail in Section 3.4.[62]

Entrepreneurship Skills

Entrepreneurship skills can be categorized as technical skills specific to starting a business. These include competencies in business strategy and development, problem-solving, market navigation, financial literacy, and innovation. Capabilities in transferable skills such as communication, creativity, and resilience complement technical entrepreneurial skills.

Entrepreneurship is a central pathway to work for young people in Africa. Given the scarcity of formal sector jobs in Africa, most young people pursue self-employment, informal work, family enterprise, smallholder agriculture, trade, services, platform work, or hybrid livelihoods, making entrepreneurship skills particularly important. According to one survey, more than 75 percent of young Africans intend to launch their own businesses.[64] Surveys of youth employment by the ILO across the West African Economic and Monetary Union found that, on average, 70 percent of young people are self-employed as entrepreneurs, often in the informal economy,

BOX 3.3

Rwanda: A package of reforms expands secondary TVET participation

Rwanda has rapidly expanded participation in secondary TVET through a package of reforms addressing access, quality, relevance, and perceptions of technical education. Since accelerating reforms in 2019, the country has established more than 600 Technical Secondary Schools and TVET wings in general upper secondary schools, contributing to TVET reaching approximately 40 percent of upper secondary enrolment. Enrolment doubled in four years, while available evidence from the Priority Skills for Growth program also points to stronger graduate employment outcomes and improved job-readiness. Several mutually reinforcing reforms have supported this expansion:

Expanding and upgrading TVET infrastructure and provision: Rwanda has increased the number of technical secondary schools and introduced TVET wings within general upper secondary schools, substantially increasing the availability of technical pathways.

Combining classroom and workplace learning: Technical secondary schools use a dual-delivery model in which learners divide their time between classroom instruction and workplace placements.

Aligning programs with labour market demand: Training programs have increasingly been developed with industry input. A graduate tracking system and labour market information system provides policymakers and educators with real-time data on employment trends and skills gaps.

Improving the status and attractiveness of TVET: Public campaigns have sought to address stigmas and improve perceptions of technical education.

Rwanda's experience demonstrates that expanding TVET requires more than increasing the number of places available. Infrastructure, relevant curricula, workplace learning, employer engagement, financing, information systems, and efforts to improve perceptions of technical pathways can work together to make TVET more accessible, relevant, and connected to employment opportunities.

Source: Cameron et al., *Secondary Education in Rwanda: Country Case Study* (Laterite, 2026).

with figures ranging from 50 percent in Senegal to 82 percent in Niger.[65] Entrepreneurship's central importance as a source of livelihoods suggests that training in entrepreneurship should be offered and promoted as an opportunity for specialized skills development, rather than as a fallback option, within secondary level curricula.[66]

A growing number of African countries are taking steps to integrate entrepreneurship within secondary schools. Senegal's work readiness and entrepreneurship training in lower secondary schools and TVET institutions has led to measurable improvements in skills acquisition and retention (Box 3.5). Tanzania's business studies course is a new, compulsory subject offered in both lower and advanced secondary schools as part of the country's recent CBC reforms and is designed to support learners to acquire applied problem-solving, self-employment, and entrepreneurship skills through a hands-on, "skills lab" approach (Box 3.4). Its Expect, Connect, and Project components position students as job creators and use real-world case studies and project-based learning, in which students apply concepts through practical, business-related activities.[67]

Entrepreneurship is a central pathway to work for young people in Africa.

BOX 3.4

Tanzania: Technical skills are embedded across secondary pathways

Through its CBC reform, Tanzania has begun to introduce technical skills in both general lower secondary education and vocational pathways. Embedding subjects such as business studies, ICT, agriculture, tailoring, home economics, and life skills earlier provides students with practical skills before entering the world of work, an advantage in Tanzania where only approximately one-quarter of learners progress to upper secondary education. Tanzania's experience demonstrates the value of starting with lower-cost, adaptable subjects such as entrepreneurship, agriculture, and ICT before scaling more resource-intensive technical streams (e.g., engineering and construction, digital media, and health sciences). The country has also started to adapt its assessment systems. The National Examinations Council of Tanzania is beginning to assess vocational subjects through theoretical and practical components, with practical assessments conducted in schools by trained assessors.[63]

Source: Elimu-Soko, *Secondary Education in Tanzania: Country Case Study* (Toronto: Mastercard Foundation, 2026).

BOX 3.5

Senegal: Entrepreneurship education improves young people's skills and retention

Since 2016, Senegal has implemented large-scale work readiness and entrepreneurship training within lower secondary schools and TVET institutions, emphasizing the importance of early exposure and reinforcement over time. Supported by the Mastercard Foundation and Education Development Center, the program, *Projet de l'amélioration des performances de travail et d'entreprenariat*, combined classroom entrepreneurial skills training in areas such as business planning, financial management, savings, and support for businesses. Entrepreneurship clubs provided opportunities to develop and test ideas through savings groups and income-generating activities.

The program also incorporated career guidance and school-to-work transition support, helping schools support students in navigating pathways into work or self-employment. Evaluations point to measurable improvements in skills acquisition and livelihoods. Lower secondary learners increased their mastery of life and employability skills from 59.7 percent at midline to 75.1 percent at endline, while the share of TVET learners reporting improved livelihoods increased from 44.8 percent to 58.1 percent. The program also invested heavily in capacity across the system, training 1,983 teachers – including 1,503 at the lower secondary level and 480 in TVET – and establishing entrepreneurship clubs across participating schools and training centres alongside 544 savings and credit groups.

Source: Education Development Center, *APTE-Senegal Final Report* (Dakar: EDC, 2022); Education Development Center, *Senegal, Vocational Training and Transition to Work Project (PFPI): Quarterly Newsletter,* first ed. (Dakar: EDC Senegal, n.d.).

Technical Green Skills

Technical green skills are a subset of technical skills and represent the ability to effectively utilize green technologies and processes. Complemented by cross-cutting green skills of climate and environmental awareness,[68] they can support mitigation of and adaptation to climate change. They include practices such as climate-smart agriculture, building retrofits and green construction, nature-based solutions that reduce greenhouse gas emissions and support climate adaptation, solar panel installation, environmental conservation, and reducing, recycling, and managing waste. Many of these skills can be monetised to support young people's employability.[69]

Technical green skills are increasingly important for young Africans as countries gradually transition to low-carbon economies, but they are not yet well integrated within secondary education and TVET systems.[70] Kenya offers technical green skills development in renewable energy, environmental management, and sustainable construction, with short courses for primary and secondary school graduates. Kenya's KenGen Geothermal Training Centre serves as a regional Centre of Excellence for training in renewable energy in East Africa.[71] As general and technical secondary education systems move to incorporate more technical green skills training, early exposure modules, practical projects, apprenticeships with green firms, and career guidance on potential employment in this sector can support young people's access to evolving opportunities.[72]





3.3 Competency-based curricula reforms are growing to equip learners with relevant skills

Governments are increasingly using CBC reform to address the gaps between what students learn and the skills they need. Employers consistently report a skills mismatch among many who leave secondary school before completion, in which the skills that education systems promote are not well-aligned with those demanded by labour markets.[73] The CESA 2026–2035 emphasizes the need to better align education and training to the skills demanded by labour markets. Similarly, the skills mismatch was highlighted in the African Continental TVET Strategy 2025–2034 and is a key driver of widespread CBC reform across the continent.[74] To close the gap between education and employment, a large number of African countries are reforming secondary school curricula, and are actively implementing new curricula that depart from theoretical academic content and passive recall of knowledge in favour of applied, practical learning, including outcome-based, learner-centred, green-focused, technology-supported, and project-based approaches, collectively referred to as CBC.[75]

At the continental level, African Union strategies provide a strong policy mandate for competency-oriented and labour market-responsive education reform. CESA 2026–2035 emphasizes foundational, socio-emotional, digital, and labour market-relevant skills, while calling for curricula that respond to emerging priorities such as AI, science, technology, engineering, mathematics, greening, and lifelong learning.[76] The AU's Continental TVET Strategy for Technical and Vocational Education and Training (TVET) to Foster Youth Employment, together with the African Continental TVET Strategy 2025–2034, extends this logic from general secondary education to the TVET sector by emphasizing employability, competency-based training, quality assurance, qualification portability, industry partnerships, and responsiveness to labour market demand.[77]

Since 2020, national competency-based reforms have progressed at different speeds, with some countries adjusting sequencing and design in response to implementation experience. Adoption has been most pronounced in East and Southern Africa, particularly in Ethiopia, Kenya, Rwanda, Tanzania, Malawi, Mozambique, and Zimbabwe, which also account for much of the published research on CBC.[78] In West Africa,

progress has been more uneven, with countries such as Mali and Côte d'Ivoire moving toward fuller implementation, while Ghana and Togo have pursued more gradual paths.[79] Evidence remains limited for several Sahelian countries, making continent-wide comparisons difficult. The post-2020 landscape reflects not only wider adoption but also greater emphasis on reviewing and adapting reforms as implementation challenges and equity concerns become clearer. A recent UNESCO background study notes that Kenya, Tanzania, and Zambia have undertaken significant curriculum reviews to address earlier gaps and challenges, while maintaining their commitments to competency-based reform.[80]

Governments are increasingly using CBC reform to address the gaps between what students learn and the skills they need.

Engaging learners and their families in curriculum design can help ensure skills are relevant and reforms gain credibility. Competencies prioritized through CBC reform may not always reflect young people's experiences, aspirations, or the realities of work.[81] Engaging young people in curriculum design can help ensure that skills and learning experiences emphasized are relevant to the pathways they expect to navigate.[82] Parents and caregivers also influence how competency-based reforms are understood, supported, and sustained beyond the classroom. When parents and communities are skeptical, disengaged, or insufficiently consulted, reform momentum may be harder to sustain.[83] More research is needed to understand how parental and community engagement, communication, and change management affect implementation.[84]





3.4 Implementation challenges continue to limit the impact of competency-based curricula reform

As competency-based reforms spread across Africa, adoption has outpaced the development of the conditions needed to implement them effectively. CBC reforms seek to move beyond traditional content and input-oriented approaches by focusing on the knowledge, skills, and competencies learners are expected to demonstrate and apply to solve problems within increasingly complex and rapidly changing contexts.[85] It emphasizes the teacher as a facilitator, rather than as someone who delivers knowledge. As CBC reforms have evolved from policy documents into classrooms, researchers and policymakers have increasingly focused on whether education systems have in place the teacher training and assessment systems and other critical conditions to deliver improved outcomes.

Evidence of CBC impact on learning outcomes remains limited. A scan of the literature shows that few published evaluations have assessed whether national competency-based reforms have improved measurable outcomes among secondary-level learners. This scarcity of evidence in part reflects the relative newness of these reforms, given that full implementation can take many years. Where studies are available, they often centre teachers' perspectives and document how reforms are experienced in classrooms and schools.[86] As a result, the literature offers valuable insights into implementation conditions, but limited evidence on whether CBC reforms have improved learning outcomes and skills uptake through rigorous, longitudinal, or comparative analysis.

Curriculum reform often outpaces accompanying changes to assessment, pedagogy, and teacher training and practice, limiting the extent to which intended competencies are developed in classrooms. Implementation increasingly reveals equity gaps, as disparities in resources, infrastructure, language support, care responsibilities, and household

capacity influence learners' opportunities to engage in competency-based learning and demonstrate uptake.[87]

Transferable, technical, and vocational skills are best developed through practice and application, requiring a shift to more learner-centred pedagogies. Young people need opportunities to ask questions, solve real-world problems, work collaboratively, and apply knowledge through projects, practical activities, and work-based learning.[88] This is particularly important for skills such as entrepreneurship and digital literacy, which are difficult to develop without opportunities for hands-on practice. CBC reforms can create space for these approaches across subjects, but their effectiveness depends on teachers having the training, resources, and classroom conditions needed to move beyond predominantly teacher-led instruction and toward learner-centred design where young people learn by applying critical thinking, problem-solving, and doing.

As competency-based reforms spread across Africa, adoption has outpaced the development of the conditions needed to implement them effectively.

Extracurricular activities and work-based learning are also effective vehicles for developing young people's skills.[89] Young people in Ghana, Malawi, and Senegal report that extracurricular activities such as entrepreneurship clubs, sports, youth-led activities, and community service projects offer valuable opportunities to learn and practice transferable skills such as communication, problem-solving, leadership, and teamwork.[90] They help connect learning to practice while providing opportunities to meet role models and build confidence.[91] Senegal (Box 3.5) presents an example of how entrepreneurship skills can be embedded comprehensively throughout lower secondary school curricula, TVET institutions, and extracurricular activities, highlighting the importance of early and consistent exposure, as well as reinforcement over time. The use of green gardens, tree planting, recycling, environmental stewardship projects, and mangrove restoration are being used to develop learners' green skills, though these programs remain largely at the policy and pilot stage.

Teacher preparedness and instructional capacity are the most significant determinants of whether CBC reforms translate from policy ambition to meaningful classroom practice.

Teacher preparedness and instructional capacity are the most significant determinants of whether CBC reforms translate from policy ambition to meaningful classroom practice. Some countries, including Egypt, Rwanda, and Tanzania, are reforming teacher training to align with new CBC.[92] Many teachers, however, continue to rely on traditional instructional approaches poorly aligned with the learner-centred, applied, and competency-focused practices best placed for supporting learners to acquire practical skills and competencies.[93] Respondents from Egypt and Kenya highlighted persistent challenges related to teacher capacity, ongoing professional development, and resistance to change. Evidence from TVET systems points to similar gaps between instructor preparation, evolving occupational standards, and emerging curriculum priorities such as digital and green skills.[94]

Assessment practices also have not evolved alongside the adoption of CBC reforms, resulting in a mismatch between the skills and competencies that curricula aim to develop and what education systems continue to measure. Although many national frameworks now emphasize applied competencies, critical thinking, and practical skills, assessment systems often remain reliant on conventional examinations that reward passive content mastery and recall.[95] Consequently, teachers have limited incentives to prioritize

competency-based approaches in the classroom, and learner performance is frequently judged through measures not designed to capture the full range of competencies these reforms seek to promote. This raises broader questions about whether qualifications accurately reflect learners' readiness for further learning, work, and everyday life.

Infrastructural and resource constraints further limit the effective implementation of CBC and related competency-based reforms. In many contexts, shortages of laboratories, workshops, tools, and instructional resources make it difficult for schools to provide the hands-on learning experiences that competency-based approaches require, especially when teaching some technical skills. These constraints affect not only curriculum delivery but also assessment practices, as schools and teachers often default to written or theory-based examinations that are less resource-intensive to administer, particularly in underserved and rural settings. Evidence from Ghana illustrates the scale of this challenge: a study of 112 schools and 238 agriculture teachers across four regions found that only five percent of schools possessed the full complement of facilities required to support competency-based delivery of this subject.[96] Differences in school resources mean that students may experience the same curriculum in very different ways, with learners in better-resourced schools often better positioned to engage with the practical and experiential dimensions of the curriculum. As such, the CBC can inadvertently deepen socioeconomic, linguistic, gender, disability, and geographic inequalities when systems do not finance and design for inclusion from the outset.[97]

Both general and technical secondary education systems are grappling with how to balance curriculum breadth and depth. As policymakers seek to incorporate transferable, technical, digital, entrepreneurial, and green skills, there is a growing risk of curriculum overload. Rwanda's recent curriculum reforms, which organize upper secondary studies around broader learning pathways while maintaining a common core curriculum, reflect one approach to balancing broad foundational learning with later specialization and practical skills.[98] Transferable, digital, entrepreneurial, and green skills can also be integrated across subjects through learner-centred pedagogies, project-based learning, entrepreneurial assignments, and extracurricular activities, as discussed in the following section.







3.5 Successful implementation of competency-based curricula requires sustained, system-wide reform

Effective implementation of CBC depends on aligning reforms to curricula, teacher development, assessment, and classroom resources. Inputs alone cannot fully achieve desired learning outcomes unless accompanied by changes in teaching practice, aligned instructional materials, assessment, continuous professional development, coaching, and performance monitoring.[99] In Tanzania, where CBC reform is further along and has been implemented in tandem with changes to teacher training, adoption of inquiry-based learning, and new assessment methods, students and teachers have reported positive experiences (Box 3.6).

Curriculum reform efforts are most effective when implemented gradually and adapted over time. Case studies from Malawi, Senegal, and Tanzania suggest that reforms are more likely to take hold when governments strengthen teacher training and assessment systems, sequence reforms, and create opportunities to learn from implementation challenges as they emerge.[100] Experience from OECD countries also indicates that CBC reforms can take more than a decade to implement successfully. They require a sustained process of institutional change across many parts of the education system and government, as well as input from stakeholders such as employers, parents, and young people. As progress advances across these multiple fronts in Africa, additional research will be needed to assess the impacts of CBC reform on learning outcomes, skills uptake and use, success in reaching marginalized populations, and the extent to which these reforms facilitate young people's transitions into productive work and lifelong learning.

Emerging evidence suggests that CBC can be made more inclusive when deliberately designed for marginalized learners. Measures that can help deliver CBC to diverse learners include female role models, gender-responsive mentoring, support for transitioning from a home language

BOX 3.6

Tanzania: A package of reforms enhances CBC implementation

Tanzania's experience suggests that the success of CBC reform depends less on curriculum design and more on the conditions that support implementation. Since the rollout of the revised CBC in 2023, Tanzania has introduced learner-centred pedagogy, project-based learning, entrepreneurship education, business studies, and competency-oriented assessment reforms. Encouragingly, students and teachers in some schools report a shift away from memorization and a path toward discussion, critical thinking, and practical learning. Students describe having more opportunities to think, collaborate, and apply knowledge, while business studies were frequently cited as helping learners connect schooling to entrepreneurship and future livelihoods. A business studies teacher in Morogoro similarly observed that more practical approaches have helped students better visualize concepts and participate more actively in classroom learning.

Across the case study, the strongest signs of progress were observed when three factors came together: structured teacher support, functioning school-based professional-learning communities, and basic infrastructure to support applied learning. Absent these factors, implementation often remained largely theoretical despite positive perceptions of the reform itself. Initiatives such as MEWAKA, which translates to Teacher Continuous Professional Development in Swahili, incorporates school-based communities of practice, and the Secondary Education Quality Improvement Project (SEQUIP) funded by the World Bank, along with national teacher orientation programs, all demonstrate how sustained implementation support can help bridge the gap between policy intent and classroom practice. With time, it will be possible to evaluate the impact of these reforms on student learning and skills acquisition.

Source: Elimu-Soko, *Secondary Education in Tanzania: Country case study* (Toronto: Mastercard Foundation, 2026)

to national language, and adapted project-based assessments for learners with disabilities, as found in a case study from Tanzania.[101] Effective implementation thus requires tailored instructional resources, language and accessibility supports, teacher guidance, context-sensitive project design, and deliberate measures to ensure that practical, take-home, or technology-enabled learning activities do not create additional barriers for learners facing resource or other constraints.[102] Material support, community engagement, and targeted efforts to reduce barriers faced by marginalized groups can help ensure experiential learning opportunities are accessible to a wider group of learners.[103] These elements are further explored in Chapter 6 in the context of inclusive formal schools.

Material support, community engagement, and targeted efforts to reduce barriers faced by marginalized groups can help ensure experiential learning opportunities are accessible to a wider group of learners.

Drawing on local and Indigenous approaches to skills development can strengthen the contextual relevance of CBC, but further research is needed to understand how these approaches can inform implementation. Indigenous knowledge and practices represent an under-recognized source of knowledge that can be incorporated into skills curricula to improve its relevance.[104] In some

countries, practical training in entrepreneurship is offered outside of formal education through informal, Indigenous apprenticeship systems. Examples include Igbo entrepreneurship networks in Nigeria and the Mouride brotherhood in Senegal, which according to a recent study, "represent proven, rigorous forms of practical training that remain largely closed and disconnected from formal education."[105] Such Indigenous models could be offered to wider communities and linked to formal certification, but more evidence is needed to better understand how to formalize and scale these programs without losing elements that make them effective.[106]





3.6 Conclusion

African education systems have made progress in reorienting secondary education to provide young people the skills they need for work, further learning, and productive livelihoods. CBC reforms are now widely adopted across the continent, and countries are increasingly integrating foundational, transferable, digital, green, entrepreneurial, and technical skills into secondary education. Importantly, reform is also maturing: experience from early implementers is generating practical lessons on how curricula can be strengthened through better teacher support, learner-centred pedagogy, aligned assessment, and meaningful engagement with young people, employers, and communities.

The priority now is to build on this momentum, deepening and sustaining reforms over time so changes in curricula translate into stronger classroom practices, more relevant learning, better use of digital and AI tools, and more established pathways from secondary education into work and lifelong learning. Fully delivering on the promise of CBC will require a package of reforms, aligning curriculum with teacher training, pedagogy, assessment, resources, and infrastructure, while enhancing equity and generating evidence on whether these reforms improve learning and transitions to work.

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CHAPTER 4

Embedding Transition to Work Support in Secondary Education

Reinforcing links between education systems, employers, and government policy and services



QUESTION THIS CHAPTER ANSWERS

How are schools and education systems helping young people navigate transitions into work through career guidance, work-based learning, and broader transition-support mechanisms?

What has changed since 2020

Gains in secondary education access since 2020 have not translated into a drop in the youth NEET rate, which has largely stayed flat over the period. Many young people, especially young women and those from marginalized groups, still struggle to move from school into productive work. Evidence since 2020 gives greater visibility to the nonlinear pathways young people follow and the support required to navigate them. Some countries are beginning to incorporate career guidance, work-based learning, and graduate tracking, yet these efforts are nascent. The evidence increasingly highlights the importance of strengthening these supports, as well as networks, mentoring, and holistic support, particularly for marginalized young people. These efforts remain uneven and are not yet consistently embedded within secondary education systems.

What is needed now

Skills alone do not guarantee successful transitions. Secondary education can do more to help young people translate learning into opportunities through career guidance, labour market information, mentoring, networks, work-based learning, and entrepreneurship support. Effective transition systems require coordination and cooperation among three sets of actors: education and training institutions, governments, and employers, which together make up the Transition to Work System.



4.1 Young people need more than skills to successfully transition to work

Greater access to secondary education, enrolment, and completion in Africa have not lowered the share of youth who are NEET. Since 2020, while school enrolment and completion have improved, the share of youth who are NEET has remained consistent at around 20 percent, suggesting persistent exclusion from the labour market (Chapter 2).[1] Since 2020, the after-effects of the COVID-19 pandemic, economic insecurity, conflict, and climate-related shocks have further disrupted education and livelihood pathways, amplifying transition risks for young people already affected by poverty, gender inequality, displacement, and weak labour markets.[2] A central challenge for secondary education is not only helping young people remain in school, but ensuring they can successfully navigate the transition to meaningful, resilient, and productive livelihoods. Transition support therefore needs to become a more integral part of secondary schooling.

A central challenge for secondary education is not only helping young people remain in school, but ensuring they can successfully navigate the transition to meaningful, resilient, and productive livelihoods.

Supporting young people's transitions to work requires responding to the dynamic pathways followed by African young people.[3] Conventional models of transition support are often adapted from Global North contexts.[4] These tend to assume linear transitions into formal employment and focus primarily on matching individuals to occupations. African labour markets are characterized by widespread informality, multiple income streams, self-employment, and non-linear livelihood trajectories that do not conform to these assumptions (Chapter 2). Effective

transition support must reflect these realities, helping young people navigate multiple livelihood pathways while improving their prospects for more productive and secure work.[5]

> **"Secondary education and technical and vocational education and training (TVET) systems need to prepare young people for multiple pathways into work: wage employment, self-employment, informal sector livelihoods, platform-mediated work, entrepreneurship, further education, and community-based enterprise. A narrow focus on formal wage employment is not sufficient in labour markets where informality, self-employment, and hybrid livelihoods are central features of how young people work."[6] – African Centre for Economic Transformation, Changing Nature of Work, 2026[7]**

In this report, transitions refer to the ways in which young people move among education, training, work, entrepreneurship, and other livelihood opportunities. These pathways are rarely linear. They may be prolonged, interrupted, or reversible, and often unfold at different ages and stages of life.[8] Many young people simultaneously combine work with continuing education, entrepreneurship, unpaid family labour, or household responsibilities. Transitions may also be shaped by parenthood, illness, displacement, climate and economic shocks, and other events that alter educational and livelihood trajectories.[9]

Young people require support that extends beyond schools. Some services are best provided by education systems; others by employers, communities, or public agencies. Together, these supports make up the Transition to Work System (Figure 4.1), centred on young people, and upheld by three mutually reinforcing pillars: education and training systems, employers and community, and government.

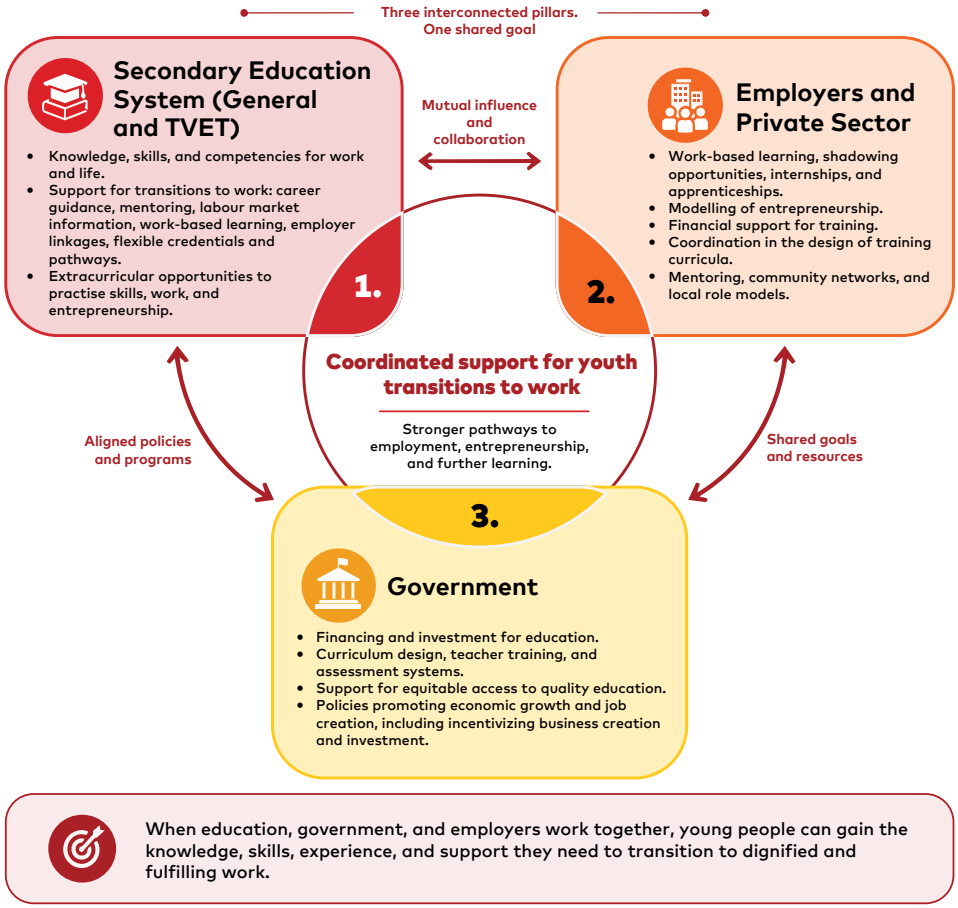
Secondary school systems can complement classroom learning with career and livelihood related services.[10] Educational systems play a key role in helping young people acquire strong foundational competencies and relevant work-readiness skills (Chapter 3), but these are insufficient to support successful transitions. Emerging evidence suggests educators also need to help young people understand and navigate opportunities and make decisions about pathways beyond school.[11] Young people increasingly need schools to provide effective career guidance and to coordinate work-related experiences.

Yet offering these services in addition to delivering curricula and developing core skills places increased demands on schools and teachers. As Chapter 3 of this report suggests, curricula are already crowded, especially in the context of competency-based curriculum reforms. Teachers are further constrained by limited instructional time and resources, overcrowded classrooms, and the imperative to support learners with a range of abilities and needs. Teachers and school leaders also are not typically trained in career counselling and may lack awareness of the importance of transition supports and knowledge of labour markets. In rural and remote areas, these challenges are exacerbated, with fewer employers nearby able to partner with schools to offer work-based learning.

Other parts of the transition system can provide support that schools cannot deliver alone. Employers, supported by a myriad of actors in the community, play a key role in partnership with schools and training institutions. They can provide work-based learning, including workplace visits, internships, and apprenticeships, as well as access to mentoring and employer networks. In some instances, they can also support development of training curricula to ensure its relevance to the labour market and help finance training and facilities. Governments in turn are crucial in mapping, recognizing, and accrediting clear, flexible, and viable pathways through different types and levels of education (Chapter 7) while providing access to psychosocial, health, and childcare services. Together, these three elements of the Transition to Work System can ensure young people access pathways to productive employment, further training, entrepreneurship, and other livelihood opportunities.[12]

FIGURE 4.1

Education systems, governments, and employers form the transition to work system



Source: Authors, using ChatGPT (OpenAI), 2026.

Supporting successful transitions requires reforms that simultaneously reduce exclusion, build relevant skills, provide holistic support, and connect young people to realistic economic pathways in both formal and informal labour markets.

Transition supports are particularly important for marginalized young people, including young women, young people with disabilities, and those affected by conflict and displacement. For these individuals, transitions are often shaped as much by poverty, social norms, location, parenting, and weak labour market institutions as by educational attainment.[13] Supporting successful transitions requires reforms that simultaneously reduce exclusion, build relevant skills, provide holistic support, and connect young people to realistic economic pathways in both formal and informal labour markets. Secondary schools cannot determine employment outcomes, but they can play a far larger role in helping young people develop the capabilities, support networks, and opportunities needed to navigate multiple pathways toward meaningful work and opportunities.



Employers, supported by a myriad of actors in the community, play a key role in partnership with schools and training institutions. They can provide work-based learning, including workplace visits, internships, and apprenticeships, as well as access to mentoring and employer networks.



4.2 Data help us understand labour market needs and young people's transition pathways

Two types of evidence are particularly useful for supporting transitions to work: labour market information on current and emerging markets, relevant skills and sectors, and job vacancies available to young people both locally and in the global economy; and longitudinal data on the pathways young people follow after school. These data can help education systems understand young people's work trajectories after they leave school and align transition support with evolving opportunities in the world of work.

Labour market data and information

Designing effective transition services requires a clear picture of demand for work, skills, and entrepreneurship opportunities.[14] Relevant labour market information is needed beyond formal job vacancies to capture the range of livelihood pathways available, identify growing sectors and occupations, help young people choose appropriate education and training pathways, and recognize viable entrepreneurship opportunities.

Yet links to labour market information systems remain weak and labour market information may be outdated, fragmented, or unavailable at the local level.[15] To fill data gaps, preparation for youth employment in some countries includes training and engagement of young people to conduct local labour market assessments themselves (Box 4.1).

The usefulness of labour market information also depends on its geographic detail and coverage. Ideally disaggregated at the district level, it can reflect variations in labour markets and economic sectors that provide the greatest employment prospects in young people's communities. In labour markets dominated by informality and self-employment, this information needs to extend beyond formal job vacancies to include local market demand, value chains, enterprise opportunities, and emerging sectors. Even strong national level data, however, may not reflect local realities.

Given the increasingly global nature of labour markets, it is important to provide information on opportunities at the national and international levels, including through digital platforms and migration.[16] Labour market information is most useful when linked to career guidance, employer exposure, and practical job-search support, and when it reaches families and communities as well as learners.[17] The ability of schools to provide labour market information to students will depend in part on the strength of government data, on labour markets, on economic growth sectors, and on cooperation among schools and training institutions, governments, and employers.

Tracking young people's transition pathways

A shortage of longitudinal evidence limits our understanding of how young people's pathways unfold and which forms of transition support have lasting effects. Although a growing body of research examines employability, skills development, and school-to-work transitions, the evidence remains relatively thin on how young people's trajectories unfold over time, particularly for secondary school graduates, TVET learners, and marginalized groups.[18] Existing studies often focus on immediate labour market outcomes, providing limited insight into whether transitions are sustained, how educational experiences shape later livelihood opportunities, or which combinations of skills development, guidance, work-based learning, and transition supports yield lasting impacts.[19]

Longitudinal data can reveal how young people move among education, work, and other activities over time. Some countries are recognizing this and improving their data systems to better track young people's education, skills, and labour pathways. In Rwanda, the Ministry of Public Service and Labour launched a Graduate Tracking System in 2024 to systematically follow graduates from secondary TVET and tertiary institutions, helping policymakers better understand post-school trajectories and labour market outcomes.[20] Other research has yielded data on young people's pathways following secondary education in five African countries (Box 4.2).

Secondary school graduates often hold multiple positions simultaneously. According to recent evidence, their pathways are frequently disrupted by changing socioeconomic circumstances, family responsibilities, and labour market conditions.[24] Figure 4.2 draws on the Human and Social Resources Council (HSRC) data and demonstrates how young people move through education and livelihood activities. Their trajectories are diverse. While a small portion of young people consistently stay in employment (illustrated by the horizontal blue pathways at the bottom of the image), others move in and out of work, entrepreneurship, school, and training, or a combination. The high degree of diversity and complexity of young people's pathways from education and training to work suggest that secondary education systems will need to provide diverse models of support for transitions to effectively prepare young people for productive livelihoods.



BOX 4.1

Youth-led data collection builds skills and captures relevant labour market information

The Education Development Center (EDC) has conducted youth-led labour market mappings through practical data collection in collaboration with the governments of Rwanda, Senegal, and Liberia. Young people are trained as field investigators to conduct interviews with local employers on skills in demand and opportunities for employment and entrepreneurship. They then assemble the collected data in a map of employment and entrepreneurship opportunities in the community and region. Qualitative evidence indicates that such approaches help young people develop transferable skills and equip them with labour market knowledge, both of which are key to finding employment or starting a business.

Source: Education Development Center, *Our World, Our Work: Toward a Youth-Inclusive Green Economy* (Education Development Center, n.d.).

BOX 4.2

Tracking young people's work trajectories can help design relevant transition support

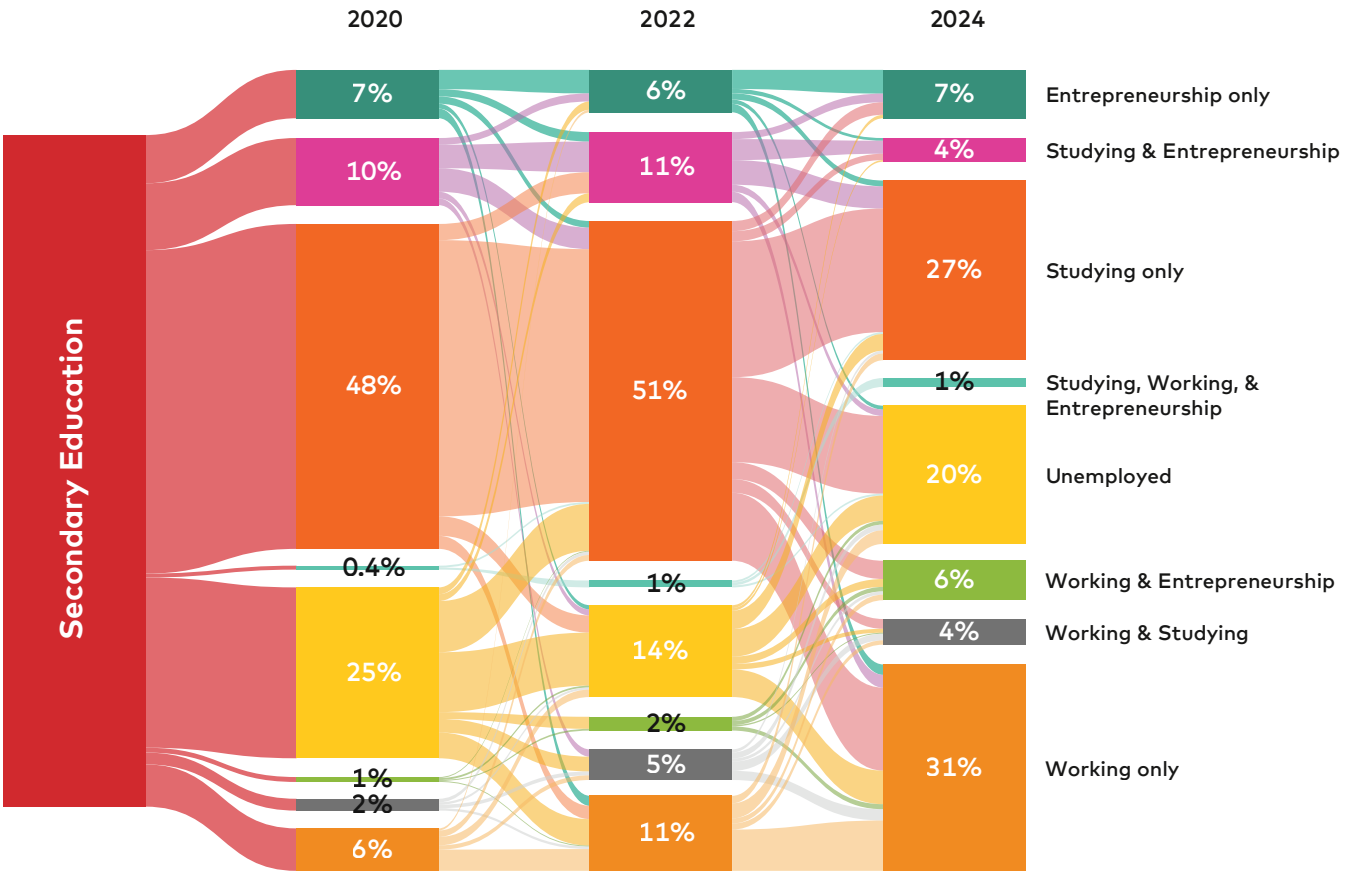
Existing longitudinal evidence suggests the pathways young people follow are far from uniform and often involve a combination of school and formal or informal work. A recent HSRC study of more than 8,000 secondary school learners across Uganda, Rwanda, Ghana, Kenya, and Ethiopia provides a glimpse of young people's work trajectories (Figure 4.2). The study found that their transitions between education and work involve diverse combinations of further study, employment, entrepreneurship, unemployment, mobility, and multiple income-generating activities.[21]

A companion longitudinal study by the HSRC[22] in South Africa follows a cohort of Mastercard Foundation Scholars at the secondary level. In the period following their graduation, the study identified 136 unique pathways among secondary alumni and concluded that transitions were not linear or singular. As one of the only studies following secondary education graduates over a long period of time, the HSRC research highlights a combination of practical experience, social networks, mentoring, entrepreneurship support, and continued learning as important for helping young Africans navigate transitions into work and livelihoods.[23] More longitudinal data are still needed to better understand pathways after schooling.



FIGURE 4.2

Young people follow diverse and nonlinear employment and education pathways



Source: Human Sciences Research Council, *The Imprint Of Education*, 2025, drawing on data from 8,650 Mastercard Foundation Secondary Alumni from five countries in Africa (2020-2024).[25]





4.3 Transition to work systems require collaboration across governments, secondary education stakeholders, and the private sector

Education and training alone cannot address all the obstacles young people face in moving into work. A systems approach recognizes the complementary roles of education systems, the private sector, and governments.[26] According to the African Centre on Economic Transformation, secondary education systems are characterized by:

> **"Inadequate career guidance, poor workplace exposure, fragmented labour market information, and economies that do not generate enough productive employment at scale. No single reform addresses all of these at once."**[27]

Education and training alone cannot address all the obstacles young people face in moving into work.

These three pillars must be strengthened individually and connected more effectively. While each pillar is crucial for a well-functioning system, this report focuses primarily on the role of secondary education systems – both general and technical – within this system, and their links to the other two pillars.

Education and training institutions, governments, and employers can create synergies in support of young people's transitions. Governments can enable productive and inclusive economic growth and job creation by putting in place policies that promote macroeconomic stability, trade, industrial and sector development, and access to finance.

They can also offer incentives for private sector investment in infrastructure, business and job creation, research, and technological innovation while ensuring appropriate labour market regulation and social protection. The private sector is a central player as an investor, employer, innovator, provider of work-based learning, and partner in curricular development and financing of skills training (Chapter 9). In Egypt, for example, employers participate in public-private partnerships to co-design secondary-level technical education curricula and offer work-based learning experiences (Box 4.3). Employers determine many aspects of job quality and who gets to participate.

Transition to work efforts have often focused on what young people learn, without devoting equal attention to the wider conditions that enable them to translate learning into livelihoods. A systems lens (Figure 4.1) shifts the focus from simply preparing young people with skills and competencies to also strengthening the connections, services and opportunities that

BOX 4.3

Egypt: Reforms to technical secondary education strengthen links with employers

Enrolment in upper secondary-level vocational education in North Africa has declined since 2020, yet still stood at approximately 31 percent as of 2022, more than twice that of sub-Saharan Africa's secondary-TVET enrolment rate of less than 15 percent.[28] Egypt has one of the continent's largest technical secondary education systems. Since 2018, the government has pursued its Technical Education 2.0 (TE 2.0) reform to modernize technical education through competency-based curricula, teacher training, stronger employer engagement, and work-based learning. The reforms aim to equip young people with practical and transferable skills more closely aligned with labour market requirements, while improving the status and attractiveness of technical education. In the 2023–2024 academic year, technical schools administered by Egypt's Ministry of Education and Technical Education enrolled approximately 2.2 million students across 3,386 schools, with enrolment exceeding 2.7 million when the wider TVET sector is included.[29]

A key element of Egypt's TVET reform is creation of Applied Technology Schools (ATS) with sector-specific curricula tied directly to corporate partners and economic priorities. Egypt expanded its ATS network from three schools in 2018 to 90 by April of 2025, including 10 International Applied Technical Schools that feature innovation labs, language labs, and sustainability initiatives in solar energy and water reclamation. The Ministry oversees the schools, which are governed as public-private partnerships lasting six to 10 years. While the Ministry supplies school buildings, utilities, and teachers, private partners co-manage the schools, co-create curricula, develop business plans for financial sustainability, invest in facilities, and support workforce training, international accreditation costs, internships, and employment placement.

Together, Egypt's ATS account for less than one percent of the country's technical learners. Most ATS do not charge student fees, relying fully on public and private support. A key challenge moving forward will be to sustain private sector engagement and meet the government's goal to scale the ATS model to 200 schools by 2030.[30] While evidence shows that the ATS reforms have expanded industry partnerships, introduced new training models, and attracted students, evidence is not yet available on their impact on graduates' employment or income. A 2024 study found no clear employment or wage advantage for vocational education compared to general upper secondary education in Egypt, though the study did not focus specifically on ATS schools.[31]

enable them to navigate diverse pathways into work. It recognizes that better preparation and navigation support cannot compensate for a shortage of productive work; transition systems connect education reform with economic, industrial, enterprise, and labour market policies that expand viable livelihood opportunities.[32]

Secondary education systems across Africa have made great progress in aligning curricula with work-relevant skills, but skills alone do not guarantee successful transitions to work. Young people report that the relevance of secondary education is shaped not only by what they learn in school, but by the extent to which education systems support their transitions to work. Across the evidence base, young people continue to view secondary education as an important foundation for building knowledge, confidence, aspirations, and life skills. Many also express concern that educational attainment alone does not reliably translate into employment, income generation, or economic mobility. In contexts characterised by high youth unemployment, informality, and limited formal sector opportunities, young people increasingly judge the value of education by its ability to support meaningful livelihood opportunities rather than credentials alone.[33] These challenges underscore the importance of strengthening both the contribution of each pillar and the connections among them.







4.4 Career guidance and mentorship help young people better understand the work opportunities available to them

Career guidance and mentorship can help young people access and interpret information about skills demand, employment, and entrepreneurship opportunities. While accessing labour market information systems is one way of gathering this information (Section 4.2), this section explores how career guidance, informational campaigns, and mentorship can be used to support learners.

Despite its importance, limited evidence exists on the extent of campaigns and other initiatives to improve learners' access to labour market information in secondary education systems. In 2023, the Rwanda TVET Board conducted a three-week national awareness campaign in 80 general secondary schools. Lower secondary school learners and teachers received information on Technical Secondary School programs, job-ready skills, employment opportunities, and progression into further engineering or other technical training. This is a useful example of a public agency bringing career and pathway information into general secondary schools, but evidence of impact is scarce, and it appears to have been a time-limited outreach campaign rather than school-based career counselling.[34]

Career guidance has the potential to strengthen transitions to work by equipping young people with relevant knowledge and skills. A study from Uganda found that school-based career guidance was positively associated with young people's career self-concept, or their ability to interpret how their interests, values, personality traits, or skills relate to the world of work.[35] Similarly, evidence from Tanzania and South Africa suggests that the provision of group-based career interventions improved young people's decision-making and knowledge of occupational pathways.[36] Evidence on subsequent employment, however, remains limited.

Governments are increasingly seeking to embed career guidance within secondary education systems. Recent reforms go beyond standalone

policies: Rwanda is institutionalizing career guidance through school-based "career guidance and counselling corners," intended to provide secondary learners with information and support as they consider further education, technical and vocational training, and future career pathways. Rwanda's 2024–2029 Education Sector Strategic Plan aims to expand these career resources from 1,632 to 4,923 secondary schools,[37] while Kenya's 2023–2027 plan includes career guidance programs and a target to establish career guidance offices in 9,350 schools.[38] Kenya's junior secondary guidelines also require schools to timetable career guidance and expose learners to job shadowing and other career experiences,[39] while South Africa is institutionalizing Career Education and Guidance alongside the expansion of academic, vocational, and occupational pathways.[40]

Governments are increasingly seeking to embed career guidance within secondary education systems.

These reforms are too recent for their effects at scale to be assessed reliably. But emerging evidence underscores the importance of high-quality implementation. In Rwanda, career counselling among secondary students has been associated with better academic performance.[41] Studies in Kenya, however, point to mixed results: one study found positive associations with academic performance, particularly for higher performing students,[42] while a second study found no significant difference between the career development of students participating, compared with those who did not participate, in career counselling.[43]

Some countries are also beginning to make career guidance more explicitly inclusive. South Africa's National Youth Policy 2020–2030, for example, calls for early career guidance for students with disabilities,[44] while Kenya's National Council for Persons with Disabilities launched targeted career guidance and mentorship for secondary-school learners with disabilities in 2024.[45] Beyond government-led reforms, a UNESCO-UNEVOC initiative through TVET institutions in Ghana, Madagascar, Nigeria, South Africa, Tanzania, and Uganda worked to strengthen gender-responsive career guidance and to support girls and young women in pursuing pathways such as STEM.[46]

These efforts are important because teachers and guidance counsellors can help adolescent girls, young women, and young people with disabilities explore career options. Evidence from employed young people with disabilities (aged 18 to 36) in South Africa shows they value structured, non-judgemental opportunities to explore career options based on their interests rather than their disability.[47] Similarly, evidence from secondary schools in Tanzania indicates that although gender gaps between girls and boys may persist, career guidance can increase girls' interest in pursuing STEM pathways.[48]

Translating policy ambitions into consistent, high-quality provision at scale remains challenging. Schools are often perceived as the primary platform for delivering career guidance, yet limited staffing and resources can constrain their capacity to provide comprehensive guidance at scale.[49] As a result, career guidance is often delivered through non-governmental organizations, donor-funded initiatives, or parallel government programs that operate outside formal education systems, which limits both reach and consistency.[50] Young women, rural young people, refugees, displaced young people, and other marginalized groups are among those least likely to receive meaningful support despite facing the greatest barriers to navigating transitions.[51] Together, these challenges mean that access to career guidance remains uneven and provision is often fragmented across much of Africa.

Emerging evidence points to a broader role for career guidance extending beyond the provision of occupational information to helping young people navigate increasingly complex pathways into work and livelihoods. Career guidance often focuses on changing individual behaviour while paying insufficient attention to structural realities, including limited formal job creation,

weak recognition of skills acquired outside formal education, geographic inequalities, and persistent barriers faced by marginalized groups.[52] Guidance that ignores these realities risks raising aspirations without adequately supporting young people to navigate the conditions they encounter. Rather than viewing successful transitions primarily as a matter of individual career planning, emerging literature highlights the importance of understanding how social norms, labour market conditions, institutional constraints, and unequal access to opportunities influence young people's pathways.[53]

In this context, career guidance is increasingly being reconceptualized as a mechanism for building "navigational capacities" that enable young people to move through complex, fragmented, and non-linear transitions.[54] Rather than directing learners toward a single destination, effective guidance helps them interpret opportunities, respond to constraints, mobilize social networks, and adapt their strategies as circumstances change.[55] It helps young people navigate their aspirations, opportunities, and constraints across education, work, entrepreneurship and other livelihood pathways.[56] In this framing, guidance is most effective when it supports both agency and adaptability while helping young people understand how labour markets, institutions, and social expectations influence the pathways available to them. The purpose of career guidance is not simply to direct learners toward occupations, but to help them understand themselves and the opportunities and constraints around them, make informed choices, build networks, and adapt their plans as circumstances change.[57]

Family and community relationships can affect career decisions as much as formal information services. Mentors, peer networks, family members, community actors, and trusted intermediaries often play a more influential role in career decision-making than formal information systems.[58] Evidence from Morocco, South Africa, and Nigeria suggests that parents, teachers, siblings, peers, educational experiences, and broader social expectations play an important role in shaping how young people understand opportunities and make decisions about education, training, and employment pathways.[59] Young people consulted in Ghana, Malawi, Senegal, Sierra Leone, and Tanzania reported that successful labour market entry depends more on personal networks and family connections than on structured support provided through schools.[60] As a young man from Malawi[61] said:

> **"These days, getting a job depends largely on connections and who you know in the system. You can be well qualified academically, but if you have no connections or no next of kin in positions of influence, it will be difficult to secure a job."**

Peer mentorship can help young people access not only information, but confidence, networks, legitimacy, encouragement, and practical guidance. Tracer data from Mozambique show that many graduates access employment through personal networks, informal contacts, media, and online searches, while formal employment services and recruitment agencies play only marginal roles.[62] These findings suggest that successful transitions depend not only on qualifications, but also on young people's ability to access information, mobilize networks, and navigate opportunities across fragmented labour markets.

In this context, career guidance is increasingly being reconceptualized as a mechanism for building "navigational capacities" that enable young people to move through complex, fragmented, and non-linear transitions.

The Learner Guide model developed by the Campaign for Female Education (CAMFED), combines digital platforms with peer mentorship, providing young women with career information alongside networks, encouragement, and practical guidance that can strengthen their social capital and agency (Box 4.4).[63] The model combines

digital platforms with peer mentorship, providing young women with career information alongside networks, encouragement, and practical guidance that can strengthen their social capital and agency.[64] Guidance systems that recognize these social and relational influences tend to be more effective than models that assume young people make decisions independently, highlighting the importance of embedding career guidance within wider networks of support.

Technology-based approaches offer opportunities to scale guidance services, but their effectiveness depends on accessibility, digital infrastructure, and complementary human support.[65] Digital platforms such as Fikia, in collaboration with employers who post internship and job opportunities, have begun to offer career guidance and job placement services to young people at the tertiary level. No such pan-African platform appears to exist at the secondary level, but Kenya's CareerFlow offers secondary students career profiles and information on job qualifications, job market conditions, and subject career matching. Student Hub Uganda is a digital secondary-school career-guidance platform covering subject selection, career planning, resume writing, and virtual internships.[66] Evidence is not available on how widely these platforms are used, their impacts on job seekers. Importantly, they do not include informal work opportunities that will absorb the majority of out-of-school learners. While expanding the development of these platforms presents an opportunity, inclusive digital design and the incorporation of informal sector opportunities will be important to ensure they reflect labour market realities from which young people in rural and remote areas, girls and young women, displaced young people, and young people with disabilities can benefit (see more in Chapter 8 on technology).

BOX 4.4

CAMFED's Learner Guide Model demonstrates the importance of social networks

CAMFED's work in Ghana, Tanzania, and Zimbabwe illustrates how support for successful transitions can extend beyond career guidance or financial assistance alone. Through its Learner Guide model, trained young women provide peer mentorship, social and learning support, leadership development, and guidance to young women learners while serving as role models in their communities. Increasingly embedded within government systems, this approach seeks to strengthen connections between education, livelihoods, leadership, and longer-term life outcomes.

Evidence from program participants in Tanzania and Zimbabwe suggests that young women value outcomes that extend beyond income generation, including increased confidence, leadership skills, mentoring relationships, and stronger social support networks. Participants identified mentorship and peer relationships as particularly important in helping them navigate transitions from school to entrepreneurship and economic activity.

The model highlights how successful transitions often depend on social and relational resources as much as technical skills or financial capital. Through peer mentorship, leadership opportunities, and community engagement, Learner Guides help young women build confidence, strengthen decision-making capabilities, access information and networks, and navigate opportunities and constraints in their local contexts. In this sense, the model illustrates how transition systems can support not only livelihoods and employment outcomes, but also the agency, relationships, and navigational capacities that enable young people to act on emerging opportunities and pursue dignified and fulfilling livelihoods.

Source: Chetty et al., *Rethinking Career Guidance for African Secondary Students* (Future Fit Young Africa; Mastercard Foundation, 2026).



4.5 Work-based learning opportunities help young people develop skills and obtain job experience

Work-integrated learning gives young people opportunities to apply classroom learning in real work settings. By combining classroom instruction with structured exposure to work-based experiences such as internships, apprenticeships, workplace visits, job shadowing, and opportunities to practice entrepreneurship, young people can develop technical and transferable skills in real-world contexts. Work-based learning within secondary education systems also allows young people to build confidence, networks, and experience that support their transitions to employment and entrepreneurship.[67]

Practical and work-based experiences can strengthen young people's transitions to work, particularly when employers are involved in the process and placements provide meaningful learning.[68] In Senegal and Cameroon, apprenticeship or vocational training was associated with improved employment probability or job quality. In some cases, it also led to employment under formal contracts and registration for social insurance, which are associated with formal employment.[69] A review of models of transition support across the continent found that work-integrated learning and apprenticeships are more effective when employers help design curricula and assessment, placements provide concrete learning, and technical training is combined with transferable skills.[70]

Young people consistently emphasize the importance of workplace exposure.

Young people consistently emphasize the importance of workplace exposure. Learners frequently report limited access to internships, apprenticeships, and other opportunities to

acquire firsthand work experience.[71] Many also say that exposure to workplaces and diverse career pathways should begin earlier in their educational journeys.[72] Young people in Senegal emphasized that exposure to diverse work opportunities and career paths should begin as early as the lower secondary level, before work trajectories become harder to change.[73] Further, evidence on internships and structured work-based learning in Africa is concentrated largely in TVET and post-secondary settings,[74] despite the fact that only a small minority of African young people progress to this level. Such opportunities remain much less institutionalized within general secondary education.[75] As one young Ghanaian participant explained, exposure to workplace experiences can help young people make more informed decisions about their futures:

> **"When we are exposed to internships at the early stages, we are able to assess ourselves and know which programs are suitable so that we can choose the best career path."**[76]

For these young people, workplace exposure is a central part of preparing for transitions, not an optional addition to schooling.

Countries are embedding work-based learning within secondary education and training. Rwanda has piloted TVET Centres of Excellence to address the high cost of TVET expansion, with one centre of excellence for every TVET trade in the curriculum. (Box 3.3, Chapter 3).[77] Ghana is incorporating work-based learning within the public secondary TVET system through industrial attachments, internships, apprenticeships, and "Workplace Experience Learning," including in the informal sector. Government programs – such as the Ghana Jobs and Skills Apprenticeship Programme, Ghana TVET Voucher Project, and the newer National Apprenticeship Programme – connect formal training and national certification with structured workplace learning, with some training delivered through informal master crafts people rather than public institutions. The programs, which are secondary or pre-tertiary level, connect competency-based training with recognized qualifications and are intended to support young people who are seeking to start their own businesses. A report by the Commission for Technical and Vocational Education and Training (CTVET) indicates that by 2023, more than 40,000 learners had been certified through the Ghana Jobs and Skills Apprenticeship Programme.[78]

However, implementation challenges persist. Efforts are often constrained by limited financing and school capacity, weak or unsustained links with employers, and insufficient support for young women and young people with disabilities.[79] Internships remain inconsistently available and institutionalized in Africa, and unpaid opportunities can create barriers to participation.[80]

Dual training models can ease the transition into employment and entrepreneurship by helping learners gain experience while seeing firsthand how enterprises operate. These models combine institution-based learning with substantial experience in the workplace, allowing young people to apply technical knowledge, develop transferable skills such as communication, teamwork and problem-solving, understand workplace expectations, and build relationships with potential employers and customers. An evaluation of a dual training pilot in Ghana, however, suggests the effectiveness of such models depends on strong collaboration between training institutions, employers, and trade associates.[81] Curricula need to be matched to both learners' and labour market needs, with sufficient training time and resources, and meaningful involvement of trainees and workplace actors in program design and delivery.[82]

Dual training models are becoming increasingly common across Africa. Countries such as Algeria, Rwanda, and Senegal have incorporated dual training into general and secondary education, resulting in improvements in skills development and workforce integration (Box 4.5). Work-based and dual training are among the most widely documented approaches for improving the relevance of TVET and among those most

often associated with measurable labour market outcomes.[83]

Despite their importance, secondary schools and training institutions face challenges implementing dual training models. These difficulties include lack of teachers and instructors with work expertise in areas where labour is in demand; weak links with employers and entrepreneurs that limit employer participation; a lack of employers, especially in remote areas; crowded curricula; insufficient labour market information on growing sectors and opportunities; and challenges in connecting training to livelihood opportunities in the informal sector. Alternatives for addressing these challenges are described in Box 4.6. Evidence from Senegal's PIC IV program and Algeria (Box 4.5) indicate that legal requirements, financial incentives, and formal co-training arrangements can boost employer participation in dual training and other work-based learning programs, helping to address one of the main challenges these programs face.[87]

Entrepreneurship practice

Exposure to entrepreneurs and opportunities to practice entrepreneurial skills are particularly relevant where informal self-employment is widespread. Entrepreneurship programs at the secondary level in both general and TVET education are more promising when they move beyond classroom-based instruction to offer

BOX 4.5

Senegal, Rwanda, and Algeria: Dual training builds skills through learning and work

Senegal, Rwanda, and Algeria illustrate the potential of different dual training approaches:

In Senegal's PIC IV program, public TVET institutions partnered with local master artisans and employers to combine institutional and practical training relevant for work in both the formal and informal sectors. Longitudinal evidence from 2020–2025 found that the graduate insertion rate into employment reached 61 percent, 56 percent were placed within 12 months, and 36 percent entered self-employment; employer satisfaction rose from 68 percent to 81 percent, while employer partnerships became the main recruitment route for graduates.[84]

In Rwanda, a secondary-TVET, dual delivery pilot split learning between school and industry. Government officials reported that students acquired skills using practices and equipment currently used by industry and that some learners were subsequently hired by the same businesses in which they completed their placements. The pilot also demonstrated a key scaling challenge: the Rwanda TVET Board had to cover transport, accommodation, meals, and workplace consumables when employers were unwilling to absorb these costs.[85]

Algeria demonstrates how dual training can be institutionalized at a national scale. Its apprenticeship framework requires substantial workplace learning – at least 50 percent of training time overall – and links public and private training centres with some 20,000 enterprises, supported by more than 100 national and 7,500 local partnership agreements. Apprentices receive contracts, remuneration, and social protection, while tax incentives encourage firms to participate; 43 percent of participating companies received professional tax exemptions in 2020. Apprenticeship accounted for roughly 30 percent of national training capacity, with more than 650,000 places in the 2023–2024 school year. Although employment outcomes from Algeria's national model have not yet been rigorously evaluated, its scale illustrates how legislation, employer incentives, and coordination across education systems, broader government policies, and employers can scale and embed work-based learning within national secondary TVET systems.[86]

BOX 4.6

Diverse forms of dual training and work exposure exist

To address challenges with sustaining dual training and work exposure programs, countries can explore a variety of alternatives, though evidence on their feasibility and effectiveness in Africa is limited. Innovative models of dual training and work exposure include:

- creation of dedicated career and transition staff within schools and training institutions,
- school clusters or regional transition centres,
- alumni networks,
- digital employment platforms,
- extracurricular training programs through clubs and after school programs,
- employer levies and subsidies,
- partnerships with local business and trade associations,
- small and medium sized enterprises, and
- informal master craftspeople, and shared training centres.

Sources: Ansari, *Transitions from Secondary Education to Work in Africa: A Scoping Review of Post 2020 Evidence* (The REAL Centre, 2026); African Center for Economic Transformation, *Secondary Education in Africa: The Changing Nature of Work in Africa* (2026).

experiential learning opportunities.[88] These include support to meet entrepreneurs, identify market opportunities, develop and test business ideas, sell products or services, and receive mentoring, finance, and post-training business support. This is especially important in African labour markets where secondary school and TVET learners will enter self-employment in the informal sector (Chapter 2).

Exposure to entrepreneurs and opportunities to practice entrepreneurial skills are particularly relevant where informal self-employment is widespread.

Entrepreneurship experiences are increasingly being embedded within general secondary school programs in Africa, sometimes at scale. Examples include Tanzania, Ghana, Senegal, and Rwanda. In Tanzania, an ICT-enabled secondary school employability project combined digital skills, entrepreneurship, and transferable-skills training with student-run school enterprises. As reported by students, this model gave learners direct practice in collaboration, leadership, communication, creativity, and business activity.[89]

Ghana's standards-based secondary curriculum emphasizes entrepreneurship alongside creativity, problem-solving, digital literacy, and socio-emotional skills. While young people in Ghana strongly supported more practical entrepreneurship education and identified business, digital, and communication skills as important for both employment and self-employment, they reported that entrepreneurship training remains examination-oriented and requested additional workplace and enterprise experience.[90]

Beginning in 2016, Senegal's APTE[91] program integrated market-oriented work readiness instruction and after-school entrepreneurship clubs into approximately 210 public lower secondary schools and 58 TVET institutions. Approximately 37,000 learners annually receive entrepreneurship and career development support. Learners formed simulated companies and prepared business plans and participated in income generating activities and savings groups.[92] Rwanda has also incorporated entrepreneurship and work readiness training in its secondary education curriculum nationally since 2016.[93]

Entrepreneurship training is covered further in Chapter 3.

In addition to practical experience, finance, mentoring, and business development support are important to assist young people's transitions to self-employment.

Involving young entrepreneurs as mentors and trainers is a promising but under researched approach. One study found that "very young entrepreneurs" aged 15 to 25 are more likely to hire other young people as employees, to start businesses using new technologies, and to engage in social entrepreneurship that helps address local challenges. It also found that when young entrepreneurs receive mentorship and experience both failure and success in their businesses at an early age, they are more likely to establish a greater number of successful businesses over time.[94] More research is needed in this area, particularly because it offers a youth-led approach to entrepreneurship training.

In addition to practical experience, finance, mentoring, and business development support are important to assist young people's transitions to self-employment. The Financially Self-Sufficient Schools approach in Tanzania[95] and PFPI in Senegal (Box 3.5) both offer examples of entrepreneurship practice. Implemented in Tanzania beginning 2015, Financially Self-Sufficient Schools were originally developed by Fundación Paraguaya, and provide students with practical business experience while generating income to offset schools' operating costs and was.[96] In Senegal's PFPI, post-training accompaniment for transitions into self-employment in agriculture and other value chains was viewed by stakeholders as central to observed gains in young people's confidence, motivation, and professional ambition.[97] However, both accompaniment and access to finance were difficult to scale and did not reach all participants.[98]

CAMFED's transition model (Box 4.4), in which girls participate in a six-month, post-school transition program, offers entrepreneurship training and practice grants to start a business.[99] Tracking of Mastercard Foundation Secondary Scholars over time found that education combined with a broader entrepreneurship support ecosystem helped 18 percent of graduates start a business, mostly in the informal sector. Of those who started a business, 29 percent were able to pay workers or family members.[100] The Anzisha Prize similarly demonstrates how financing can be combined with mentoring, networks, and sustained business-development support to help young entrepreneurs grow their businesses (Box 4.7).

Taken together, these examples suggest a progression from awareness of entrepreneurship to exposure and then to markets, followed by practical enterprise experiences, to startup finance, mentoring, and business-development support. Schools and TVET institutions are unlikely to build such an entrepreneurship ecosystem alone. Partnerships with employers and entrepreneurs, and government policies that facilitate young people's access to financing and reduce barriers to starting a business, will be essential.



BOX 4.7

The Anzisha Prize illustrates the value of finance and entrepreneurship support

The Anzisha Prize for young entrepreneurs operates outside of national secondary education and TVET systems but demonstrates the importance of long-term mentoring, seed funding, budgeting, financial management, local incubation, and post-award business-development support. Seventy percent of responding prize winners said the awards had a very positive effect on their businesses and another 28 percent said they had a somewhat positive effect. Cash awards provided seed capital, while non-financial support strengthened organizational capacity, transferable skills, networks, credibility, and access to investors; businesses ranged from microenterprises to firms employing more than 100 people.

Source: Agbe, et al., *Review of Mastercard Innovative Prizes in Africa* (Participatory Development Associates Ltd., 2020).





4.6 Holistic support services are critical to supporting the most marginalized

This section considers additional barriers to work faced by young women, young people with disabilities, and refugees and displaced young people and the holistic supports that can help address these barriers. It complements the broader discussion of inclusive supports in Chapter 6. Where these dimensions of marginalization intersect, exclusion can be compounded.

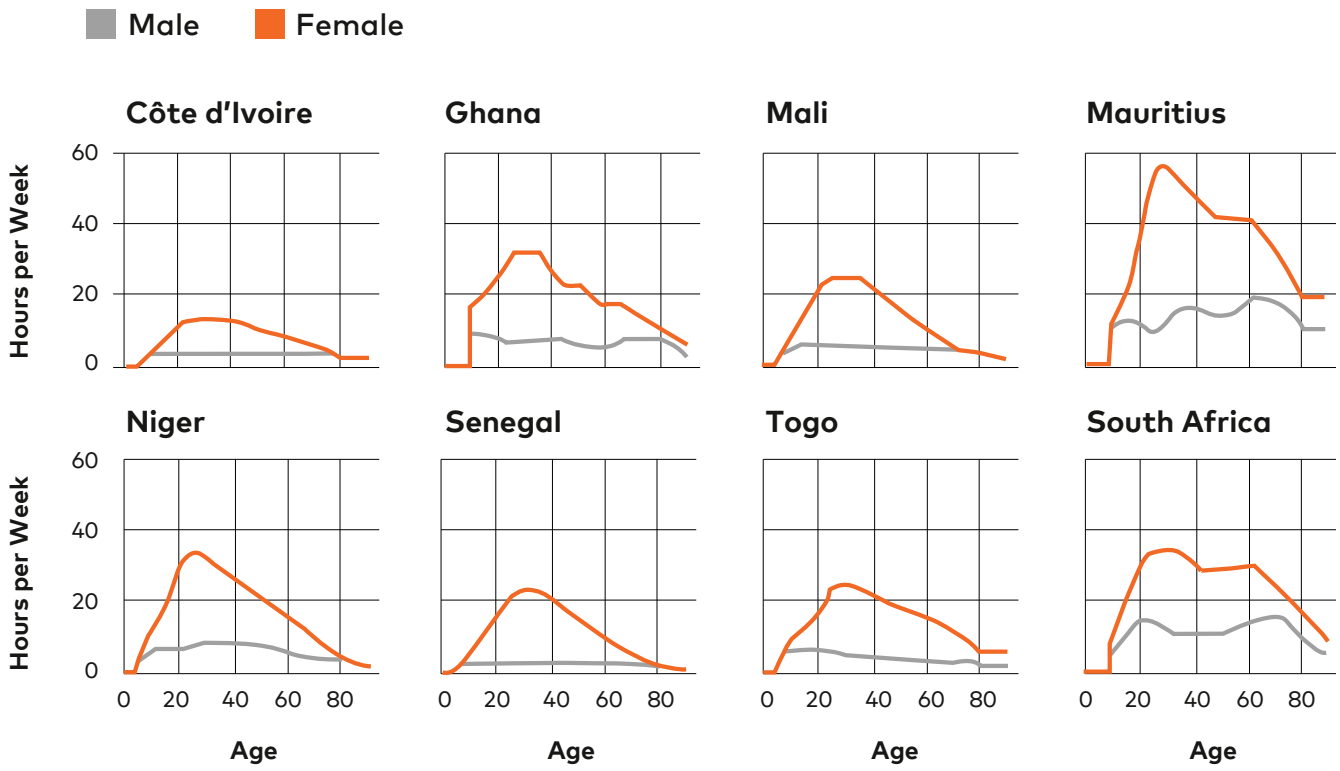
Young women often require a combination of educational, psychosocial, institutional, and community-based support to transition successfully into work.

Supporting girls and young women

In several countries, gains in girls' educational attainment coexist with high rates of economic inactivity, NEET status, and informal employment among young women.[101] Evidence from eight African countries (Figure 4.3) shows women spend substantially more time on unpaid care work than men. Importantly, the data indicate that women's peak periods of time spent on unpaid care work correspond to the age (mid-teens to early twenties) at which young people typically leave education and training and transition to remunerated work.[102] This phenomenon may help explain why young women transition to remunerated work at lower rates than young men with similar levels of education.[103] Gender norms also shape the type of work young women are more likely to access. Analysis of nationally representative labour data from South Africa, for example, demonstrates that gender-segregated educational choices are reflected in later employment patterns, with women concentrated in lower-paid sectors.[104] This underscores the need for gender-responsive transition support for young women to help them learn about and access

FIGURE 4.3

Young women in Africa spend a significant amount of time on unpaid care work



Source: World Data Lab et al., *Africa Youth Employment Outlook Report* (2026), using data from Counting Women's Work 2022.[105]

training and employment pathways where young women are underrepresented.

Young women often require a combination of educational, psychosocial, institutional, and community-based support to transition successfully into work.[106] This holistic model goes beyond financial and educational support to address young women's multifaceted barriers when transitioning to work, including pregnancy, restrictive social norms, and care duties. Evidence highlights the importance of community awareness and norm changes, mentorship and female role models, psychosocial and mental health support, safe spaces, gender-transformative community engagement, institutional support systems such as access to childcare or flexible training, re-entry policies for adolescent mothers, and support for adolescent well-being and dignity during transitions into work.[107] Such an approach can be useful in addressing the range of barriers that may help explain why young women are not transitioning to work and livelihoods at rates proportional to their expanded enrolment in secondary education since 2020.

These types of supports are shown to be critical for sustaining girls' participation in education and enabling successful entry into employment. In Kenya, for example, institutional support systems, reproductive health services, and re-entry mechanisms were found to be important to supporting transitions into work during adolescent pregnancy in informal settlements.[108] A qualitative study of young female migrants in Ethiopia points to the importance of improving protections for migrant girls and women, creating stronger education to employment pathways within education programs, and recognizing care work.[109] Finally, evidence from CAMFED (Box 4.4), Sierra Leone (Box 4.8), and South Africa highlight how mentorship, peer support, female role models, emotional support from caregivers, and

psychosocial interventions can help girls persist in STEM fields. This evidence demonstrates that these types of holistic, psychosocial supports can build resilience against discriminatory attitudes and hostile learning environments.

While these examples are promising, more evidence is needed to understand how they can be embedded within education systems and implemented at scale. The nature of the barriers to women's transitions to work are well known, but evidence supporting a holistic set of supports is still relatively new, with few government initiatives evaluated. Little quantitative evidence is available on the reach and impact of these models on young women's employment and income outcomes.

Supporting young people with disabilities

Young people with disabilities face substantial barriers to entering work. They are nearly twice as likely to be outside education, employment, or training,[110] reflecting systemic exclusion. Weaker transition and employment rates reflect structural inequalities in system design, including inaccessible infrastructure, non-adapted curricula and assessment, limited assistive technology, weak transition planning and support responsive to their needs, employer discrimination, and discouragement that restricts young people's career choices and agency.[111]

The career aspirations and transitions of young people with disabilities can be constrained by discouragement and limited autonomy, reinforcing the need for inclusive support systems, career guidance, and links to work-based learning experiences within secondary education systems.[112] However, few documented examples of programs exist within secondary level general and technical education that offer career guidance and work-based learning opportunities for youth with disabilities. Those that do are largely implemented by civil society and other non-state actors. Connecting the Dots in Uganda, for example, offers holistic transition support for rural youth with disabilities, with evidence of impact in terms of employment and entrepreneurship, yet it operates outside the education system.[113] The Ethiopian Centre for Disability and Development works with Christian Blind Mission to provide TVET learners with disabilities training in employability, workplace transferable skills, entrepreneurship, and business development.[114] It also offers practical assistance with job searches and starting or improving small enterprises. This model extends support beyond the technical course and addresses the actual transition

BOX 4.8

Sierra Leone: Thousands of adolescent girls and young mothers return to school

In Sierra Leone, a Ministry of Basic and Senior Secondary Education program, implemented in collaboration with the United Nations Population Fund and the government of Ireland's Irish Aid development program, helped nearly 10,000 out-of-school girls in districts with high rates of teenage pregnancy and child marriage return to formal education between 2022 and 2025. This program is part of Sierra Leone's broader Radical Inclusion agenda, implemented during and after the COVID-19 pandemic. The program reversed the previous exclusion of pregnant girls and adolescent mothers from school and created a policy environment supporting their return. It provided wrap-around supports, including enrolment assistance, remedial learning, life-skills training, and sexual and reproductive health education. The program was not fully holistic in that it did not address childcare needs, psychosocial support, or links to livelihoods and work. Evidence on retention in school and longer-term outcomes remains limited.

Source: Hunt et al., *Secondary Education in Sierra Leone: Country Case Study* (Laterite, 2026).

process. More evidence is needed to track trainees' pathways over time to better understand the impact of this approach.

Supporting refugees and displaced young people

Refugees and displaced young people – especially those living in camps or settlements – face unique challenges that limit their ability to transition into work. These include disrupted and limited access to education, a lack of documentation, stigma and discrimination, restrictive policies on leaving camps, and lack of a legal right to work.[115] Measures to support refugees and displaced young people to transition into work often begin outside the school system by removing legal barriers to employment.

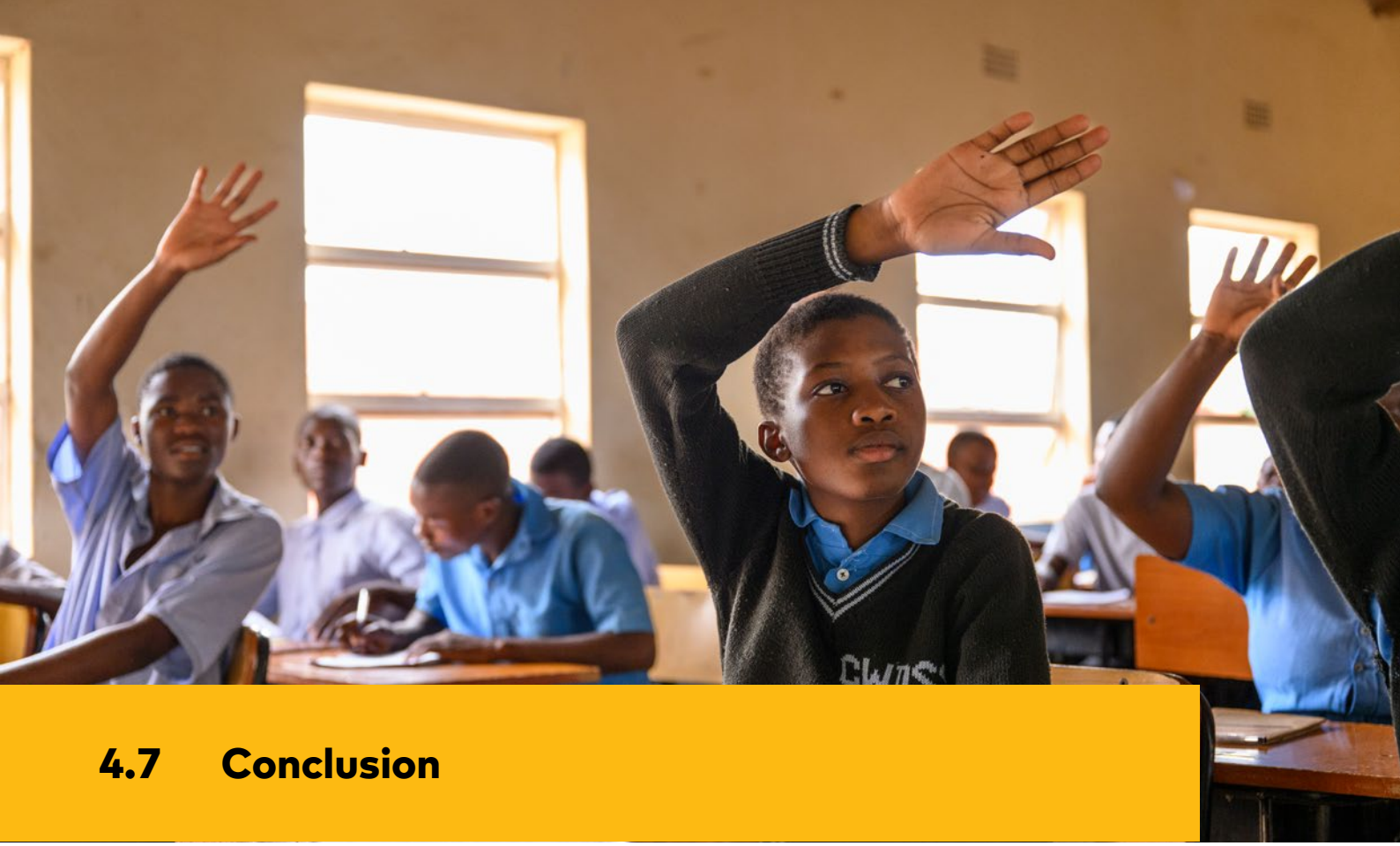
Countries are increasingly making efforts to remove legal barriers to employment for refugees and displaced young people. In 2024, Ethiopia adopted a government directive operationalizing the right of recognized refugees and asylum seekers to work. Zambia's National Refugee Policy and Implementation Plan, launched in 2024, aims to further socioeconomic inclusion of refugees, in part through access to employment and livelihoods.[116] Since 2023, Chad's National Asylum Law has granted refugees the right to work, to own land, to housing, and to own a business. In Sudan, with the support of humanitarian organizations, diplomas earned outside the country are increasingly recognized.[117] Access to documentation is also an important tool to enable young people affected by conflict and displacement to enter school, training, and work.[118] These examples demonstrate the importance of coordination and collaboration with government as part of the wider transition to work system.

Removing restrictions on refugees' access to work can help both refugees and host communities. Refugees receive workplace experience and access to networks, while host communities can meet labour demand and reduce support costs. Data from 10 refugee-hosting countries, including four in Africa (Chad, Ethiopia, Niger, and Uganda) indicate that in countries with more progressive policies on work access and freedom of movement, refugees tend to have better socioeconomic outcomes, with women achieving the greatest gains.[119] Removing legal and bureaucratic hurdles to refugees participating in labour markets can help reduce their reliance on humanitarian assistance and host governments.[120] While refugees' right to work is codified in the 1951 Convention Relating to the Status of Refugees, this does not necessarily translate to their ability to access the labour market if they cannot move freely, own assets such as land, or start their own businesses.

Not all refugees benefit from the right to work equally: those living in camps or settlements face additional barriers to employment. Fifty-five percent of refugees in Africa reside in camps or camp-like locations, including managed settlements, which limits their access to employment and markets.[121] In Ethiopia, higher levels of educational attainment and experience increase the likelihood of employment and income levels for members of host communities, but not for refugees living in camps, according to survey data.[122] In Chad, despite a national law protecting asylees' freedom of movement, refugees must go through complicated authorization processes to access jobs and markets outside of camps, restricting their ability to find sustainable livelihoods.[123] Refugees are more likely to receive returns from education and experience when living outside of camps.[124]

Removing legal and bureaucratic hurdles to refugees participating in labour markets can help reduce their reliance on humanitarian assistance and host governments.





4.7 Conclusion

African governments are increasingly expanding beyond the formal curriculum to integrate transition to work support within secondary education systems. Career guidance, mentoring, work-based learning, internships, apprenticeships, entrepreneurial support, and professional and community networks are helping young people understand available pathways, make informed decisions, build confidence, acquire practical experience, and navigate transitions into employment, self-employment, entrepreneurship, and further education. Ensuring these supports are responsive to young people's circumstances requires improving the quality of and access to labour market information, while reducing barriers to business creation and financing, and providing health and psychosocial services to marginalized populations. Expanding their reach and sustaining their impact will ultimately require stronger government leadership and closer coordination and collaboration across education, labour, social protection, health, and community stakeholders.

Secondary education systems, governments, and employers all play crucial, complementary, and reinforcing roles in providing additional support to help young people access work, livelihoods, and entrepreneurship. Employers, both formal and informal, also play a critical part in helping to finance training while facilitating work-based placements and experiences for young people. Schools and training institutions must be able to coordinate these experiences with the private sector to connect young people with mentors, networks, and practical work experiences. This coordinated system of support can facilitate transitions into the world of work for young people, including adolescent mothers, refugees, and young people with disabilities.

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CHAPTER 5

Empowering Teachers and School Leaders to Deliver Transformation

Strengthening the human foundations of effective and equitable secondary education systems



QUESTION THIS CHAPTER ANSWERS

How are teachers, school leaders, and the wider education workforce evolving to support more diverse learners and pathways through education and beyond?

What has changed since 2020

The scale and nature of the workforce challenge have become clearer since 2020. Sub-Saharan Africa alone needs an estimated 10.7 million additional secondary teachers to achieve universal secondary education by 2030. The COVD-19 pandemic and increasing risks of crises have placed new burdens on the mental health and well-being of teachers. Across Africa, countries are pursuing promising reforms to professionalize the workforce, enhance teacher education, training, and deployment, and support school leadership. These reforms vary from policy formulation to full implementation, but evidence suggests that reforms to strengthen the teaching workforce have not kept up with curricular changes. Countries are creating new pathways into the profession and making better use of existing expertise. Building an education workforce that is larger, more diverse, better supported, and more effectively deployed will be essential to improving learning and preparing young people for successful transitions to work.

What is needed now

The ambitions placed on secondary education depend ultimately on the people responsible for delivering them. Qualified teachers remain central, but increasingly complex expectations around competency-based learning, inclusion, technology, learner well-being, and transitions to work mean they cannot do everything alone. Reforms to teacher recruitment, training, deployment, and workforce planning have not kept pace with these evolving expectations. Systems need both to strengthen and professionalize teaching and leadership and to mobilize a wider ecosystem of specialist and support roles.



5.1 Secondary education requires a reimagined workforce

As secondary education systems are expected to deliver increasingly ambitious outcomes for young people, demands on teachers and school leaders are increasing rapidly. The responsibilities of educators now extend beyond subject instruction. As this report illustrates, they are now increasingly expected to provide competency-based curricula (Chapter 3), support learners through key education to work transitions (Chapter 4), integrate technology into teaching and learning (Chapter 8), promote learners' broader well-being (Chapter 6), and respond to diverse learner needs. As education systems also respond to broader priorities such as climate change, technological advancement, and engaged and responsible citizenship, many of these additional responsibilities inevitably fall on teachers and schools. Yet the systems that prepare and support teachers and school leaders have not expanded at the same pace as these responsibilities.

The result is a growing mismatch between the demands placed on teachers and the conditions and support available to them. Teacher recruitment, training, and workforce planning have not kept pace with the evolving demands of secondary education systems. Rapid expansion of secondary education has created demand for more than 10 million additional secondary school teachers in sub-Saharan Africa alone,[1] a shortage becoming increasingly difficult to sustainably address through traditional workforce models, particularly in the context of mounting fiscal pressures (Chapter 1). The challenge for African education systems is not only to recruit enough teachers, but also to ensure that they have the diverse workforce capacity, expertise, and support structures needed to deliver modern curricula, promote inclusion, improve learning outcomes, and support transitions to work, at scale.

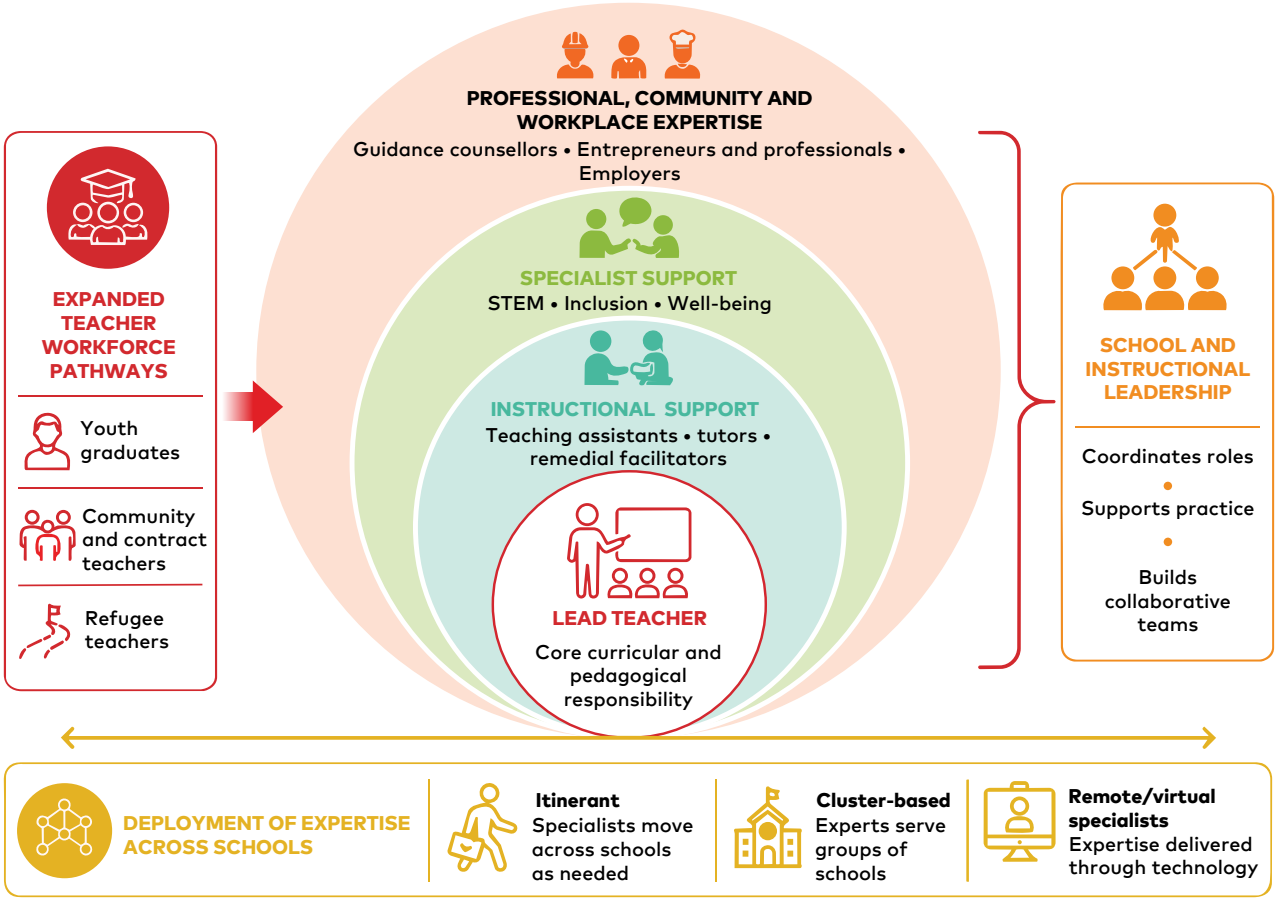
Protecting and strengthening the professional role of teachers remains essential, but it must

be accompanied by a broader conception of the education workforce. The expertise now required within secondary education systems extends beyond what any single teacher can reasonably be expected to provide. Supporting competency development, career guidance, digital learning, inclusion, psychosocial well-being, and transitions to work requires a wide range of knowledge, skills, and specialized support. Qualified teachers remain central and retain primary responsibility for teaching and learning, but they cannot be expected to carry these expanding responsibilities alone.

Addressing workforce challenges requires a dual strategy. First, countries must continue to professionalize teaching through stronger preparation, continuous professional development, career pathways, leadership, and support systems. Second, they must reimagine the education workforce by expanding pathways into the profession, making better use of existing expertise, and creating complementary roles that can strengthen instructional capacity while preserving teachers' professional autonomy and leadership. The aim is to extend the capacity of qualified teachers, not to replace them, so that schools can respond to changing learning needs and support young people's transition beyond school. This vision is illustrated in Figure 5.1, demonstrating a deployment in which qualified teachers retain primary responsibility for teaching and learning, while other actors expand instructional capacity, provide specialized expertise, and support learners.[2]

FIGURE 5.1

A diverse education workforce extends the expertise available to teachers and learners



Source: Authors, using ChatGPT (OpenAI), 2026.



5.2 Teacher shortages remain significant, but the challenge extends beyond supply

Many workforce challenges identified in the first *Secondary Education in Africa* report remain highly relevant today. As countries pursue ambitious goals to universalize secondary education and implement complex reforms, many are attempting to transform education systems without a workforce large enough to sustain existing responsibilities, let alone new ones. In sub-Saharan Africa alone, UNESCO estimates 10.7 million additional teachers will be needed to keep pace with population growth and to meet universal secondary education targets by 2030.[3]

The consequences of these shortages are far-reaching. They can result in large class sizes, heavier teacher workloads, limited capacity to provide individualized learner support or effectively implement competency-based curricula, and difficulties achieving adequate syllabus coverage.[4] These pressures can undermine teacher well-being and motivation to stay in the profession. As expectations of secondary education continue to expand, workforce pressures are becoming an important constraint on quality and equity.

Female teachers and school leaders can help challenge gender stereotypes and serve as important role models and mentors for girls.

In sub-Saharan Africa alone, UNESCO estimates 10.7 million additional teachers will be needed to keep pace with population growth and to meet universal secondary education targets by 2030.

Teacher shortages do not always reflect an insufficient overall supply. In many countries, available teachers are unevenly distributed across schools and regions. Variations in teacher availability across geographic regions, school types, and subject specializations point to persistent weaknesses in workforce planning and deployment. In The Gambia, Sierra Leone, and Tanzania, for example, teachers cluster around urban centres, contributing to acute shortages in rural and underserved areas.[5] This imbalance is common across many countries and is particularly concerning because more marginalized learners are disproportionately concentrated in rural, remote, conflict-affected, and underserved areas where staffing challenges are often greatest. Workforce inequalities therefore become equity challenges, limiting access to qualified teachers for learners who may need them most. Even when countries attempt to address understaffing in rural and fragile contexts, they often call upon newly qualified teachers who are less experienced,[6] further hindering learners.

Mismatch between teacher supply and system demand is also evident across subject areas. While teacher shortages have historically been concentrated in STEM subjects and languages, this trend appears to be shifting, with some countries reporting parity or even oversupply in these same subject areas. In Sierra Leone, for example, the total supply of specialist science and language teachers had surpassed national need by 2024, and the mathematics supply was close to parity.[7] Yet some districts have only about 50 percent of the mathematics teachers needed, and individual schools in better-supplied districts still report shortages.[8] To address this, the Teaching Service Commission is using an algorithm-based deployment tool to allocate teachers to schools based on subject need and school size.[9] Deployment decisions are also increasingly guided by Annual School Census data and teacher-management systems.[10] Additional examples of how countries are addressing these imbalances include stronger workforce planning, improved forecasting systems, and more effective use of data, which are discussed in Chapter 8 on technology.

The teaching workforce also lacks diversity, particularly in leadership, with women, teachers with disabilities, and refugee teachers underrepresented or insufficiently recognized. While there is a near-even gender split in the teaching workforce at the primary school level, women account for just one-third of secondary school teachers in sub-Saharan Africa,[11] with low representation in STEM teaching and school leadership roles.[12] Few workforce data systems appear to systematically capture the representation and deployment of refugee teachers and teachers with disabilities, limiting evidence-informed workforce planning.[13]

This matters not only from an equity perspective, but also because representation can impact learners' aspirations, participation, and educational outcomes. Female teachers and school leaders can help challenge gender stereotypes and serve as important role models and mentors for girls.[14] Their presence can raise girls' aspirations and increase their participation in STEM subjects or STEM-related careers.[15] The potential benefits of female teacher representation are particularly important in rural and fragile contexts where girls have limited access to female role models, peer support, and safety nets (Box 5.1). Yet in these very contexts where women teachers and school leaders are most needed, they are less likely to be present, as concerns over safety, housing, and difficult working conditions continue to deter their recruitment and retention.[16] Similarly, the literature underscores the important role refugee teachers (described below) and teachers with disabilities play in advancing inclusion. They can serve as powerful agents for driving inclusive school environments, normalizing diversity, and challenging misconceptions.[17]

BOX 5.1

Ghana: Female teachers help improve learning for girls in junior high school

Evidence from Ghana reinforces the importance of female teacher representation at the junior secondary level. An analysis of assessment data from 215 districts, complemented by interviews with seven female teachers, suggests that higher numbers of women teachers are associated with stronger performance among girls in mathematics and science. The research found that role modelling and targeted support for girls are important ways that female teachers contribute to gains in learning outcomes. These effects were particularly pronounced in rural and resource-constrained districts, although their impact can be constrained by large pupil-teacher ratios that limit opportunities for individualized support.

Source: Kassim, Han, and Hong, "Examining the Effects of Gender Representation on Student Academic Performance in STEM Subjects," International Journal of Educational Development 120 (2026).

Limited fiscal capacity remains a binding constraint on secondary education systems' ability to recruit, deploy, develop, and retain qualified teachers.

Limited fiscal capacity remains a binding constraint on secondary education systems' ability to recruit, deploy, develop, and retain qualified teachers. While African countries continue to expand access to secondary education, constrained fiscal space and policies that limit public sector wages often restrict teacher recruitment, development, and remuneration.[18] Consequently, many countries now face a striking paradox: teacher shortages coexist alongside large numbers of trained but unemployed teachers. In 2021, despite a pool of 50,000 trained and qualified teachers, Zambia's government could only employ 1,300.[19] These examples illustrate that workforce shortages are often driven not only by supply constraints, but also by financing limitations and insufficient capacity to absorb and deploy qualified teachers. As demand for secondary education rises, fiscal pressures will intensify, underscoring the need for innovative solutions to address the staffing gaps.

Beyond limiting workforce expansion, fiscal pressures can compound unfavourable conditions which undermine workforce stability. Large class sizes, rising workloads, constrained investment in teacher salaries and benefits, and limited opportunities for advancement place considerable pressure on teachers' well-being and motivation, contributing to attrition.[20] High attrition rates not only disrupt learning continuity but also impose substantial costs on recruitment, induction, and training.[21] When experienced teachers leave, systems lose institutional knowledge, pedagogical expertise, mentoring capacity, and prior investments in teacher preparation and professional development. Replacing teachers places additional pressure on already constrained education budgets.[22] These dynamics are particularly damaging in rural, remote, fragile, and underserved areas, where recruitment challenges are more severe and underserved learners are more likely to be.[23]

Expanding responsibilities and recurrent crises are also taking a toll on teachers' well-being. Teachers working in crisis-affected settings may be expected to support adolescents experiencing trauma and emotional distress and contribute to wider community recovery, often with limited preparation for these roles.[24] The COVID-19 pandemic highlighted these pressures, as teachers assumed responsibilities beyond instruction, including psychosocial and health support while adapting rapidly to keep learners engaged during school closures.[25] Similar demands continue as teachers help learners catch up, while contributing

to broader school recovery.[26] Evidence from 14 African countries indicates that these pressures can contribute to burnout, emotional exhaustion, lower job satisfaction, and ultimately attrition.[27] Teacher development in education-in-emergencies settings therefore needs to strengthen teachers' psychosocial competencies alongside their instructional skills, while ensuring that teachers themselves have access to appropriate psychosocial support.[28] Professional development, peer support, and psychosocial services can help protect teacher well-being, but access remains limited, although recent efforts have been made by the African Union, as discussed further below.





5.3 Countries are making progress in professionalizing the teaching workforce

Across Africa, governments are pursuing reforms to strengthen teaching as a profession by elevating its attractiveness and prestige. This includes instituting stronger standards, licensing systems, career pathways, and continuous professional development. While the extent of reform implementation varies across countries, their common purpose is to ensure that teachers have the preparation, support, and professional standing needed to meet changing expectations.

These reforms increasingly address the full span of a teacher's career. This includes pre-service preparation and induction, ongoing professional development, licensing, promotion, and leadership. This builds on the first *Secondary Education in Africa* report's "virtuous cycle" of the teaching workforce, in which higher teacher entrance standards and stronger preparation, support, and career development reinforce teacher quality and professionalization and better learning outcomes over time.[29] This virtuous cycle also creates efficiencies in the system as fewer students drop out or repeat grades as learning outcomes improve.[30] Across many countries, there is a shift away from viewing teacher development as a series of isolated training events to a continuous process embedded throughout a teacher's career.[31] This reflects growing recognition that curriculum reforms and changing expectations of secondary education, including preparing learners for rapid changes in the world of work, can succeed only when teachers receive sustained support to translate new policies and changing demand for skills into classroom practice.

One of the most significant shifts is from one-off workshops toward sustained, practice-oriented professional learning. Countries are embedding professional development within teachers' everyday work through mentoring, coaching, peer learning, professional learning communities, and school-based support systems.[32] Stakeholders who have been consistently consulted recognize the

positive impacts of these school-based models.[33] These approaches acknowledge that meaningful changes in teaching practice are more likely to occur when professional learning is sustained over time, grounded in classroom realities, and linked to broader workforce policies such as licensing, career progression, and professional accountability.

Across many countries, there is a shift away from viewing teacher development as a series of isolated training events to a continuous process embedded throughout a teacher's career.

Rwanda, Sierra Leone, and Tanzania illustrate different approaches to strengthening teacher professional development (Box 5.2). While their approaches differ, all three countries have taken practical steps to institutionalize ongoing and school-based professional learning, clarify professional expectations, and create stronger links between teacher development, career progression, and workforce quality.[34] They have also closely aligned teacher professional development with competency-based curricula reform, in part by including training in active, learner-centred pedagogies. Together, these types of reforms demonstrate how countries are treating professionalism as a coherent package of support that encompasses standards, preparation, continuous learning, career pathways, promotions, and compensation expectations.

Across the continent, countries are establishing clearer standards, stronger accountability systems, more structured professional development opportunities, and better-defined career pathways.

Efforts have also been made to protect teacher well-being and prepare teachers to respond to the psychosocial demands of increasingly crisis-affected learning environments. The African Union, for example, launched its 2025 *Continental Strategy on Mental Health and Psychosocial Support for Teachers in Africa*.[39] Recognizing that teachers may be expected to provide emotional support, guidance, and counselling alongside instruction, the strategy calls for mental health and psychosocial support to be incorporated into both pre-service and in-service teacher training. It also positions training within a wider system of support encompassing teacher well-being policies, peer support and mentoring, school-based services, referral pathways, and specialized care.

These examples point to encouraging progress in strengthening and professionalizing the teaching workforce. Across the continent, countries are establishing clearer standards,



BOX 5.2

Rwanda, Sierra Leone, and Tanzania: Reforms professionalize the teaching workforce

Rwanda's Teacher Development and Management Policy and the Continuous Professional Development (CPD) Framework (2025–2029), codified in 2024, positions professional development as a compulsory requirement for all teachers and is directly tied to teacher licensing, career progression, and salary brackets. It also emphasizes training in the Competency-Based Curriculum, including active, learner-centred pedagogies.[35] CPD is delivered through a blended approach that combines online learning that is provided by the Rwanda Basic Education Board's e-learning portal. The portal offers school-based mentoring, where school subject leaders support the professional development of less experienced teachers. To institutionalize and enforce continuous professional development, each school is required to designate a CPD coordinator, typically the head teacher, to lead, coordinate, and monitor professional learning activities within the school. Renewal of teaching licenses and career progression are contingent upon attainment of CPD credits, which ensures continuous professional development is embedded as a core requirement of professional practice.

Sierra Leone has focused on mass recruitment, salary enhancements, teacher licensing and registration, and data-driven deployment systems alongside continuous professional development. Central to these reforms has been the strengthening of the Teaching Service Commission, which oversees teacher registration, licensing, deployment, professional standards, and workforce accountability. This has been supported by the rollout of the Teacher Management Information System to enable more data-driven workforce planning and deployment. The Teacher Service Commission recruited more than 19,000 teachers between 2019 and 2025, and increased salaries by 30 percent in 2020 and a further 15 percent in 2023.[36] The Teacher Registration and Licencing Policy for Sierra Leone (2020) formalized licensing as a legal prerequisite for teaching, requiring renewal every three years and tying professional advancement to demonstrated competencies, adherence to professional standards, and continuous professional development.[37] Training also helps teachers understand and implement competency-based curriculum reforms in the classroom.

Tanzania's teacher professionalization efforts have shifted from one-off workshops to continuous, school-based professional learning that is embedded in teachers' everyday practice. Guided by the 2020 National Framework for Teacher Continuous Professional Development, the country introduced its own program, MEWAKA, which means Teacher Continuous Professional Development in Swahili. The program institutionalizes ongoing professional development through school-based Communities of Learning, structured training modules, peer collaboration, and digital learning platforms (see more in Chapter 8 on technology). It is also aligned with the country's new competency-based curriculum, and trains teachers to implement it using active, practice-oriented pedagogical techniques. Together, these reforms have transformed teacher development from a periodic activity into a routine component of professional practice.[38]

stronger accountability systems, more structured professional development opportunities, and better-defined career pathways. The reforms represent an important shift toward implementing competency-based curriculum reforms and viewing teaching as a profession requiring continuous learning, professional growth, and ongoing support.



5.4 Innovative workforce pathways expand who supports learning

Expanding the secondary education workforce requires encouraging both new pathways into teaching and a broader range of personnel who can support teachers and learners. Countries are pursuing two complementary approaches: creating alternative routes into the profession and introducing roles such as classroom assistants and multidisciplinary support teams that provide additional instructional capacity and specialized expertise. As Figure 5.1 illustrates, qualified teachers remain central to teaching and learning, while other personnel contribute expertise that teachers cannot reasonably be expected to provide alone.

Countries are creating alternative pathways into the teaching profession to address staffing shortages and draw on a wider pool of potential educators. Ethiopia[40] and Sierra Leone,[41] for example, have introduced approaches that enable people without conventional teaching qualifications to enter the profession while working toward professional recognition. In Ethiopia, the Ministry of Education launched the Alternative Teacher Training Program in 2025 to recruit graduates from other fields, particularly in subjects facing shortages. As of February 2026, six teacher training colleges were delivering the training. Sierra Leone has expanded pathways into teaching by creating routes through which volunteer and untrained teachers can progressively become formally recognized and qualified. Although evidence on the implementation and outcomes of these initiatives is not yet available, they illustrate different ways systems can expand the supply of teachers. Their long-term effectiveness will depend on the quality of preparation, practical experience, mentoring, and professional development provided, as well as clear pathways to certification and career advancement.

Countries are creating alternative pathways into the teaching profession to address staffing shortages and draw on a wider pool of potential educators.

Leveraging recent secondary and tertiary graduates can help fill teaching gaps in schools while providing young people with practical experience and pathways into teaching. Such programs typically provide recent graduates without a teaching background with opportunities to gain practical classroom experience while addressing staffing gaps in schools. In Ghana, the National Service Scheme recruits tertiary graduates, including those without prior teaching experience, to work in schools (Box 5.3). Rwanda's Teaching Assistantship Program, under the Mastercard Foundation's Leaders in Teaching Initiative, recruits secondary school graduates for fixed-term placements as teaching assistants in public schools. Participants receive training, mentoring, and practical classroom experience while supporting teaching and learning.[42] These programs can address immediate staffing needs while giving young people experience that may lead to careers in teaching. Their contribution depends on how well temporary placements are connected to structured preparation and recognized pathways into the profession.

Countries are also using contract and temporary teachers to address teacher workforce needs. Across the continent, the share of contract teachers varies, from a low of five percent in Tanzania to a high of over 40 percent in Côte d'Ivoire and the Democratic Republic of Congo.[46] In Uganda, the share of teachers on fixed term or temporary contracts at the secondary level (71 percent) is substantially higher than that at the primary level (35 percent).[47] This underscores the increasingly important role this group of teachers plays in addressing teacher workforce needs across the continent.

Contract teachers can expand workforce capacity, but reliance on them risks creating a

BOX 5.3

Ghana: Innovative pathways help tertiary graduates enter the teaching profession

Ghana's National Service Scheme, implemented in collaboration with the National Teaching Council, annually deploys nearly 41,000 service personnel, typically tertiary graduates, to work as teachers for one year, including approximately 5,000 without prior teaching experience.[43] Before being deployed to Senior High and Senior High Technical Schools, service personnel receive a two-week induction covering pedagogy, professional ethics, ICT, and assessment. During their first year of service, they participate in ongoing training and professional support while gaining practical classroom experience. In 2022, 2,025 personnel completed the initial two-week course, increasing to 3,439 in 2024.[44] More recently, the government has begun connecting this alternative route into teaching with professional qualification. In 2024, a work-based Post-graduate Diploma in Education was accredited for National Service Personnel without education degrees, allowing participants to undertake professional preparation while teaching during their service year. The first cohort of 90 graduated in February 2025, while a second cohort of 139 enrolled in 2025.[45] Completion provides a pathway toward teacher licensure and consideration for recruitment in the Ghana Education Service. Though too early to see the impact of such efforts, it exemplifies how the government is developing a structured pathway for tertiary graduates without education qualifications to enter the teaching profession.

two-tier workforce with weaker pay, protections, and professional development opportunities. Despite having responsibilities similar to those of civil-service teachers, contract teachers' salaries are typically substantially lower, and these teachers often lack job security. Across 15 African countries, the median monthly earnings of fixed-term contract primary and secondary teachers are only 70 percent of the earnings of permanent teachers. [48] The ratio ranges from 33 percent in Côte d'Ivoire to 93 percent in the Democratic Republic of Congo. [49]

How contract teachers are managed also varies across contexts, with recruitment and oversight bodies ranging from central governments and local education offices to school management committees, parents, and local communities.[50] These variations in employment conditions and benefits can compound system inefficiencies through high turnover, low motivation, and unbalanced teaching quality if not well managed.[51]

Contract, community, and volunteer teachers can help alleviate staffing gaps and sustain education continuity, particularly in rural and fragile areas. These benefits may partly reflect the advantages of local recruitment: teachers from rural areas and minority groups often appear more willing to work in communities with similar profiles, making local teacher supply a potentially more cost-effective way to address staffing gaps.[52]

Sierra Leone and South Sudan provide examples of using contract teachers to address teacher shortages. Progressively integrating qualified primary and secondary contract teachers into the civil service, along with providing standardized in-service training, can improve learning outcomes while helping to stabilize teacher supply.[53] In Sudan, where conflict has disrupted education provision since 2023, community teachers and volunteers with no prior teaching experience have stepped in to sustain educational opportunities when the state cannot.[54] A rotating model that combines professional teachers with locally educated substitutes illustrates the value of flexible staffing, while also showing why community provision should not replace a properly supported public teaching workforce (Box 5.4).

Opportunities for community and volunteer teachers to convert their experience into recognized qualifications and formal teaching roles remain underdeveloped. One important lesson emerging from community teacher models is that these teachers need not remain outside the formal profession. Countries are exploring ways to recognize prior experience, certify competencies, and create pathways through which community educators can progressively become part of the formal teaching workforce. Research from Sierra Leone and Ghana suggests that community facilitators of accelerated education programs are often willing to work in hard-to-staff communities.[56] In Sierra Leone, 23 of 30 community facilitators in an accelerated education program subsequently became certified teachers, independently enrolling in distance education to obtain full teaching certificates, while in Ghana, researchers recommend reinstating the Untrained Teachers Diploma in Basic Education program to formalize facilitators' qualifications and pathways into the public sector.[57]

In Senegal, while community facilitators have helped improve learning outcomes for out-of-school learners participating in bilingual bridge classes, 93 percent lack professional qualifications and half have no experience in formal education. [58] Many have considered leaving their positions because of inadequate remuneration and limited career prospects.[59] An existing professional recognition mechanism might address this gap but has not yet become fully operational: the Recognition of Prior Learning (*Validation des Acquis de l'Expérience*) for facilitators has remained blocked since 2021 pending implementing regulations (EC-*Classes Passerelles*). If fully implemented, the mechanism could provide a pathway for recognizing competencies acquired through experience and contribute to professionalizing the role of these facilitators.[60]

BOX 5.4

Sudan: Teachers and community volunteers rotate to sustain education during conflict

In conflict-affected Sudan, community and volunteer teachers operate within wider local networks that help recruit teaching support, mobilize resources, reopen schools, and solve problems across communities. Existing and former teachers, especially women, are approached by the community, while untrained teachers with "sufficient educational background to teach" help fill the gaps.[55] They contribute time, skills, and resources because they see education as a shared community responsibility. Participation rests on community trust, mutual aid, and a shared belief in the importance of education, rather than primarily on financial incentives. Some schools charge students a small fee, while families also contribute in-kind materials, such as water or breakfast for teachers.

The volunteer pool is shaped strongly by who can afford to work for little pay and consists disproportionately of young people whose families do not depend on them financially, older people who are not their household's main breadwinner, and women with other family members who can financially support their households. Because most teachers also need other income-generating work, rotating models allow each teacher to work two to three days per week, ensuring pupils stay in class for five days while leaving teachers time to earn money elsewhere. Qualifications of teachers vary across regions and communities. For example, areas where access to secondary and higher education has historically been limited tend to have a smaller pool of qualified people to participate.

Source: Glade and Pacifico, *Learning through Crisis: Community-Driven Education in Sudan* (ERICC Helpdesk, 2026).

Contract, community, and volunteer teachers can help alleviate staffing gaps and sustain education continuity, particularly in rural and fragile areas.

Refugee teachers play an important role in supporting displaced young people's learning and broader well-being.[61] In Kakuma, Kenya, refugee teachers served as role models and mentors for adolescent girls, helping them cope with displacement and connecting them with services including gender-based violence and psychosocial support.[62] Evidence from Dadaab (Garissa County, Kenya) similarly illustrates the potential of refugee teachers to provide culturally and linguistically responsive education to displaced young people, while demonstrating that refugee-led schools can achieve strong learning outcomes[63] (Chapter 6).

Despite the importance of refugee teachers, they are frequently employed as temporary humanitarian support, although promising practices are emerging to address this. When refugee teachers are not registered as civil servants, they are subject to low and irregular pay, short-term contracts, and limited benefits which can undermine their motivation and retention.[64] Nevertheless, promising practices are emerging, including the alignment of refugee teacher salaries and contractual terms with government pay scales in Uganda[65] and the integration of refugee teachers into national teacher-training pathways in Chad, enabling recognition of prior experience and access to accredited qualifications.[66] These examples suggest that refugee teachers should not be viewed not only as temporary humanitarian personnel, but as an important part of the education workforce whose expertise can be strengthened through recognition, certification, professional development, and integration into national systems.

While the various models offer promising pathways to addressing teacher shortages, their sustainability and effective integration into government systems face serious challenges. A common strength of these models is their ability to expand teaching capacity in hard-to-staff contexts, including rural, remote, underserved, and displacement-affected areas. They can help address teacher shortages, strengthen local relevance, and create alternative pathways into the profession. But low pay, limited training, weak job security, and limited career progression can undermine teacher motivation and retention and exacerbate system inefficiencies.[67] Investment and long-term planning are critical to support professional development, certification pathways, offer fair remuneration, and integration into broader teacher-management systems, as discussed in Section 5.2.

Other community members and professionals can strengthen connections between students and their schools, while supporting learning, transitions, and overall well-being. This was a key premise of the Education Commission's (2019) Learning Generation report, which highlights the spectrum of roles beyond the lead teacher, including learning assistants, remedial tutors, community education workers, community health workers, or community-based mentors.[68] Multidisciplinary school-based support teams with disability specialists provide essential learning, health, and broader well-being support for learners with disabilities (Chapter 6). These models are growing in importance as secondary education systems expand and open their doors to increasingly diverse learners. To support transitions to work, guidance counsellors and professional mentors also play critical roles (Chapter 4). An illustrative example from CAMFED demonstrates how these roles not only support learning and well-being, but also help young people, especially girls, develop key job-related skills (Box 5.5).

BOX 5.5

CAMFED: Young women act as peer mentors to help young people develop job-related skills

Young women from the CAMFED Association volunteer as peer mentors and are trained to support 40 to 50 children weekly with life skills, study support, and counselling.[69] The model is designed for marginalized young women in rural or low-income settings or who are at risk of dropping out. CAMFED Learner Guides work alongside Agriculture Guides to teach climate change education and green skills and offer other support as role models and mentors. This example illustrates the importance of drawing on community expertise and using co-teaching approaches to deliver a wider set of curriculum skills. Learner Guides bring shared language, lived experience, and cultural understanding, building trust while offering not only information but also networks, encouragement, and practical guidance.[70]





5.5 Teacher deployment and development models help extend the reach of existing expertise

In addition to expanding pathways into the workforce, innovative teacher development and deployment models can help governments make better use of existing expertise. Models such as roving teacher arrangements, cluster-based approaches, and virtual or remote specialist models offer practical ways of extending expertise in contexts where shortages make it difficult to place specialists in every school. While innovative teacher development models help extend access to professional development, through master trainers, teacher champions, or virtual coaching, deployment models in which teachers and specialists rotate among schools or classrooms directly influence who benefits from the expertise and how it is shared.

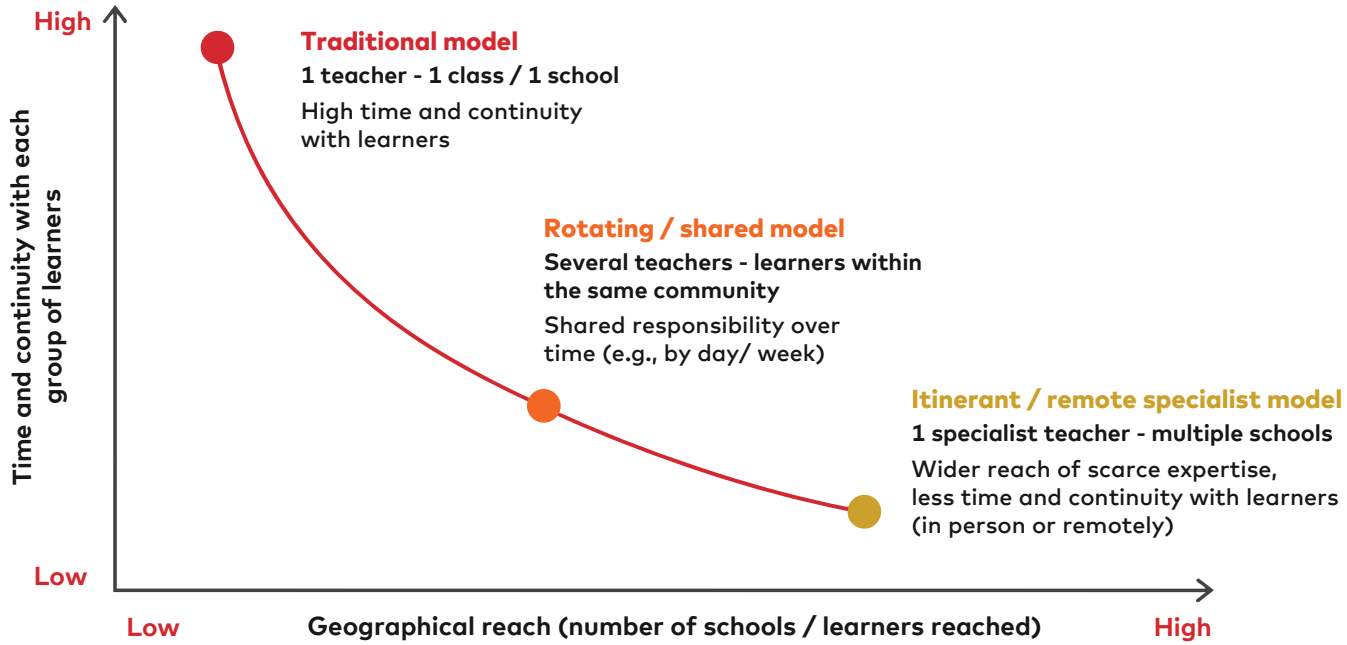
In addition to expanding pathways into the workforce, innovative teacher development and deployment models can help governments make better use of existing expertise.

These deployment models involve trade-offs. As the reach of a single teacher increases (Figure 5.2), the time and continuity they can devote to each group of learners tends to decrease. A teacher assigned to one classroom can provide sustained support to the same learners; rotating teachers and specialists can reach more schools but spend less time with each group. While more research is needed to evaluate these trade-offs, different models can help systems respond to their unique constraints and the human resources available. The right mix of deployment models will depend

FIGURE 5.2

Different teacher deployment models have different trade-offs

As reach increases, time and continuity with each group of learners tends to decrease.



Different models can help systems respond to teacher and expertise constraints. The right mix depends on the type of expertise, local context and infrastructure.

Source: Authors, using ChatGPT (OpenAI), 2026.

on the type of expertise being shared, the local context, and the infrastructure in place.

As more adults take part in supporting learners, safeguarding accountability and establishing clear roles become important. As illustrated in Section 5.1 and Section 5.4, roles and responsibilities within the classroom are becoming increasingly diverse. A teacher may be a formally trained teacher, community volunteer, classroom assistant, or subject-specific specialist. In the case of learners with disabilities, a specialist may be needed to provide additional health and support services, such as occupational therapy, speech therapy, or sign language interpretation. Likewise, beyond core academic subjects and cognitive learning needs, guidance counsellors, professional mentors, or psychosocial support specialists may be needed to support young people's transitions to work (Chapter 4) or broader well-being (Chapter 6). As the range of personnel involved in supporting learners expands, stronger safeguarding frameworks, clear role definitions, robust vetting procedures, and effective accountability mechanisms become increasingly important to ensure learner protection, quality, and system coherence.

As the range of personnel involved in supporting learners expands, stronger safeguarding frameworks, clear role definitions, robust vetting procedures, and effective accountability mechanisms become increasingly important to ensure learner protection, quality, and system coherence.

Rotating models help reorganize roles and time within schools, extending the reach of teachers

and other educators. The African School for Excellence in South Africa, for example, used a rotational model in which secondary learners moved between teacher-led instruction, small-group peer learning, and individual computer-based learning. A fully qualified teacher led the instructional rotation, while trainee teachers or academic advisers facilitated peer- and technology-supported rotations, allowing scarce qualified teacher expertise to be concentrated where most needed.[71] Participating students outperformed their peers from wealthy households, achieving stronger performance in mathematics and English, at relatively low per-student cost.[72]

The Sudan example (Box 5.4) illustrates a different form of rotation: community volunteers supplement teachers and share classroom responsibilities so that teachers can earn income elsewhere. These models demonstrate that rethinking how instructional time and expertise are organized can sometimes be as important as expanding workforce numbers.

Cluster-based models can extend teacher expertise and professional support across groups of schools. The Uganda Secondary Education Expansion Project, funded by the World Bank, employs a national continuous professional development architecture based on approximately 100 lower secondary school clusters. Stronger schools with capable teachers act as cluster centres, while subject teachers participate in communities of practice and receive in-person and distance coaching.[73] A coordinator at each cluster centre supports a network of schools. The model is being rolled out nationally, including the provision of equipment for 100 cluster centres and science teachers across government secondary schools.

Though the impact on teaching and learning has not yet been established, the model allows expertise and professional support to be shared across schools and creates peer-to-peer subject support. This is particularly relevant where specialist expertise is geographically uneven. Through a hybrid model, technology is used for distance-based teacher coaching and digital communities of practice, enabling regional and national expertise and peer expertise to reach teachers across schools.

Technology can further extend this reach, enabling scarce expertise to be shared remotely and across schools. The MGCubed program (2017–2021), implemented in Ghana under the Girls' Education Challenge, offers valuable lessons on how remote subject expertise can be leveraged to strengthen teaching quality and expand access to specialist instruction. Under this program, which was implemented in primary and lower secondary schools, qualified Master Teacher Trainers, based in studios in Accra, delivered live, interactive literacy and numeracy lessons through satellite technology to classrooms in participating schools.[74] Local Ghana Education Service teachers acted as classroom facilitators.

This model enables a small number of strong teachers to reach learners across many schools by combining remote subject expertise with an in-person facilitator. The significance of this model lies not only in the technology itself, but in its ability to extend teaching expertise to schools that would otherwise have limited access to it. However, it requires reliable technological infrastructure and an effective in-person facilitator.

Resource centres offer a promising model for extending scarce specialist expertise and resources across schools to support disability inclusion, provided they are adequately equipped and funded. As African countries move toward educating learners with disabilities alongside their peers in mainstream schools, existing special schools can serve as hubs, share expertise and knowledge, teaching materials, and support with wider school networks. Research from Malawi and Sierra Leone highlights the potential of this approach, while several countries are already putting it into practice.[75] In Ethiopia, where inclusive education resource centres were first established in 2008–2012, evaluations have documented their contribution to expanding access for learners with disabilities through itinerant teachers, specialist support to

mainstream schools, and adapted learning materials, alongside increasing enrolment and community awareness.[76]

Since 2020, several countries have started using resource centres to extend support to learners with disabilities. Nigeria's 2023 inclusive education policy identifies one special school in each state for transformation into a resource centre supporting mainstream schools.[77] Rwanda has established inclusive education resource centres that support secondary and out-of-school learners (Chapter 3),[78] while Mozambique uses resource centres to support inclusion at secondary and vocational levels.[79] While challenges with staffing, funding, or access to teaching and learning materials or assistive technologies limit their effectiveness,[80] these models show how existing centres of expertise can support individual learners while simultaneously building capacity across wider school networks.

As African countries move toward educating learners with disabilities alongside their peers in mainstream schools, existing special schools can serve as hubs, share expertise and knowledge, teaching materials, and support with wider school networks.

Mobile teacher models offer another way to extend specialist support to mainstream secondary schools, particularly for learners with disabilities. Though more common at the primary level, these models can also strengthen inclusive teaching at the secondary level, where specialist expertise remains limited (Chapter 6).[81]

A secondary level model piloted by Humanity and Inclusion in Burkina Faso, Mali, Sierra Leone, and Togo, produced positive outcomes for learners with and without disabilities. At the same time, secondary school teachers benefitted from the opportunity to collaborate and learn from the mobile specialists (Box 5.6). Outcomes varied across schools, highlighting the importance of appropriate school- and district-level supervision.



BOX 5.6

Burkina Faso and Togo: Mobile teachers improve inclusion and teacher collaboration

As part of an Inclusive Education program (2016–2019) in Togo and Burkina Faso, Humanity and Inclusion experts trained mobile STEM teachers to support young people with moderate to severe disabilities. Once trained, the mobile teachers travelled among a network of schools, supporting lead classroom teachers by coaching inclusion strategies, co-developing lesson plans, and providing instructional support.[82] An evaluation[83] identifies various mechanisms through which positive impacts were observed across teachers and students with and without disabilities.

Additional instructional support. When a mobile teacher explains something to a learner with a disability, other learners listen and benefit from the additional or differently presented explanation. Pupils without disabilities specifically reported that following these explanations helped them to better understand lessons.

A second teacher/resource in the classroom. Teachers described the mobile teacher as effectively adding instructional capacity: the two teachers "share their knowledge," and the mobile teacher instructs the whole class or provides support when the lead teacher is absent.

More inclusive teaching practices. The mobile teacher works with mainstream teachers to adapt lesson plans, teaching methods, and assessments, helping them to recognize learner diversity and to organize their teaching approach accordingly. This collaboration makes classroom teaching more dynamic and inclusive as it supports all students.





5.6 School leaders can be multipliers of good teaching and learning

Why school and instructional leadership are important

Effective school leadership can strengthen teaching and learning across an entire school. Global evidence has consistently identified school leadership as second only to classroom teaching among school-based factors influencing learning outcomes.[84] Evidence from Africa suggests it can account for as much as one-third of its variation.[85] This highlights the importance of school leaders as key drivers of education quality. Given their pivotal role in creating a supportive environment where teaching and learning can thrive, recent research concludes that without prioritizing effective school leadership, improving learning outcomes at scale will remain an elusive target.[86]

Instructional leadership is particularly important because it creates the conditions in which teachers can teach effectively.[87] As school leaders serve as a critical bridge between national policy and school-level implementation, instructional leadership plays a pivotal role in translating educational reforms into changes in teaching and learning.[88] Instructional leadership can also help advance inclusion.[89] By providing feedback to teachers, encouraging the use of data to strengthen teaching, and fostering a positive and inclusive school climate, instructional leaders help create the conditions for effective teaching and equitable learning.[90]

Strong instructional leadership can be particularly important in disadvantaged contexts. In settings where education systems face competing demands, including resource constraints, teacher shortages, large classes, and uneven learning outcomes, school leaders play an important role in keeping attention focused on teaching and learning while managing the wider pressures.[91] Strong instructional leadership can help keep efforts focused on delivering inclusive, high-quality education[92] by creating supportive environments that promote teacher development, motivation,

and student engagement, all of which are essential for academic success.[93] School leaders play a pivotal role in setting a shared vision for schools, roadmaps, mechanisms, and routines for academic improvement.[94]

Recent studies from Ethiopia and Tanzania reinforce the importance of school leadership for both teachers and learners. A mixed-methods study across 22 secondary schools in rural Ethiopia found strong positive associations between principals' instructional leadership, teacher self-efficacy, and student performance, underscoring the importance of collaborative, teaching-focused leadership that sets academic expectations, monitors instruction, develops teachers, and builds a positive school climate.[95] Similarly, a mixed-methods study of 10 public secondary schools in Tanzania found that student achievement was positively associated with school leaders' conceptual, technical, and interpersonal capabilities.[96] Conceptual capabilities, such as setting a clear vision, solving problems, and using data for decision-making, emerged as critical predictors of school leaders' ability to support student achievement. [97] Technical capabilities included instructional supervision and resource management, while interpersonal capabilities helped foster trust, collaboration, motivation, and community engagement.[98] While these observational studies do not establish that leadership caused better outcomes, they illustrate how school leaders can create the enabling conditions for effective teaching through a combination of strategic direction, instructional support, and collaborative leadership.

Progress in the selection and preparation of school leaders in Africa

Teaching experience is increasingly being recognized as a key requirement for entry into school leadership roles. A recent review of school leadership selection processes across the continent found that nearly half of countries require prior teaching experience as a prerequisite for appointment or promotion to school leadership positions.[99] This is a positive development considering that school leaders require a solid understanding of curriculum implementation, pedagogy, and the challenges of being a teacher to be able to support teachers effectively. Yet enforcing this requirement on teaching experience remains inconsistent. In nearly two-thirds of countries analyzed, the guidelines for selection of school leaders do not specify the minimum number of years of teaching experience required, leaving considerable room for interpretation and discretion in recruitment and promotion decisions.[100]

While teaching experience is foundational to instructional leadership, career structures that prioritise management as the primary path to advancement may draw experienced and effective teachers away from the classroom. The Mastercard Foundation's first *Secondary Education in Africa* report highlighted this tension, cautioning that leadership development should not promote experienced and effective teachers out of the classroom. Recent evidence from public secondary schools in Tanzania similarly highlights tensions between career progression and retaining experienced teachers in teaching roles.[101] One promising response is to create differentiated career tracks, enabling teachers to progress through either leadership and managerial or technical and specialist roles.[102] Sierra Leone provides one example of this approach as part of wider reforms to professionalize teaching and school leadership (Box 5.7). Such approaches can preserve instructional expertise in the classroom while providing high-performing teachers with meaningful opportunities for professional advancement.

Competency frameworks are helping professionalize school leadership. Across the continent, countries have introduced legislative and policy frameworks to strengthen and standardize the recruitment and appointment of school leaders. In Kenya, for example, the Teaching Service Commission's Professional Teaching Standards (2021) sets out a range of competencies, including instructional leadership, financial literacy, inclusive learning environments, and digital literacy, reflecting the expanding demands placed on school leaders.[103]

Similar reforms in Sierra Leone and Rwanda combine professional standards with wider changes to career progression, recruitment, licensing, and leadership development (Box 5.7). These reforms signal growing efforts to move school leadership toward a more clearly defined and professionalized career pathway.

The training of school leaders is receiving growing attention alongside efforts to professionalize their selection and career pathways. Some countries have formalized accredited training as a prerequisite for leadership roles. In Kenya, for example, current and aspiring school leaders can undertake a one-year Diploma in Education Leadership and Management offered by the Kenya Education Management Institute and accredited by the Teachers Service Commission.[108] As of 2024, 50,000 participants had been trained.[109] In The Gambia, a one-year mandatory diploma in School Leadership and Management was introduced in 2020 for teachers entering the leadership track.[110] The program targets teachers serving in middle leadership positions to prepare them to become effective leaders.

Other countries are strengthening induction and ongoing support: in Zimbabwe provincial

BOX 5.7

Rwanda and Sierra Leone: Career progression pathways link teaching to school leadership

Sierra Leone and Rwanda illustrate how countries are combining professional standards with wider reforms to career progression, recruitment, and development to strengthen school leadership.

Sierra Leone is building a more coherent, professional architecture for teachers and school leaders. The *Professional Standards for Teachers and School Leaders* (2017) established competencies for both roles, while the 2020 teacher policy suite brought together reforms on registration and licensing, teacher management, professional development and performance, and teacher-employer relations.[104] The 2022 Collective Agreement between the Teaching Service Commission and Sierra Leone Teachers' Union further linked salaries to a four-stage teacher career pathway – New, Proficient, Highly Accomplished and Distinguished Teacher – creating opportunities for experienced teachers to progress professionally while retaining advanced instructional and mentoring roles rather than relying solely on promotion into management.[105] Together with the Teaching Service Commission's emerging school leadership program and performance-contract reforms, these policies mark an important shift toward a more professionalized teaching and leadership workforce, although implementation has not been consistent.

Rwanda has placed particular emphasis on professionalizing entry into and expectations for school leadership. The Professional Standards for Effective School Leadership in Rwanda (2020) define the knowledge, skills, and behaviours expected of effective leaders and provide a framework for their selection and professional development. Subsequent reforms have strengthened recruitment by shifting the responsibility of recruiting Head Teachers and Deputy Head Teachers from district-level authorities to the Ministry of Education and introducing clearer eligibility requirements and centralized oversight. [106] Candidates are expected to meet specified educational and teaching-experience requirements and leadership standards, while competitive assessment is intended to strengthen consistency and transparency in the selection of these roles. The framework also seeks to advance gender equity in leadership recruitment. [107] These measures illustrate a systematic approach in which professional standards inform not only expectations of leaders once appointed, but also those who enter leadership and how they are selected and developed.

education offices deliver an induction program for newly appointed school principals, while Rwanda has invested in accredited leadership training, coaching and professional learning communities.[111] Although their effects are not yet clear, these reforms demonstrate firm policy intent to build structures and systems for preparing, recruiting, and supporting school leaders to perform their roles effectively.

Taken together, the evidence points to a broader shift from investing in teachers and school leaders in isolation toward strengthening the relationships and systems that connect them. Improving teachers' knowledge and skills remains fundamental, but professional development does not automatically translate into changes in classroom practice. School leaders play an important role in creating conditions for teachers to apply new approaches through instructional support, professional collaboration, feedback, quality assurance, and the use of evidence for improvement. Emerging approaches increasingly connect teacher development with leadership development and wider system strengthening, as illustrated by the Mastercard Foundation's Leaders in Teaching initiative (Box 5.8). Evidence from Rwanda and Ghana provides early insights into both the progress made possible through this approach and the continued support required to translate stronger teacher and school leader capacity into consistently better classroom practice.

BOX 5.8

Ghana and Rwanda: Leaders in Teaching enhances teacher and school leadership development

The Mastercard Foundation's Leaders in Teaching initiative suggests that teacher development is more likely to translate into sustained improvements in teacher capacity when reinforced by strong school leadership and ongoing professional support.

In Rwanda, the initiative combined professional development for science and mathematics teachers with support to strengthen school leadership and create enabling environments for improved teaching. Longitudinal research across 103 secondary schools found substantial improvements in teachers' content and pedagogical content knowledge between 2020 and 2023, although changes in classroom practice were more gradual, highlighting the importance of sustained school-level support in translating knowledge into practice.[112]

Similarly, experience from Ghana highlights the importance of the environment surrounding teachers. Between 2022 and 2025, the proportion of observed teachers meeting Ghana's National Teachers' Standards increased from three percent to 46 percent, while those demonstrating gender equality and social inclusion-responsive pedagogy increased from 11 percent to 48 percent.[113] Professional Learning Communities provide ongoing opportunities for teachers to learn together, while school leadership and internal quality assurance are important for translating professional development into practice.[114]





5.7 Conclusion

Across Africa, governments are making encouraging progress in strengthening and reimagining the education workforce. With an estimated 10.7 million additional secondary school teachers needed to achieve universal secondary education by 2030 in sub-Saharan Africa alone, countries are increasingly exploring innovative ways of attracting and retaining more qualified professionals. Countries are professionalizing teaching through stronger standards, continuous professional development, and clearer career channels; creating new pathways into the profession and new types of roles to support teaching and learning; experimenting with ways to extend scarce expertise across schools; and strengthening the selection and development of school leaders. These reforms point toward a broader conception of the education workforce in which qualified teachers remain central but are supported by a wider range of educators, specialists, and instructional leaders.

Beyond teachers, school leaders help convert education system reforms into practical improvements in schools and classrooms. As education systems become more complex and workforce models more diverse, school leaders play an important role in creating the conditions for effective teaching, supporting continuous professional learning, coordinating multidisciplinary teams, and translating national reforms into sustained classroom improvements. Across Africa, governments are placing greater emphasis on more structured approaches to selecting, preparing, and supporting school leaders. The next priority is to connect and scale these efforts through coherent, data-driven workforce strategies that respond to expanding enrolment, increasingly diverse learners, and the growing ambitions of secondary education systems.

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CHAPTER 6

Making Formal Secondary Education Work for Marginalized Learners

Addressing barriers to equity and inclusion so all young people can learn and succeed



QUESTION THIS CHAPTER ANSWERS

How are formal secondary schools becoming more equitable, responsive, and inclusive for the young people most likely to be left behind?

What has changed since 2020

Since 2020, governments have continued expanding fee-free education, but even where fees have been eliminated or reduced, not all young people have benefitted equally. Hidden costs, poverty, disability, displacement, gender norms, learning gaps, safety, and well-being continue to shape participation. Recent reforms increasingly combine financial support with inclusive pedagogy, learner well-being, and locally responsive provision.

What is needed now

Expanding access is necessary but insufficient to achieve inclusion. Formal secondary education must address the financial, social, instructional, and physical barriers that determine whether diverse learners can participate, learn, progress, and transition successfully. This requires universal improvements that strengthen teaching, safety, well-being, and school environments alongside targeted financial, academic, social, and transition to work support for young people facing the greatest barriers. It also requires different and locally responsive models of schooling, using stronger data and evidence, and meaningful opportunities for marginalized young people to shape the system intended to serve them.



6.1 Intersecting disadvantages continue to leave many young people behind

Decades of progress in expanding access to primary and secondary education have enabled unprecedented numbers of young people across Africa to access school, but the benefits have not been shared equally. As Chapter 2 shows, more than 110 million young people now attend secondary school on the continent,[1] yet an estimated 77 million adolescents remain out of school. Many of those who enroll leave school without the learning and qualifications needed for further education and[2] national averages obscure particularly steep disadvantages for rural and low-income learners, learners with disabilities, refugees and displaced adolescents, and those facing several barriers at once. The challenge is therefore not only to expand universal reforms at scale but to address these barriers.

Targeted responses are needed to address the overlapping barriers that leave some learners behind. Poverty remains one of the strongest drivers of exclusion, limiting families' ability to afford direct and indirect education costs and increasing exposure to food insecurity, poor health, and other conditions that undermine learning and well-being.[3] Attending school can also mean foregoing income or household labour. Gender norms, disability-related exclusion, displacement, conflict, and climate shocks compound these pressures in different ways. Effective responses must address the specific combination of barriers learners face, including social, economic, and community conditions that shape whether young people can learn and succeed.

Many African countries have made significant efforts in recent years to address these barriers and reach learners previously excluded from the education system. In 14 countries, introducing free and compulsory lower secondary education increased attainment by 1.6 years for girls and 1.4 years for boys and made students 14 percentage points more likely to complete some form of secondary education.[4] A 2025

survey found that nine of 10 participating East and Southern African countries have re-entry policies for pregnant girls, and seven of 10 have measures targeting boys and young men to reduce risk factors.[5] Kenya's 2020 National Guidelines for School Re-Entry in Early Learning and Basic Education, for example, guarantee pregnant girls and teenage mothers the right to stay in school or return to classes after giving birth.[6] South Sudan's 2020 National Inclusive Education Policy establishes a multi-level framework addressing inclusion in schools, counties, states, and nationally.[7] Governments have also increasingly committed to the inclusion of refugees in national systems, with secondary education seeing the highest gains in recent years (2022 to 2024).[8] Meanwhile, Sierra Leone's 2021 Radical Inclusion Policy prioritizes multiple historically excluded groups: girls, pregnant and parenting learners, learners with disabilities, and rural children. This policy has contributed to girls now slightly outnumbering boys at junior and senior secondary levels.[9]

These policy developments establish important rights and commitments made by various countries in Africa, but their impact depends on effective implementation. The sections that follow examine how countries are working to reduce the costs of secondary education, making school environments more inclusive to bring more diverse young people into educational environments, extending provision to underserved communities, and identifying learners whom existing systems overlook. Ultimately, inclusive secondary education systems increasingly adapt to learners rather than expecting learners to adapt to systems.





6.2 Fee-free secondary education can expand access, but it is not enough

Fee-free secondary school education has been one of the most significant policy reforms contributing to expanded access across Africa. Over the past two decades, many countries across the continent have introduced and implemented such policies, reflecting growing recognition that the direct costs of schooling exclude large numbers of young people from education.[10] By 2024, 34 of 54 African countries offered fee-free lower secondary education, and 16 extended it to the upper secondary level (Figure 1.6). Across sub-Saharan Africa, abolishing secondary school fees is estimated to have increased upper secondary enrolment by nearly seven percent.[11] Removing tuition charges shifts an important cost from households to the state, although the scale and distribution of benefits depend on how policies are designed and financed.

Sierra Leone's Free Quality School Education program contributed to doubling enrolment from half a million in 2018 to more than one million in 2024.[12] Similar gains have been observed elsewhere. Following the introduction of fee-free secondary education, Tanzania nearly doubled secondary enrolment from 1.77 million learners in 2015 to 3.31 million in 2024,[13] while Ghana's Free Senior High School policy has been associated with the net enrolment rate increasing from 26.5 percent in 2016–2017 to 41.2 percent in 2022–2023.[14] The policy has also improved gender parity and contributed to modest gains in participation for learners from rural communities.[15]

However, fee-free education does not benefit all learners equally. Because young people from poorer households are less likely to enter secondary school in the first place, they may benefit less from fee abolition than their wealthier peers, as discussed in Chapter 2.[16] Universal fee abolition also subsidizes secondary education for households that could already afford school fees. Where these policies are financed through

consumption taxes, such as VAT, lower-income households may bear a disproportionate share of the tax burden relative to their income (Chapter 9).[17]

Even where granted free tuition, learners face financial barriers to accessing school. For many families, other costs of education – uniforms, transport, meals, materials, examination fees, parent-teacher association contributions – continue to place secondary education beyond reach. In case studies from Ethiopia, Ghana, Malawi, Sierra Leone, and Tanzania, these obstacles are cited repeatedly. One adolescent in Ghana explained the Free Senior High School program:

> **"has helped many of us to continue our education, but our families still struggle with the costs of transport, food, and other school requirements."**

Removing school fees alone is therefore rarely sufficient to achieve equitable participation. Indeed, the accomplishments of Sierra Leone's decision to cover examination fees alongside tuition illustrates how governments can address such barriers (Box 6.1).

Hidden costs disproportionately affect marginalized learners. Adolescent girls and young women often need access to menstrual health hygiene resources, while young mothers and parents may be forced to choose between spending money on educational materials over diapers, healthcare, or nutrition for their children.[18] Learners with disabilities often need to pay for assistive technologies and health or specialized support services such as occupational or speech therapy.[19] Where tuition is free, these hidden costs continue to disproportionately affect the poorest households and those facing multiple forms of inequality. Removing additional hidden costs and other financial barriers is thus a necessary next step to improve access to education for these young people, as explored in the following section.

BOX 6.1

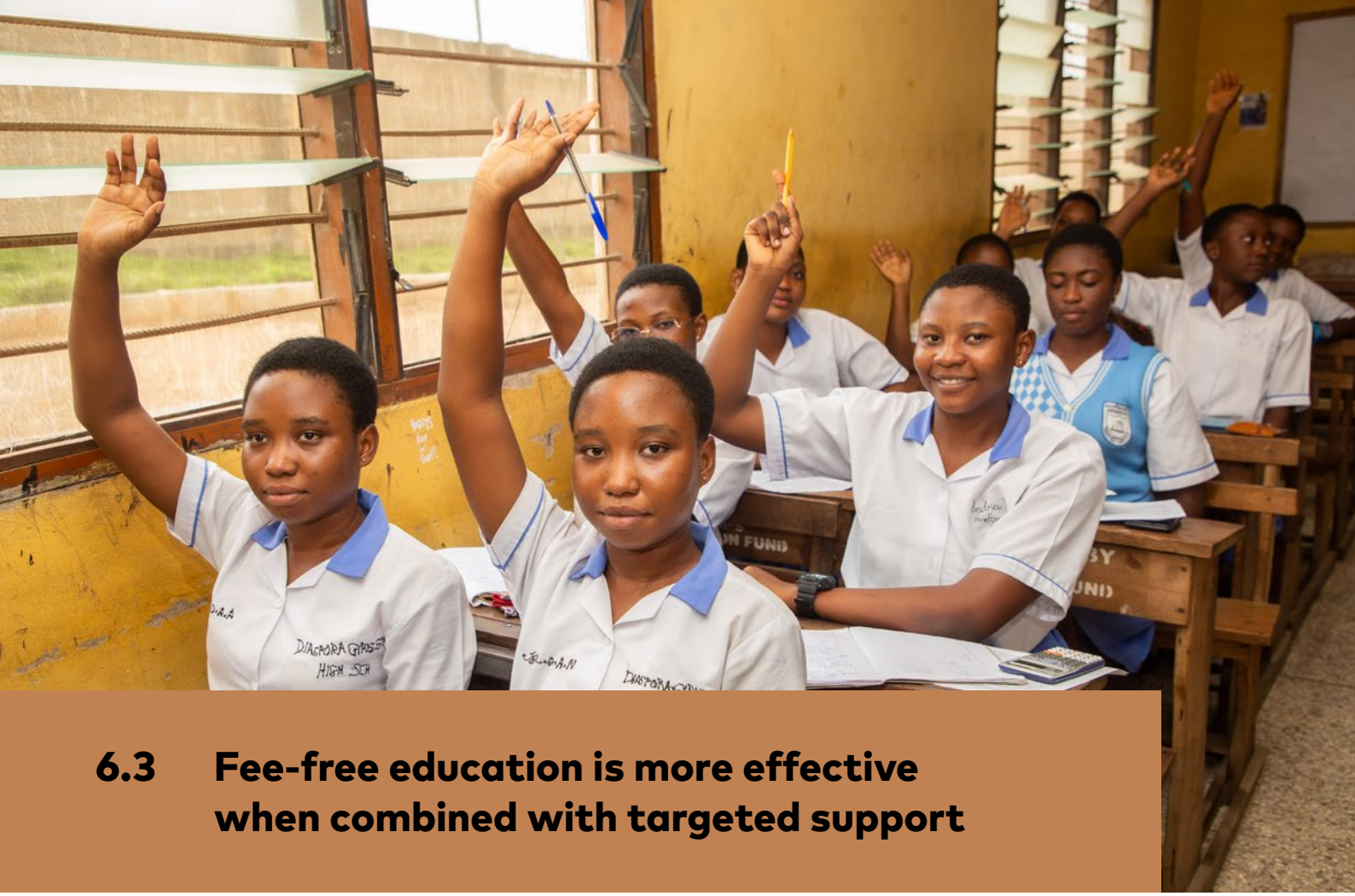
Sierra Leone: The removal of both school and exam fees enhances participation

In 2018, Sierra Leone launched the Free Quality School Education program, shifting major direct costs from households to the state in government and government-assisted schools. The program covers tuition fees, public examination fees, textbooks, and core learning materials.[20] Secondary enrolment more than doubled following the introduction of the program, increasing from 522,036 learners in 2018 to 1,215,465 in 2024, an increase of 133 percent.[21] Growth was particularly pronounced at senior secondary level, where enrolment rose from 206,536 to 531,045 learners.[22]

Reducing costs of high-stakes exams also shows the potential to improve transition or completion rates. After the government paid examination fees for more than 516,000 learners in 2023, the West African Senior Secondary Certificate Examination candidature grew more than sixfold, from 33,516 in 2018 to 220,721 in 2023.[23] These figures illustrate a substantial rise in participation, although they do not by themselves establish how much was caused by the fee policies.[24] In addition, TVET examination fees have not been eliminated.[25]

Source: Hunt et al., *Secondary Education in Sierra Leone: Country Case Study* (Laterite, 2026).





6.3 Fee-free education is more effective when combined with targeted support

Targeted, equity-based financial or material support can help expand access and learning by addressing costs that continue to exclude marginalized learners. Targeted cash transfers across Africa – including in Kenya, South Africa, and Zambia – have improved enrolment, attendance, and retention, with many education-focused programs specifically targeting adolescent girls.[26] Cash transfers provided through the Girls' Education South Sudan program accompanied a rise in girls' secondary enrolment from fewer than 20,000 in 2014 to more than 90,000 in 2024.[27] Eligibility has since expanded to boys and learners with disabilities.[28] In Zambia, economic support combining cash transfers and school-fee payments for adolescent girls reduced the risk of school drop-out due to teenage pregnancy and early marriages, increased motivation for school and sitting grade nine exams, and reduced health and gender-based violence risks.[29]

The design of targeted support matters for who ultimately benefits. While South Africa's government cash-transfer system has improved secondary attendance and learning irrespective of gender,[30] Mali's social safety net program, *Jigisémèjiri,* produced substantial gains for girls but no significant schooling effects among older boys (Box 6.2). Program design also has implications for sustainability. Five of the six interventions described above relied predominantly or entirely on external financing, although three were research interventions rather than national programs. South Africa provides the clearest contrast, with cash transfers embedded within the government social-protection system. This raises questions about how effective targeted support can be sustainably financed and institutionalized at scale.

As fee-free education expands, targeted scholarships and bursaries can complement universal provision by addressing the remaining

BOX 6.2

Mali: Combining cash transfers with targeted interventions addresses barriers for girls

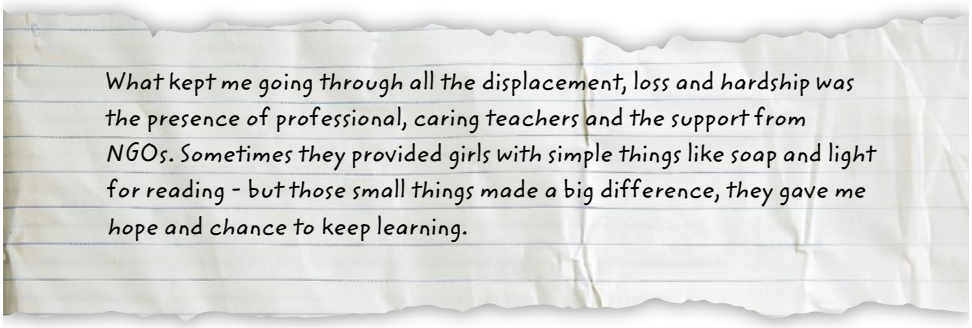
In Mali, the national social safety net program *Jigisémèjiri* increased girls' enrolment at primary and lower secondary school age and doubled it among girls of upper secondary school age. Yet it had no significant schooling effects among older boys. While cash transfers were targeted to extremely poor households irrespective of gender, accompanying community sessions explicitly promoted girls' education. The authors suggest that reducing the direct and opportunity costs of girls' schooling alongside efforts to address gender norms may explain these effects. This highlights the value of combining financial and social interventions, while also underscoring the need to identify and address the distinct barriers affecting both girls and boys, as well as marginalized groups.

Source: Sessou, et al. "Educational Impacts of an Unconditional Cash Transfer Program in Mali." Economics of Education Review (2024).

costs and barriers faced by marginalized learners. Scholarship schemes and bursaries for financially underserved students have incentivized education participation, reduced dropout rates, and improved learning outcomes for girls and other marginalized young people in Nigeria, Malawi, Tanzania, and Zimbabwe.[31] A study in Malawi found that although school bursaries covered just school fees, they also motivated girls to work hard and transition to tertiary education, because recipients experienced a higher sense of self-worth and could focus on their studies without worrying about school fees.[32] Scholarships and school kits were also identified as important enablers of inclusion by young refugees and displaced learners, including "dignity kits," which provide hygiene resources for boys and menstrual health hygiene resources for girls.[33] As part of a case study in South Sudan, a young refugee researcher attested to the importance of such provisions (Figure 6.1). Evidence from the Mastercard Foundation Scholars Program also suggests that scholarships for secondary education students are associated with building confidence, aspirations, networks, livelihoods, and support for families. The study found that scholarship financing should be complemented by mentoring, career guidance, and transition to work support to help translate

FIGURE 6.1

A young refugee from South Sudan describes why material and social support matter



Source: Ioanna Ayen Wagner Tsoni et al., Case Study: *Secondary Education for Refugees and Displaced Populations in South Sudan* (World University Service of Canada, 2026), p.32.

educational opportunities into sustained economic and social benefits.[34]

Targeted, equity-based capitation grants can direct resources to schools serving increasingly diverse student populations. Capitation grants are public funds allocated to schools based on the number, and in some cases, needs of their learners. Though more common at the primary level, they have been used in secondary education systems in Tanzania, Uganda, South Sudan, and Kenya. The scaling of capitation grants in Tanzania provides schools with operational funding to manage increased enrolment and improve education quality by covering essential inputs such as learning materials and infrastructure.[35] In Sierra Leone, per-pupil subsidies are higher at the secondary level compared to the primary level due to higher costs at this level. In 2021, Kenya increased grants for schools serving learners with disabilities[36] to help cover costs of assistive devices and additional personnel.[37] Needs-based formulas, however, raise risks of over-reporting disability, as schools seek resources based on labels that may not always reflect individual needs.[38] They require reliable data and safeguards against inaccurate classification or reporting. Delays and funding shortfalls can further limit their effect.[39]

These instruments enhance equity only if designed to address the needs of marginalized learners and are properly implemented. Scholarships based solely on academic performance may unintentionally exclude marginalized learners.[40] Bottlenecks such as delays and reductions in grant payments undermine school planning.[41] Financial support cannot overcome supply-side shortages: severe infrastructure constraints and distance barriers will continue to hamper access, as seen in research on refugees and displaced young people.[42]

Equitable access also depends on addressing the basic health and well-being needs that shape whether young people can attend school and learn. Poverty is closely linked to food insecurity and poor nutrition, leaving many adolescents unable to fully engage in learning even when they are enrolled in school.[43] Because educational exclusion is often a symptom of wider household and community vulnerabilities, schools are most effective when connected to broader social protection and other services that can address barriers beyond the classroom, including health, nutrition, child protection, disability, and livelihood support.[44] In highly food-insecure rural communities, school meals combined with nutrition education, school gardens, and community workshops may address both nutritional and educational needs.[45] School gardens can also provide practical learning opportunities, including exposure to entrepreneurship.

To that end, African countries are increasingly turning to school meal programs to respond to the needs of marginalized learners. The number of learners reached by school meal programs in Africa has increased from 38.4 million in 2013 to 86.9 million in 2024, reflecting a growing recognition of the importance of these programs for young people's education and broader well-being.[46] Following the COVID-19 pandemic, the government of Kenya committed to extending school meals to universal coverage. Since then its reach has increased dramatically from 1.8 million in 2023 to 2.6 million in 2024.[47] Through public-private partnerships and shared financing with development partners, the program has extended to reach secondary schools and refugee populations.[48] In Tanzania, increased enrolment at the secondary level has been attributed to the combination of fee-free education and school meals, in part paid by families.[49] Its national nutrition framework explicitly monitors the share of primary and secondary schools providing fortified meals, producing nutrient-dense foods in school gardens, and operating nutrition clubs, as well as training for health and nutrition teachers and school committees on the implementation of school meals guidelines.[50] An analysis covering 14 countries, nine in Africa, estimated that an annual investment of $11 billion generated an estimated $156 billion in social benefits through lifetime productivity and health gains.[51]

In many contexts, however, school meal programs end at the primary level or fail to reach those learners most in need. A survey of 41 African countries (39 in sub-Saharan Africa) found that

while all offered school meals programs at the primary level, less than half (44 percent) reached students in secondary schools.[52] Reaching remote schools can also be challenging, as poor roads, seasonal inaccessibility, and weak supply chains constrain reliable food delivery,[53] potentially excluding marginalized rural learners where food insecurity may be higher.[54] In refugee camps and settlements – where risks of food insecurity are more prominent – school meals also reportedly stop at the primary level.[55] Refugee youth in Chad and South Sudan identified school meals as one of the priority reforms to extend to the secondary level.[56] Rwanda's National School Feeding Expansion, together with the adoption of the Comprehensive Refugee Response Framework helped to extend school meals and school-based psychosocial support services to refugees and host communities (Box 6.3).

Sustaining school meal programs can be costly. To make them work long term, they require predictable financing and workable delivery arrangements that reduce costs without shifting the burden onto communities. In many low- and middle-income countries, including in Africa, community contributions of food, cash, or labour – including unpaid food preparation by women – can shift costs back to households, creating gender-equity concerns.[57] More sustainable approaches include more diversified public financing, pooled procurement, and economies of scale.[58] Tanzania, for example, combines grants, loans, and carbon-related financing to support healthier meals and clean energy.[59]

BOX 6.3

Rwanda: Combining school meals with targeted support helps refugee learners

Introduced in secondary schools in 2014, Rwanda's National School Feeding Expansion program has since then scaled to near universal national coverage. From 2020 to 2025, coverage grew from 68 percent of general secondary students and 50 percent of TVET students to 99 percent of learners across both types of institutions.[60] School meal provision, alongside complementary measures such as remedial learning, water, sanitation, hygiene, and community engagement, have contributed to reducing dropout rates from nine percent in 2021 to five percent in 2025.[61]

In parallel, Rwanda adopted the Comprehensive Refugee Response Framework in 2018, extending access to secondary education and social protection to refugees on the same basis as nationals.[62] Refugee learners now benefit from government school meals and psychosocial support programs, contributing to higher secondary enrolment rates.[63] This example illustrates how universal reforms, such as school meals, are most effective when paired with targeted support for learners facing intersecting barriers related to poverty and displacement.





6.4 Inclusive instruction helps respond to diverse learning needs

Inclusion depends not only on enabling young people to attend school, but on what transpires inside the classroom. Harsh discipline, weak relationships with teachers, and lessons disconnected from young people's experiences can compound exclusion. [64] Participatory teaching, positive discipline, social-emotional learning, and respectful relationships can strengthen engagement.[65] Consultations with young people in Cameroon, Ghana, Kenya, Nigeria, Rwanda, Tanzania, and Togo consistently identify supporting and engaging teachers as the foundation of meaningful learning, well-being, and successful transitions beyond school.[66]

As secondary classrooms become increasingly diverse, teachers require stronger competencies in differentiated instruction and remediation. As discussed in Chapter 2, many young people enter secondary school without secure foundational skills. Most evidence on approaches such as Teaching at the Right Level[67] comes from primary education, although longitudinal evidence from Zambia suggests that earlier remediation can have benefits as learners progress to school[68] (see more on remediation in Chapter 3). While more research is needed at the secondary level, the underlying principle has broader relevance across the education system: effective teaching starts with assessing learners' current level of understanding rather than assuming all students are ready for the same content.[69] Regular assessment and targeting additional support to learners needing additional support feature in Morocco's recent remediation efforts (Box 6.4). In secondary education, teaching at the right level means adapting instruction and providing appropriate support while maintaining age-appropriate curriculum expectations.

Inclusive pedagogies, such as Universal Design for Learning, help increase participation and equity in the classroom. Universal Design for Learning encourages teachers to use flexible approaches to

BOX 6.4

Morocco: Targeted remediation supports struggling learners

Early identification of at-risk students and offering them remedial education are the centrepiece of Morocco's recent major reform, the Pioneer Schools Program, launched in 2023–2024. The Program aims to continue the country's progress in improving retention of students, this time focusing on students struggling with learning. By 2025–2026, the Pioneer Schools Program had covered 500 lower secondary schools accounting for 30 percent of enrolment. Pioneer Schools' remedial program divides the school year into six periods of six weeks each. The first period opens with testing to place students in remediation groups based on content, using a non-standard curriculum. The following academic periods alternate between remediation and learning new material. Students take a post-test during the sixth week, and parents are invited to view the results. Learners not reaching proficiency receive comprehensive, personalized, and continuous support throughout the rest of the academic year. While this approach has been shown to improve learning, its impact on dropout has not yet been evaluated. Morocco's data and assessment driven approach, combined with personalized support for learners facing the greatest difficulties, are hallmarks of the program.

Source: UNESCO, *Global Education Monitoring Report,* Morocco Case Study (Paris: 2026).

teaching by providing multiple ways for learners to engage with content, participate in classroom activities, and demonstrate their learning.[70] In Tanzania's Mwanza district, a small-scale study of secondary school teachers found that the use of tactile materials, audio lessons, assistive technologies, and flexible assessment consistent with Universal Design for Learning, enhanced the participation and independence of students with visual disabilities.[71] Universal Design for Learning also benefits students without disabilities. A quasi-experimental study in two public secondary schools in Nigeria found that Universal Design for Learning approaches in a financial accounting class resulted in significantly higher learning outcomes and motivation amongst students, compared to conventional teaching.[72]

Similarly, gender-responsive pedagogy helps ensure teaching is relevant, safe, and engaging for girls and boys while encouraging teachers to reflect on gender biases and classroom practices.[73] Mixed methods research conducted in secondary schools in Tanzania and Uganda suggests that gender-responsive teaching practices are positively associated with more equitable classroom interactions and greater participation, confidence, and academic outcomes for young people.[74]

More broadly, positive classroom management can create safer and more supportive learning environments. In a cluster-randomized trial in public secondary schools in Uganda, training teachers in positive interactions and non-violent disciplinary strategies significantly reduced students' experiences of physical and emotional violence.[75]

While more large-scale evaluations and causal evidence are needed, changes in policy reforms are progressing in the right direction. Burundi, Ghana, Kenya, Tanzania, and Zimbabwe increasingly recognize approaches such as Universal Design for Learning and gender-responsive teaching.[76] Implementation, however, remains uneven and of impact evidence is limited.[77] The priority is to embed pre-service and in-service teacher education and school leadership frameworks, alongside training in competency-based curricula, rather than position it as a specialist course reserved for a select number of teachers.[78] Chapter 5 examines the workforce arrangements needed to support this shift.

Language of instruction continues to be a barrier – and at times an enabler – for the inclusion of marginalized learners in secondary schools.

Although evidence consistently demonstrates the benefits of learning in familiar languages during the early grades, many education systems transition to English, French, Portuguese, or other official languages at the secondary level, creating additional barriers for learners who are already facing numerous challenges.[79] These challenges are particularly acute for refugees, displaced learners, migrants, and linguistic minority groups, whose home language may differ from the language of instruction and the dominant language spoken in their communities. Few countries have adopted nationally inclusive language policies for secondary education. A promising example is found in Chad, where refugees access nationally recognized qualifications through curriculum pathways that include Arabic-medium provision.[80]

While research on multilingual teaching in secondary schools is limited, emerging evidence suggests this approach can help learners access content while continuing to develop proficiency in the official language of instruction. In eight secondary schools in Kenya, a quasi-experimental study found that translanguaging – strategically drawing on learners' different languages during classroom instruction – improved English language achievement by 15 percent more than English-only immersion.[81] Qualitative evidence from Tanzanian secondary schools similarly suggests that using Kiswahili alongside English can strengthen comprehension, classroom participation, and motivation.[82] Beyond supporting comprehension, evidence from accelerated education programs (Chapter 7) suggests that drawing on learners' home languages can strengthen their sense of identity, dignity, and connection between school, family, and community, particularly for marginalized learners.[83] Supporting learners to transition from a home language to a national or world language requires strong teacher capacity. Tunisia has recently implemented a program to support upper secondary school teachers and school inspectors to facilitate the transition to instruction in Arabic to French for math and science subjects (Box 6.5).

Ensuring curriculum is culturally relevant extends beyond the language of instruction. For example, several young people from Senegal expressed a desire for curricula to be more closely connected to the realities of their country, communities, and lived experiences.[86] As one young woman expressed:

> **"We are taught a great deal about the history of France, whereas it would be more meaningful to learn more about our own history and culture."**[87]

Teachers who share and understand the lived experiences and backgrounds of young learners can serve as important role models, help strengthen a sense of belonging among them, and enable schools to become more inclusive.[88] While impacts on educational outcomes can vary, evidence suggests female teachers may help girls feel safe and more connected to school.[89] Research in Chad and Rwanda shows that refugee teachers and teachers with disabilities often serve as role models and provide valuable academic, social, and emotional support, while challenging stigmas and stereotypes.[90] Chapter 5 of this report explores emerging evidence on community teachers who not only improve learning outcomes when adequately trained and supported, but who are also more likely to stay in the remote or fragile communities where they work. These findings suggest that *who* teaches can matter alongside *how* teaching occurs, particularly for learners who have historically lacked visible role models within schools.

Teachers cannot do it alone: they need classroom-, school-, and system-level support to reach all learners. Accessible learning materials avoid reinforcing harmful gender and social norms by ensuring diverse learners are visible, accurately represented, and valued in text, images, examples, and learning activities.[91] Learners with disabilities often require assistive technologies and special support services – such as sign language interpretation or occupational therapy – that extend beyond what classroom teachers can reasonably provide. Yet in many African countries, these services are not readily available. Within

BOX 6.5

Tunisia: Supporting language transitions can strengthen secondary learning

Tunisia is addressing challenges facing upper secondary students and teachers during the required transition from instruction in Arabic to instruction in French for science and mathematics. Data from UNESCO have shown that changing the language of instruction is correlated with a drop in academic performance between lower and upper secondary school, especially for the poorest students.[84]

To support upper secondary students and teachers during this language transition, Tunisia's Ministry of Education in 2024 began the PARLE initiative, a €14 million program supported by the European Union and Agence Française de Développement through 2027. PARLE strengthens the capacity of future secondary school teachers in mathematics, physics, and life sciences to incorporate language development into their subject teaching. Student teachers at the university level undergo rigorous linguistic assessments and take part in specialized language modules targeted to scientific and technical French, while also learning how to guide classroom exchange and negotiate scientific meaning using precise French vocabulary.

Tunisia's PARLE program also supports regional secondary education inspectors, who make up part of the middle-tier management of education systems and hold the potential to ease educational reforms and strengthen the quality of instruction (Chapter 9). Through PARLE, inspectors learn how to evaluate teachers while also shaping instructional guidelines and curriculum uptake at the school level. An initial cohort of 57 Tunisian inspectors and Education Ministry officials participated in immersive training in France on supporting teachers' scientific knowledge as well as the linguistic accessibility of their lessons. Tunisia also gives inspectors a key role as authors and designers of teaching materials in eleven scientific, social science, and technical disciplines.[85] Tunisia's experience demonstrates an intensive approach that targets both Ministerial and teacher capacity to ease the transition to scientific instruction in a new language. Evidence of improvements in secondary learning outcomes is not yet available.

education systems many of the provisions are concentrated at the primary level or in special schools, failing to reach learners with disabilities in mainstream secondary schools.[92] Ensuring education systems are inclusive for learners with disabilities requires a twin-track approach (Box 6.6).

Ensuring teaching and learning respond to the diverse needs of learners will ultimately depend on embedding equity and inclusion across all areas of the education system. These connections are developed in Chapters 3 and 5; the next section focuses on the health, safety, family, and community conditions that shape learners' ability to participate.



BOX 6.6

Disability inclusion in education requires a twin-track approach

A twin-track approach involves mainstreaming inclusion across the system while also providing targeted support to learners with disabilities. A scoping review of recent evidence from across Africa highlights several promising examples:

Universal Design for Learning equips teachers to anticipate learner diversity through flexible teaching, assessment, and participation strategies.

Individualized Education Plans help schools identify, address, and monitor learners' strengths, support needs, accommodations, and transition goals, enabling more coordinated and learner-centred support.

Multidisciplinary support teams, including therapists, sign language interpreters, psychologists, and social workers, can help schools respond to learners with more complex needs while allowing classroom teachers to focus on teaching.

Resource centres and itinerant teacher models provide specialist expertise and support to multiple schools, helping extend limited disability expertise – including inclusive STEM – beyond special schools.

Dedicated governance structures, including Special Education Units or School Support Officers, help to monitor progress, support teachers, and link schools with local screening and referral pathways.

Together, these measures show how mainstream schools can provide accessible instruction by drawing on specialist services and coordinated support.

Source: D'Angelo, *Secondary Education and Transitions to Work for Youth with Disabilities: A Scoping Review of Post 2020 Evidence* (Mastercard Foundation: 2026).





6.5 Whole-learner approaches strengthen well-being and participation

Some of the strongest barriers to participating and succeeding in secondary education lie beyond the schoolyard. Poverty, food insecurity, poor health, violence, restrictive gender norms, mental health challenges, pregnancy, disability-related stigma, displacement, and other social risks often interact to shape learners' educational experiences and outcomes.[93] Schools cannot resolve these pressures alone, but they can work with families, communities, and health and social protection services to identify risks and connect learners with practical support.

Restrictive gender norms and the lack of practical supports can undermine pregnant girls' and young mother's right to education, creating persistent gaps between policy and practice. Despite a proliferation of re-entry policies for pregnant girls, an estimated six million pregnant and parenting girls aged 10 to 19 were out of school in 2024 in sub-Saharan Africa and fewer than five percent of girls returned after pregnancy.[94] In Kenya, stigma surrounding adolescent pregnancy led some school leaders to ignore the 2020 National Guidelines for School Re-entry, while the absence of practical supports, such as breastfeeding spaces, flexible examination arrangements, counselling, and pastoral care, continued to exclude many young mothers.[95] In Senegal, young mothers reported similar barriers to re-entry, including stigma, limited access to childcare, a lack of family support, or not knowing the education and training options available to them after having a child.[96]

The limited capacity of governments to enforce laws and policies, along with deep-seated societal stigmas, continues to limit educational opportunities for learners with disabilities, refugees, and other marginalized groups in many communities. This is true in Senegal, where young people with disabilities surveyed cited the effective implementation of their existing rights[97] and

establishing the legal right for all young people to study as a crucial first step in making change.[98]

While schools can help transform these norms, lasting change is most likely when learners, families, community leaders, and local organizations are engaged as partners rather than passive recipients of reform. Young people across Africa consistently describe the important role their parents, caregivers, and other trusted adults play in advocating for them and encouraging them to continue their education, despite the hardships they confront. Young people in Senegal, Sierra Leone, and South Sudan describe relatives and caregivers advocating for their education despite financial and social pressures (Figure 6.2). As a young mother from Sierra Leone recalled:

> **"Only my mum and my elder sister were helping me. My mum fought hard for me to return to school. She took the child from me and sent me back to school."**

The strongest reforms institutionalize learner well-being through coordinated action across multiple levels of the education system. Sierra Leone shows how complementary measures can be embedded across the education system rather than delivered as isolated interventions. Since 2018, reforms have linked legislation, inclusion policies, school safety, adolescent health, and district-level implementation (Box 6.7). Tanzania has combined fee-free secondary education with re-entry guidelines for adolescent mothers, menstrual health support, and gender-responsive pedagogy.[99] Rwanda's Inclusive Education Initiative demonstrates that disability inclusion requires coordinated investments in teacher

BOX 6.7

Sierra Leone: Learner well-being is embedded across the education system

Sierra Leone's experience illustrates how learner well-being can be embedded across multiple levels of an education system. Since 2018, complementary reforms, anchored by the 2021 Radical Inclusion Policy, have strengthened school safety, adolescent health, gender equality, and inclusion of young people with disabilities. Key reforms include:

Inclusive policy: The 2021 Radical Inclusion Policy establishes a system-wide commitment to ensuring marginalized learners – including pregnant girls and parent learners, learners with disabilities, and children from poor and rural households – can access and remain in school.

Legislation: The Education Act (2023) bans corporal punishment.

School safety and accountability: The Comprehensive School Safety Policy establishes school safety committees, safeguarding structures, district-level reporting, and referral pathways, while School Quality Assurance Officers support implementation and monitoring.

Curriculum: The Child and Adolescent Health and Life Skills (CAHLS) curriculum equips learners with knowledge and skills related to sexual and reproductive health, gender equality, child protection, well-being, healthy relationships, and decision-making.

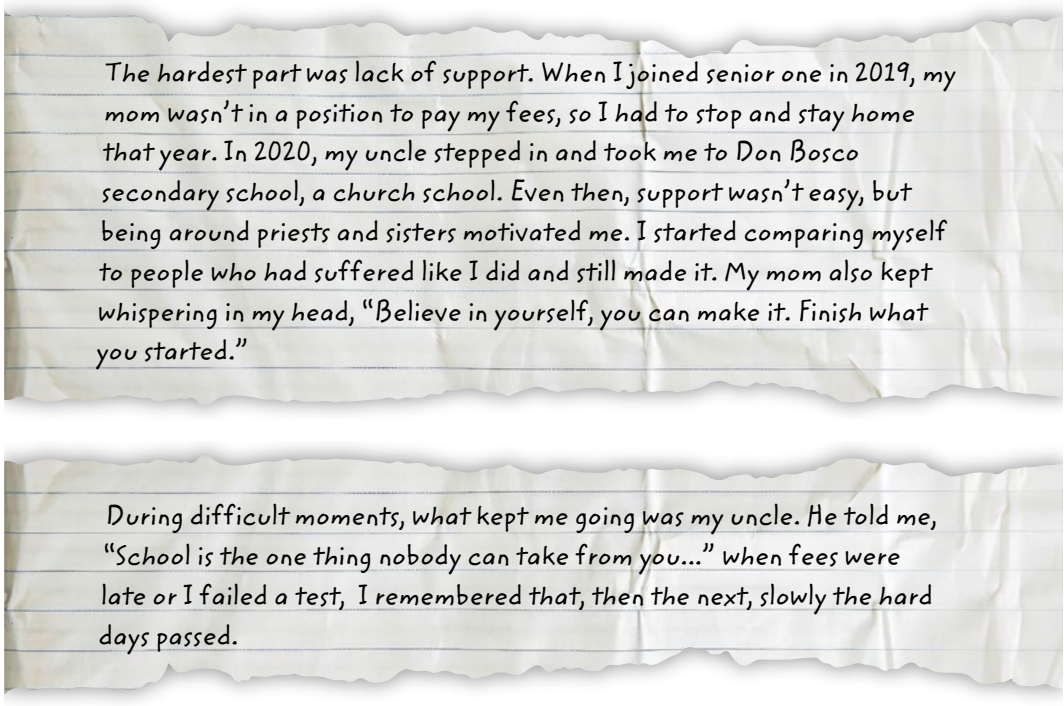
Community engagement: Government stakeholders highlighted the importance of sustained engagement with traditional leaders, parliamentarians, and communities in building support for these reforms and promoting safer, more inclusive school environments.

Together, these reforms demonstrate how governments can move beyond isolated interventions to embed learner well-being across curricula, policy, governance, and school practices.

Source: Hunt et al., *Secondary Education in Sierra Leone: Country Case Study* (Laterite, 2026).

FIGURE 6.2

Young refugees express the importance of support from families and trusted adults



Source: Reproduced Ioanna Ayen Wagner Tsoni et al., *Secondary Education in South Sudan: Perspectives from Forcibly Displaced Youth: Country Case Study* (World University Service of Canada [WUSC] and OTHERwise Research, 2026), country case study prepared for the Mastercard Foundation, p.31-32.

support, accessible infrastructure, assistive technologies, and school-level implementation mechanisms rather than policy commitments alone.[100] The common lesson is the need to coordinate the education system, social services, government, and employers to help all young people transition to productive livelihoods.

Young people across Africa consistently describe the important role their parents, caregivers, and other trusted adults play in advocating for them and encouraging them to continue their education, despite the hardships they confront.

Safe, inclusive, and supportive school environments are powerful determinants of participation and learning. Young people consistently identify belonging, safety, trusted relationships, mentorship, and psychosocial well-being as essential components of educational inclusion.[101] Young women consulted in Senegal, for example, called for confidential access to psychologists or school counsellors to discuss stress, stigma, pregnancy, early marriage, bereavement, and family pressures.[102] Investments in school safety can increase girls' access to education. In Mozambique, training school staff to prevent gender-based violence and encouraging girls to report incidents reduced staff violence against girls by 67 percent, and increased girls' enrolment by 10 percent.[103] In conflict- and crisis-affected settings, protection must also extend beyond school grounds: armed violence, attacks on schools, and unsafe journeys to school can disrupt participation, requiring preparedness, protection measures, and flexible approaches that reduce learners' exposure to risk.[104]

While governments are increasingly investing in school safety and safeguarding mechanisms, neglecting adolescents' mental health carries substantial educational and economic costs. Even before the COVID-19 pandemic, nearly 37 million adolescents ages 10 to 19 in Africa lived with a mental health condition, affecting their ability to learn and thrive in school and society.[105] Mental health conditions were more prevalent among older adolescents ages 15 to 19 than younger adolescents ages 10 to 14, and varied considerably across countries, from 11 percent of adolescents in Mauritania to 17 percent in Sudan.[106] Failing to meet the mental health and psychosocial support needs of crisis-affected adolescents in sub-Saharan Africa alone is estimated to result in $111.5 billion in lost lifetime earnings through increased school dropout rates and weaker social-emotional skills.[107] Schools play an important role, not only in academic learning but also in fostering positive school climates, preventing violence and bullying, strengthening learner protection, and connecting young people with appropriate psychosocial and referral services.

The physical environment is equally important in determining who can participate and succeed. Safe water, sanitation, and hygiene facilities – including gender-separated toilets and access to menstrual health resources – support adolescent girls' attendance, dignity, and participation. However, data from 16 African countries reporting to UNESCO Institute for Statistics reveal substantial disparities across and within education systems. While basic drinking water is available in nearly nine of 10 lower secondary schools across those countries on average (87 percent), access ranges from around half of the schools in Cameroon and Burkina Faso to universal provision in several countries.[108]

Even larger disparities exist in sanitation and accessibility. Although countries such as Botswana, Mauritius, Rwanda, and Seychelles report universal access to basic single-gender sanitation facilities, fewer than one in five lower secondary schools in Burkina Faso and Togo meet this standard.[109] Most strikingly, infrastructure adapted for learners with disabilities is available in only about 41 percent of lower secondary schools across reporting countries, ranging from fewer than two percent in Egypt and Djibouti to more than 70 percent in Rwanda, Senegal, and Côte d'Ivoire. Broader infrastructural and environmental barriers continue to limit participation for many young people with disabilities.[110] Improving school environments requires moving beyond basic infrastructure toward facilities that are safe, inclusive, and accessible for all learners.

Failing to meet the mental health and psychosocial support needs of crisis-affected adolescents in sub-Saharan Africa alone is estimated to result in $111.5 billion in lost lifetime earnings through increased school dropout rates and weaker social-emotional skills.

Curriculum and co-curricular activities further strengthen learner well-being while equipping young people with the knowledge, skills, and relationships needed to navigate adolescence and adulthood. Schools play an important role in developing learners' social, emotional, civic, and health-related competencies alongside academic learning. Comprehensive sexual education, for example, has been shown to improve sexual and reproductive health knowledge, strengthen gender-equitable attitudes, reduce harmful social norms, and help young people make informed decisions about their health, relationships, and futures.[111] In Sao Tome and Principe, the Education Policy Charter and the National Education Plan, which promotes gender equality and sexual and reproductive health in education, is credited with decreasing girls' secondary education dropout rate from 24 percent in 2014 to five percent in 2017.[112]

Young people can be powerful agents of change, helping shift harmful gender and social norms, supporting their peers, and contributing to more inclusive school environments.

Not all young people, however, have equal opportunities to participate in these activities. They are often implemented through short-term projects led by non-state actors and are rarely institutionalized within national secondary education systems.[118] Girls, learners with disabilities, and displaced youth are also frequently excluded from leadership and decision-making spaces, limiting their ability to shape the policies and programs designed to support them. [119]

Yet access to sexual and reproductive health education remains inconsistent across Africa, and in many contexts comprehensive curricula are replaced by abstinence-focused or moral instruction that leaves young people, particularly girls, without the practical knowledge needed to protect their health, exercise their rights, and remain in school.[113] Because these reforms often challenge deeply rooted social norms, meaningful engagement with parents, community leaders, and young people themselves is essential to building trust, addressing backlash, and sustaining implementation.[114]

Clubs, peer education, and mentoring can help young people build confidence, leadership, and a sense of belonging, particularly when embedded within broader school and community support systems.[115] Young people can be powerful agents of change, helping shift harmful gender and social norms, supporting their peers, and contributing to more inclusive school environments.[116] Young people have led adolescent health and rights programs in Rwanda and environmental and hygiene initiatives in Morocco.[117] These examples show how co-curricular participation can make learners contributors to school improvement rather than recipients of support alone.





6.6 Diverse forms of provision can bring learning closer to young people

For many young people, particularly those living in rural, remote, or crisis-affected communities, the nearest secondary school remains physically out of reach. Limited school infrastructure, long travel distances, inaccessible roads, and inadequate transport continue to contribute to rural–urban disparities in access (Chapter 2). Figure 6.3 maps proximity to government secondary schools across five African countries, revealing substantial variation associated with geography, population density, and school distribution. Rwanda – a small, densely populated country – stands out for comparatively high physical access.[120] But in other countries, many young people continue to live more than five kilometres from the nearest secondary school, highlighting the continuing importance of physical accessibility as a dimension of educational equity.[121]

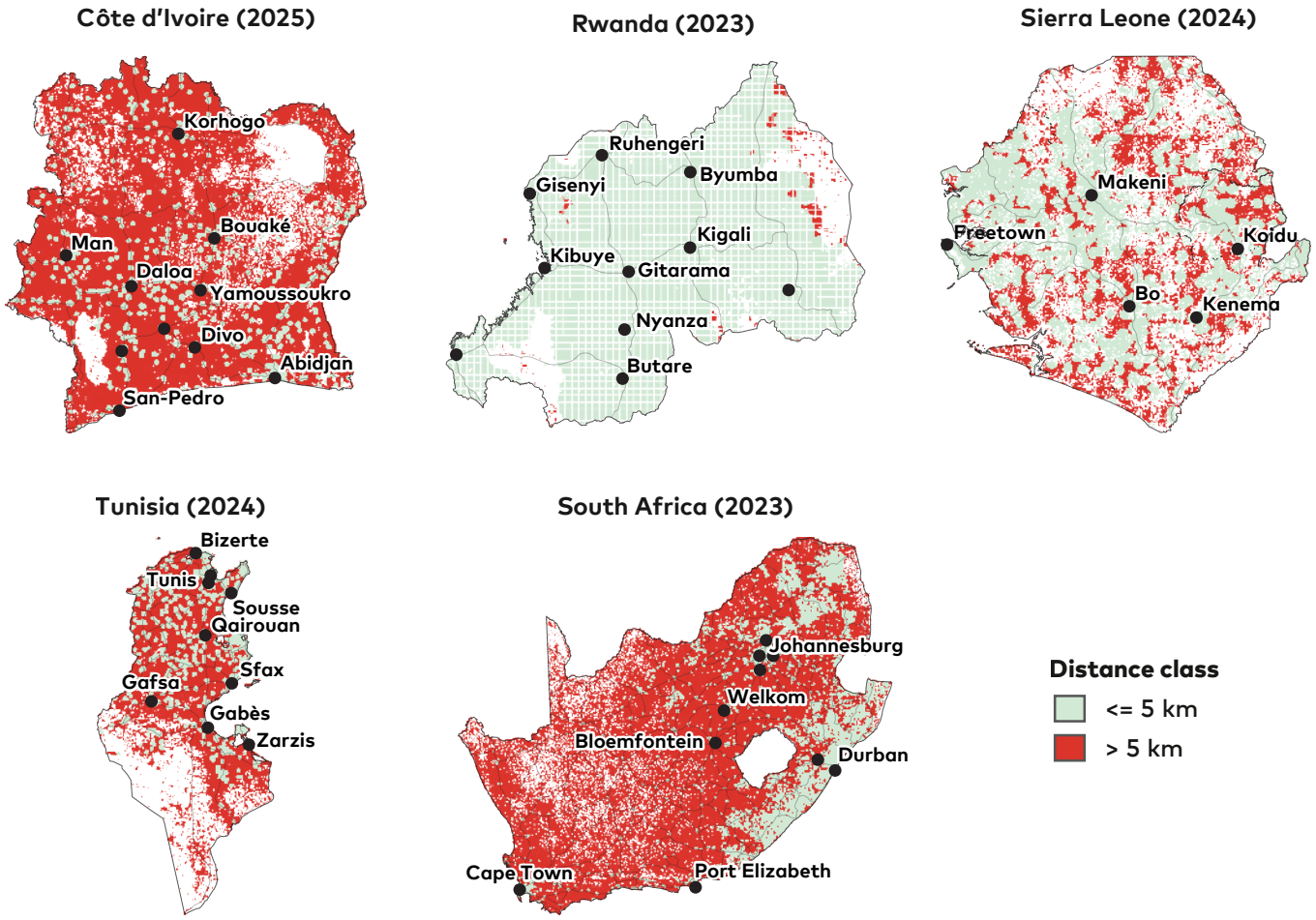
But in other countries, many young people continue to live more than five kilometres from the nearest secondary school, highlighting the continuing importance of physical accessibility as a dimension of educational equity.

Distance compounds barriers to participation, particularly for marginalized learners. Where secondary schools are far from home, long and sometimes unsafe journeys can increase risks of violence, harassment, absenteeism, and school dropout rates, particularly for girls, learners with disabilities, and displaced adolescents.[122] Distance also creates hidden costs, like transport or accommodation expenses and the considerable

FIGURE 6.3

Physical access to secondary schools remains a critical barrier for many young people

Red areas indicate longer travel distances to secondary school



Source: Reproduced from Stoelinga et al., *Secondary Education in Africa: Inequalities and Disadvantages Aggregate Trends 2015-2024* (Laterite, 2026), using geospatial school-location data and population/geographic units.

Note: Coloured grid cells use the underlying population grid and indicate access to the nearest secondary school.

amount of time learners spend travelling to and from school.

While expanding school infrastructure and transportation can enhance access, these are often costly reforms, which are difficult to implement in an already tightening fiscal space. To expand system capacity and reduce overcrowding, Rwanda constructed more than 22,500 classrooms at the primary and secondary levels between 2021 and 2023. [123] Building at this scale in such a condensed timeframe was made possible through a coordinated national effort involving the military, government agencies, and local communities.[124] In Morocco, the out-of-school rate fell between 2000 and 2023, from 42 percent to six percent among adolescents of lower secondary school-age, and from 63 percent to 23 percent among upper secondary school-age young people.[125] This reduction was supported by school construction

and transport, social transfers, and boarding.[126] In Zambia, a non-governmental program providing bicycles to students walking more than three kilometres to school lowered the probability of girls dropping out by 19 percent and of being subject to harassment on the way to school by 22 percent.[127]

Recognizing that distance and mobility barriers remain a major obstacle for many learners with disabilities, some governments are bringing services closer to communities and reducing reliance on long-distance travel. They are expanding accessible infrastructure at the secondary level, leveraging the capacity of resource centres, or training mobile teachers to better support learners with disabilities (Box 6.6). In 2021, Eswatini established its first four inclusive mainstream secondary schools, one in each region of the country. Built using universal design principles with support from the Japanese government, the schools have improved access to secondary education by reducing the need for long-distance travel.[128]

Once central to expanding secondary education, boarding schools are increasingly being reconsidered as countries seek more affordable and equitable ways to bring schools closer to learners. Boarding costs remain a significant – and often overlooked – barrier to equitable secondary education: most fee-free policies leave households to cover boarding expenses.[129] As secondary education expands, some countries, such as Tanzania and Kenya, are shifting away from boarding as the default model of provision toward lower-cost day schools located closer to communities.[130] Rather than relying on boarding schools alone to overcome distance and safety barriers, a more equitable approach combines affordable schools closer to communities with targeted boarding provision for learners for whom daily attendance is not feasible.

Faith-based schools have been longstanding partners in expanding the reach of public education, particularly where government provision is limited. Publicly funded faith-based schools – those receiving government financial support – account for an estimated 75 to 80 percent of educational institutions in Uganda, Kenya, and Malawi.[131] They can also provide trusted learning environments that align with local values and parental preferences, particularly where government provision is perceived as distant or unresponsive.[132] Governments may therefore extend inclusion by partnering with trusted faith-based providers rather than treating them as parallel systems.[133] In crisis settings, other non-state actors, including faith-based organizations and refugee-led initiatives, have similarly expanded secondary provision for displaced learners.[134]

Rather than relying on boarding schools alone to overcome distance and safety barriers, a more equitable approach combines affordable schools closer to communities with targeted boarding provision for learners for whom daily attendance is not feasible.

Community-led schools can expand secondary education by responding to learners' cultural identities and educational needs. In Kenya's Dadaab refugee camps, nationally accredited refugee-led secondary schools have expanded access while responding to community priorities. A study found that some outperformed non-governmental organization-managed schools in national examinations, highlighting the potential of community-led provision that remains connected to national education systems.[135]

Community day secondary school models can expand access for underserved learners, but inadequate funding can undermine the quality of education they provide. In Ghana, these schools have increased access, although some remain too far from the communities they are intended to serve.[136] In Malawi, community day schools accounted for 44 percent of secondary enrolment in 2025, making them the largest school type and an important option for poorer learners unable to

afford boarding.[137] These schools can also create opportunities for greater community and youth participation in school governance.[138] However, they often operate with fewer resources than conventional secondary schools.[139]

In Malawi, community day schools receive just $20 per student, compared with $114 per student in conventional schools.[140] This funding gap contributes to shortages of qualified teachers, learning materials, and infrastructure, and is associated with lower academic performance. Most community day schools have examination pass rates of below 50 percent, and only 16 percent of their students transition to university compared with more than 90 percent in conventional schools.[141] The experience highlights the need to pair expanded local provision with equitable financing and adequate quality standards.

Private schools are helping to expand access, but enrolment rates vary greatly by country, and without provisions for the most marginalized young people, advantaged learners benefit the most. The share of enrolment in private secondary schools has increased over the past decade in 17 out of 26 countries for which data are available,[142] highlighting the growing role of private actors in expanding access where public provision remains limited (Chapter 2). Private institutions account for approximately 20 percent of secondary enrolment across the continent: 14 percent at the lower secondary level but 23 percent at the upper secondary level.[143] As secondary education expands across Africa, private providers are increasingly important in absorbing demand. However, private secondary school participation varies widely across countries, ranging from just 1.4 percent in Lesotho to nearly 80 percent in Somalia.[144] More importantly, in some countries, these schools serve young people who have more support and resources, thus exacerbating inequality.[145] A recent study in 10 sub-Saharan African countries found that only a very small proportion of children from the poorest rural households attend private secondary schools. Expansion alone therefore does not demonstrate equitable access.[146]

Nigeria presents a unique example of growing private school enrolment rates leading to increased policy attention. In Lagos State, more than 70 percent of the student population attends one of about 18,000 private schools, while 1,800 public schools in the state provide education to the remaining 30 percent.[147] At the lower secondary level, the number of non-state schools in Nigeria grew by 35 percent from 2017 to 2022, compared to less than seven percent for state schools in the same period.[148] Non-state schools now serve nearly a third (29 percent) of all students at the lower secondary level.[149] Recognizing this, the federal government of Nigeria in 2025 launched the National Policy on Non-State Schools to regulate and oversee non-state schools, though it is too early to measure the impact of its recently launched policy (Box 6.8).

Low-fee private schools may offer places where public schools are overcrowded or distant, but whether this improves equity depends on fees, location, admission practices, quality, and oversight. The proliferation of these schools in many countries reflects in part the struggles of public secondary systems to keep pace with demographic growth and increased enrolment due to free education policies. In Tanzania public schools operate at 130 percent of intended capacity compared with 70 percent in private schools.[150] Evidence across Africa suggests low-fee private schools can expand available secondary school placements without necessarily compromising learning quality.[151]

Families' preferences also matter, with low-fee private schools providing the type of access and flexibility that some learners and caregivers value over free public provision. In rural Kenya, learners chose low-cost private secondary schools to avoid long distances and overcrowding, access lower-cost boarding or fee discounts, or because public schools excluded them based on exam results, age, pregnancy, or particular learning or behavioural needs.[152] Parents in Ghana similarly chose low-fee private schools based on perceived quality, affordability, proximity, and other considerations.[153] This highlights the importance

BOX 6.8

Nigeria: Non-state schools are integrated into education planning

In July 2025, the federal government of Nigeria launched the National Policy on Non-State Schools in Nigeria. Recognizing that non-state schools outnumber state schools in at least 26 of the 36 states of the federation at the Junior Secondary level, the policy officially incorporates private, faith-based, low-fee, and community schools into the formal educational planning grid. This demonstrates the move toward an ecosystem approach to education provision, whereby the government recognizes the important role of alternative school models and takes steps to regulate them to enhance quality. The national guidelines establish four critical focus areas for integration:

Standardized Regulations: Setting minimum baseline standards for curriculum, infrastructure, teacher certifications, community engagement, health, safety, and fee metrics.

Public-Private Partnerships: Including non-state teachers in government-sponsored professional training tracks.

Equity and Resource Allocation: Factoring non-state students directly into government health care, sanitation, and safety funding.

Formal Data Integration: Bringing unregistered schools into the National Education Management Information System.

Source: Federal Ministry of Education of Nigeria, *National Policy on Non-State Schools in Nigeria (NPNSN) with its Implementation Guidelines* (Abuja: 2024).

of considering learner and family agency alongside affordability and access when designing more diverse education systems.

Low-fee private schools do not necessarily reach the most underserved learners. A review of two decades of research found examples of private schools meeting the needs of vulnerable learners with scarce human and financial resources, thereby increasing access to school more cost-effectively.[154] But a 2022 study of private schooling across sub-Saharan Africa found that children from the poorest households represented less than 10 percent of private secondary school enrolments in all but two of the countries examined.[155] Private secondary provision is also strongly concentrated in urban areas, limiting its potential to address access gaps for rural and marginalized learners.[156] Because they often operate through diverse funding and governance models, their contribution to equity depends on effective government regulation and financing that safeguard access and quality.[157]

This highlights the importance of considering learner and family agency alongside affordability and access when designing more diverse education systems.

Expanding access to education involves not only growing enrolment but also leveraging the right learning structures to ensure young people transition to dignified and fulfilling work and adulthood. Where schools are inaccessible, overcrowded, disrupted, or poorly aligned with learners' circumstances, more flexible delivery models – including community-based provision, accelerated learning, and other flexible pathways – can help sustain participation and learning. While this chapter has explored approaches to expand access within formal schools – public, faith-based, and private – Chapter 7 explores flexible pathways for out-of-school learners, and Chapter 8 examines how technology can further extend access to learning when schooling is disrupted. In the context of marginalization and

risks of crisis, the priority should be not only to bring learners into school, but to leverage formal and nonformal learning structures to ensure learners acquire foundational, transferable, and technical skills vital for further learning and transitions to productive and fulfilling work.[158]





6.7 Better data and youth perspectives help design more equitable secondary education

Building more equitable secondary education systems requires making marginalized learners more visible within data and planning systems. National averages often conceal substantial disparities between learners and schools. Important inequalities persist, particularly at the intersection of gender, poverty, disability, geography, and displacement. Yet these are precisely the dimensions for which data remain weakest across many African education systems. Without timely, disaggregated learner- and school-level data, governments cannot accurately identify who is being left behind, allocate resources according to need, or monitor whether policies are reaching the learners they are intended to serve.

National averages often conceal substantial disparities between learners and schools.

Strengthening education data systems is an essential component of equitable policymaking, especially for disability inclusion. The lack of accurate and comprehensive data on learners with disabilities remains a critical barrier to designing and implementing inclusive education policies across African countries.[159] In Sierra Leone, under-reporting of disability in administrative data hinders responsive planning,[160] while in Namibia, definitions of disability are not aligned to those of the United Nations Convention on the Rights of Persons with Disabilities, leading to underestimations of prevalence data and ultimately under-budgeting of disability services.[161]

Some countries across Africa are adopting internationally recognized tools, such as the Washington Group Questions, into national censuses and Education Management Information Systems, which track and manage educational data across African nations.[162]

Better measurement must capture not only learner characteristics and needs, but also school accessibility, available services, and barriers to learners' academic development, broader well-being, and transitions to work and livelihoods.

Evidence on displaced learners is also limited. Few countries collect education data that identify refugee or internally displaced learners, data are rarely disaggregated by age, gender, or disability, and education and employment outcomes are seldom tracked by displacement status.[163] This makes it difficult to identify exclusion and target support effectively.

Governments are exploring data innovations to help identify, re-enroll, and support out-of-school learners. Kenya's National Education Management Information System (NEMIS) supports attendance monitoring and dropout-management efforts through more available learner data.[164] Though at the primary level, Rwanda's Zero Out-of-School Children program, launched in 2023, identified and re-enrolled 90,000 out-of-school learners over the course of three years, and shows potential to scale at the secondary level.[165] The initiative combines community-based identification and follow-up with real-time administrative data from the School Data Management System, enabling schools, local communities, and implementing partners to identify learners who have dropped out, to monitor attendance, and to support their reintegration into formal schooling.[166]

In the absence of comprehensive data on marginalized learners, youth voice and participation can help governments and other decisionmakers develop a more complete understanding of learners' needs. In the wake of the COVID-19 pandemic, Zimbabwe's "Children's Scorecard" enabled young people to audit their own school environments, identify infrastructure deficits, document barriers to attendance and participation, and raise concerns about bullying.[167] Students presented their collective findings directly to high-level state representatives and United Nations delegates. Their evidence helped prompt renewed attention to re-prioritize national budget allocations toward climate-resilient school infrastructure and state-funded basic education financing to reduce cost barriers.[168] Indeed, inclusive systems create formal mechanisms through which learners – particularly those facing exclusion – can shape decisions affecting their education.[169] Young people consistently report wanting to be not simply beneficiaries of education, but partners in contributing to designing, implementing, and continuously improving the services provided to them. As a Senegalese youth report acknowledges:

> **"they [young people] want to participate in decisions, propose solutions, and be recognized as actors in shaping their own pathways."**[170]

Yet learners most affected by exclusion are often the least represented in school councils, clubs, and youth networks. Girls, learners with disability, displaced young people and those living in crisis-affected areas may face particular barriers to participate.[171] [172] Data systems and formal mechanisms for learner voice are therefore complementary: one helps show where the gaps exist; the other helps explain them and identify workable solutions.

In the absence of comprehensive data on marginalized learners, youth voice and participation can help governments and other decisionmakers develop a more complete understanding of learners' needs.





6.8 Conclusion

Governments have made real progress extending secondary education to more young people across Africa. Expanded provision, fee-free education, and other measures to reduce barriers have opened school doors to millions more learners, including many previously excluded. Secondary classrooms are also more diverse than ever. The next generation of reform must ensure that all learners can benefit from educational environments. This will entail transforming schools into equalizing spaces that help mitigate disparities outside their walls and give young people a fair chance to learn, transition to work, and realize their potential. Universal improvements in teaching, school environment, and learner well-being can benefit everyone, particularly when targeted support is added to address barriers shaped by gender norms, household location, socioeconomic level, displacement, or disability.

The evidence is particularly strong around cash transfers, bursaries, scholarships, school meals, social protection, and equity-based capitation grants that help ensure expanded opportunities translate into more equitable outcomes. Expanding access also requires drawing on the whole ecosystem of school providers, from low-fee private schools to community-based schools, refugee-led initiatives, faith-based providers, and other locally rooted approaches. These not only help bring learning closer to young people, they also enhance school choice, and therefore the agency of learners and their families. Valuing marginalized young people's voice and agency in shaping reforms will be critical to ensuring that schools meet learners where they are, particularly as some of the most marginalized young people remain the most excluded from data and planning systems.

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CHAPTER 7

Building Flexible Pathways Beyond Formal Education

Expanding opportunity through diverse, accredited, and inclusive routes to learning and work



QUESTION THIS CHAPTER ANSWERS

How are countries creating more flexible, accredited, and connected pathways that enable young people to move into, out of, and across learning opportunities as their circumstances change?

What has changed since 2020

Flexible pathways have gained greater policy recognition since 2020. Countries are developing accelerated and flexible education policies, National Qualifications Frameworks, and Recognition of Prior Learning mechanisms, while micro-credentials are emerging as another potential means of recognizing learning. Yet secondary-level provision remains scarce and sustainable financing, accreditation, data, and institutionalization continue to constrain scale.

What is needed now

Formal secondary schooling must remain the primary pathway, but it cannot be the only one. Reaching young people excluded from conventional schooling requires flexible routes that enable them to continue learning, develop skills, gain recognized qualifications, and move between education, training and work. Flexible pathways must therefore become connected components of national education and skills systems rather than peripheral programs.



7.1 Flexible pathways are needed to reach the 77 million secondary school-aged young people outside formal education in Africa

This chapter examines pathways beyond formal schooling to viable work and livelihoods for the 77 million out-of-school youth of secondary age in Africa (approximately 12 to 18 years old).[1] These young people – including more than 31 million whose education has been disrupted by conflict, displacement, natural hazards, or acute socioeconomic shocks – remain excluded from the formal education system.[2] Because formal schooling alone cannot meet the needs of these young people, more intentional approaches are needed that integrate flexible pathways responsive to diverse learner needs, along with equivalency frameworks that support transitions between formal and non-formal education pathways and into work.

Continental and global strategies increasingly endorse expanding inclusive, flexible, and accredited learning pathways. The Continental Education Strategy for Africa (CESA 2026–2035) prioritizes second chance and adult literacy programs, recognizing that these "should be inclusive, flexible, and accredited."[3] The Incheon Education 2030 Declaration, which supports Sustainable Development Goal (SDG) 4, calls for "recognition, validation, and accreditation" of skills acquired through non-formal and informal education.[4]

Regional strategic frameworks increasingly prioritize flexible pathways. The African Union–ILO Youth Employment Strategy for Africa calls for stronger informal apprenticeship and Recognition of Prior Learning (RPL).[5] The African Union's TVET strategy asks member states to "establish needs-based second-chance education, bridging, and pre-apprenticeship programs," and to build quality-assurance systems covering qualification frameworks, assessment, certification, RPL, and career development.[6]

This priority is reflected in recent country-level policy updates affecting out-of-school learners. At

BOX 7.1

A note on the evidence: Secondary-level provision of flexible pathways remains scarce

An important distinction shapes the evidence: programs may serve young people of secondary-school age while teaching primary-level or foundational content because learners are over-age or have experienced interrupted schooling. Some programs become more advanced as participants grow older. Uganda, for example, requires learners to be at least 19 to enter its accelerated lower secondary program.[7]

As a result, genuinely secondary-level flexible provision, in both content and target age, remains relatively scarce. A global mapping of 188 accelerated education programs found that 91 percent supported transitions to primary education, compared with 27 percent to secondary education, mostly at the lower secondary level. [8] This chapter therefore examines both programs delivering secondary-level content, as well as programs serving secondary school-age learners through foundational or other second-chance provision. It considers programs that support progression into formal secondary education, vocational training and work.

least 13 African countries have launched efforts to institutionalize programs since 2020, including national accelerated education guidelines in Nigeria and Sierra Leone. These initiatives reflect growing policy attention to learners excluded from conventional schooling.

Despite this growing policy recognition, there is still much to be done to ensure flexible pathways for secondary level learners are institutionalized at scale. Many programs continue to operate as relatively small, time-bound initiatives delivered by non-state actors, while nationally recognized and sustainably financed provision remains limited. Closing this gap between policy ambition and implementation requires moving beyond individual programs to embedding flexible pathways *within* government systems, which would enable effective approaches to be sustained and scaled nationally. Indeed, this was a key issue raised in the Mastercard Foundation's (2020) first *Secondary Education in Africa* report. This chapter assesses progress toward sustainable, system-wide provision.

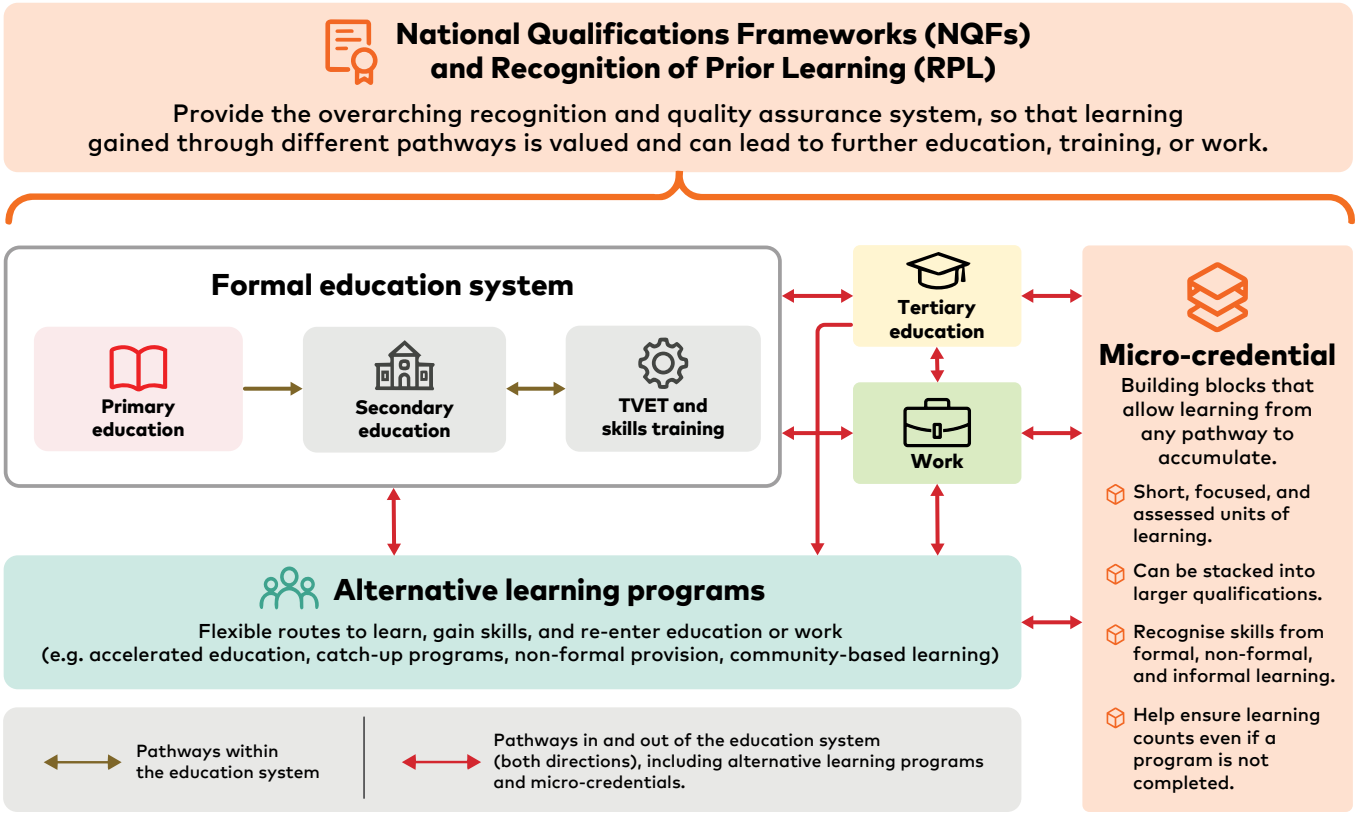
Defining flexible pathways

This chapter surveys flexible pathways that enable young people to move between education, skills development, and work. The first *Secondary Education in Africa* report (2020) highlighted accelerated, catch-up, bridging, and other flexible provision for learners poorly served by conventional schooling. This chapter extends that analysis to consider how different pathways can connect within a wider education, skills and transition to work system (Figure 7.1).

Three different approaches can make these connections possible: flexible programs that help young people resume learning, develop skills, or progress to school, training, or livelihoods (Section 7.2); micro-credentials that can recognize smaller units of learning (Section 7.3); and National Qualifications Frameworks (NQF) and RPL, which establish how learning acquired in different settings counts toward qualifications and further education, training, or work (Section 7.4). Section 7.5 examines how governments can institutionalize and connect these arrangements through policy, governance, financing, and data systems without sacrificing the flexibility that enables them to reach young people poorly served by conventional schooling.

FIGURE 7.1

Flexible pathways enable young people to move between education, training, and work



Source: Authors, using ChatGPT (OpenAI), 2026, adapted from Baxter et al. 2022.





7.2 Flexible learning pathways help young people continue learning and transition to formal school, skills training, or livelihoods

Flexible learning programs offer established and widely studied routes for young people whose schooling has been interrupted. Evidence from accelerated and community-based education shows gains in foundational learning and re-entry into formal school. [9] Most evaluated programs, however, teach primary-level content, including to older learners. Evidence on transitions into training or work is thinner. Much of the available evidence on secondary education learners comes from the United Kingdom's Foreign, Commonwealth and Development Office's Girls' Education Challenge Leave No Girl Behind program.

Programs in Ghana, Nigeria, and Sierra Leone illustrate how flexible provision can respond to barriers of poverty, distance, domestic responsibilities, and exclusion from formal schooling. [10] The programs incorporate local-language instruction, condensed curricula, community facilitators, flexible schedules, age-appropriate teaching, learner-centred curricula, individualized teacher support, and low or no fees.[11]

A growing body of evidence on accelerated education programs validates these findings. A review of evidence identifies nine features of effective accelerated education, including clear program goals and progression routes, equity and inclusion measures tailored to excluded learners, condensed curricula aligned with national standards, assessment and certification,[12] monitoring data integrated into national data systems, appropriate teacher recruitment and development, learner-centred pedagogy, fair compensation, and sustainable financing (Section 7.5). [13]

Sierra Leone's recently launched National Guidelines on Accelerated Education incorporate these features, demonstrating an evidence-based approach to policy development and the importance of maintaining flexibility within

national regulations and policy documents (Box 7.2).

When designed with these core features, accelerated education programs have succeeded in improving basic literacy and numeracy and transitioning learners back to the formal school system, particularly in primary-level programs serving some secondary school-age learners. Ghana's Complementary Basic Education program, delivered nationally since 2012 to out-of-school learners aged eight to 14 in local language community classes, achieved 95 percent completion and 90 percent transition into formal schooling.[16] Uganda's Speed Schools, run by Geneva Global in partnership with the Ministry of Education and Sports, enrolled more than 60,000 out-of-school learners aged eight to 14 in their first seven years; around 90 percent transitioned to formal school and 58 to 76 percent remained enrolled five to six years later.[17] District education offices operate the school classes and train and support the school facilitators. [18] Speed School learners show better literacy and numeracy and higher retention rates than their peers from conventional classrooms. [19] In Liberia, the Luminos Fund's 10-month accelerated learning program for out-of-school learners aged nine to 14 from marginalized communities improved reading and numeracy and supported entry into government schools. [20]

These programs demonstrate the potential of accelerated foundational learning but do not establish the effectiveness of secondary-level alternatives, for which evidence is more limited. Programs serving older adolescents may also need multiple transition pathways, including skills training or work.

Technology can further increase the flexibility of learning pathways, enabling learning to reach young people who cannot attend conventional schools regularly or at all. Radio and television can extend instruction to learners in remote or underserved areas without requiring

BOX 7.2

Sierra Leone: Evidence-based guidelines help regulate flexible pathways

Sierra Leone demonstrates how governments can institutionalize flexible education while retaining the flexibility central to its effectiveness. The country's 2022 national strategy for out-of-school children, alongside its Radical Inclusion Policy and an inter-ministerial steering committee, established a broad policy and governance framework for reaching excluded learners.[14] In 2024, the Ministry of Basic and Senior Secondary Education issued its *National Guidelines on Accelerated Education for Out-of-School Children and Youth*, translating the nine evidence-based features of effective accelerated education into national guidance, with equity and inclusion mainstreamed across them.[15]

Importantly, the guidelines establish common standards for flexible learning programs without prescribing a single model of provision. They cover learners aged nine to 19 and distinguish between accelerated education for those who have never enrolled or have been out of school for at least two years, and shorter catch-up programs for learners returning after shorter interruptions. While catch-up programs can transition learners only to formal school (primary, junior secondary, or senior secondary, depending on their age), accelerated programs lead to re-entry into formal school, apprenticeships, TVET, or work. Certification requirements are reviewed and confirmed by the Ministry's Non-Formal Education Directorate, while providers are not required to use a common assessment. This combination of national standards with flexibility in program design illustrates how institutionalization can strengthen quality and recognition without requiring flexible provision to replicate formal schooling.

internet access. Somalia's 2022–2026 National Education Sector Strategic Plan, for example, integrates radio-based distance learning into plans to expand its Accelerated Basic Education program, including developing additional radio lessons and distributing radios to hard-to-reach communities.[21]

Technology can further increase the flexibility of learning pathways, enabling learning to reach young people who cannot attend conventional schools regularly or at all.

Malawi's Open Secondary Schools provide a government-led example, combining flexible schedules with offline digital learning (Box 7.3).

Chapter 8 examines how effective digital technologies can expand access to learning, particularly when they address persistent constraints in connectivity, devices, and data costs.

Young people's pathways should reflect their different ages, circumstances, and aspirations. Some can return to formal school; older adolescents may prefer TVET, further skills development, or work. [26] Ideally, learners should be able to choose. Tanzania's *Elimu Haina Mwisho* program combined accredited accelerated lower secondary curricula with vocational, entrepreneurship, life skills, and childcare for young mothers.[27] Yet these options are not consistently available: a recent synthesis of Global Partnership for Education Knowledge and Innovation Exchange (GPE KIX) research found that few accelerated programs offered routes to vocational or skills training, even though

BOX 7.3

Malawi: Technology extends flexible secondary education to out-of-school learners

Malawi's Open Secondary Schools demonstrate how flexible secondary provision can be embedded within the public education system and progressively adapted using technology. Managed through the Malawi College of Distance Education, open schools use existing secondary-school infrastructure after regular school hours to provide secondary education to learners unable to access conventional provision. The model expands when and how learners can study, including flexible delivery arrangements, while allowing them to pursue recognized secondary education.

Since 2022, the government has also worked with the Commonwealth of Learning to test offline digital learning as a complement to open schooling. A pilot across 15 centres provided Forms 1–4 learners with digital learning materials through AptusPi devices, which create a local network to access content without an internet connection.[22] The pilot reached 5,565 open-school learners, 47 percent of whom were female.[23] This adaptation responds directly to high internet costs while retaining the flexibility of open schooling and expanding the resources available to learners and teachers.

The model is also increasingly embedded within national secondary provision. Malawi's 2024 education statistics recorded 461 Open Secondary Schools, up from 327 in 2022, with the government describing them as an important means of expanding secondary access for learners who pass primary school but are not selected to attend formal secondary schools.[24] It has been particularly effective at expanding access to young mothers or married adolescent girls, who are affected by domestic or childrearing responsibilities, and learners who cannot travel to school.[25]

out-of-school children and youth tend to be older and likely to transition directly into work.[28]

Government programs therefore need to design viable transition pathways around opportunities available locally. Sierra Leone's 2024 accelerated education guidelines, for example, call for mapping nearby schools, TVET institutions, and other training opportunities to identify feasible transition pathways for learners according to their age.[29] Nigeria Accelerated Basic Education Programme specifies routes into formal schooling and vocational training (Box 7.4).

Young people should have access to genuine choice. Evaluations of the Girls' Education Challenge Leave No Girl Behind programs found that girls' transition options were often constrained by age: younger girls were often directed only toward formal schooling, partly because of national labour laws, while older girls were steered toward skills or work.[30] Gender norms further constrained meaningful choice, with girls in skills or work-related pathways concentrated on traditionally female occupations such as hairdressing and tailoring, sometimes in saturated local markets.[31] The evaluations underscore the importance of involving girls themselves in program design and engaging communities to shift attitudes toward girls entering non-traditional occupations.

Gender norms further constrained meaningful choice, with girls in skills or work-related pathways concentrated on traditionally female occupations such as hairdressing and tailoring, sometimes in saturated local markets.

BOX 7.4

Nigeria: Multiple pathways respond to young people's circumstances and aspirations

Nigeria's Accelerated Basic Education Programme demonstrates how multiple transition routes can be built into a nationally recognized flexible education pathway. Designed for out-of-school children and youth aged 10–18, the program condenses nine years of basic education into three levels, with progression routes varying according to learners' age, previous education, and level completed. National guidelines provide routes back into formal primary or junior secondary education, while older learners can progress to vocational training. After completing Level 3 and the Basic Education Certificate Examination, learners can progress to senior secondary education or vocational training.

The model recognizes transition as a process that needs to reflect learners' circumstances and aspirations, rather than a single endpoint. Implementation experience highlights the importance of considering academic readiness alongside age, psychosocial well-being, safety, financial circumstances, and learners' preferences, with families, communities, and government actors involved in transition planning. It also points to the need for coordination across education, skills, and other sectors so that the pathways offered correspond to viable opportunities available locally. Embedding these options within a national framework gives flexible provision legitimacy and continuity, while allowing implementation to respond to learners and local contexts.

Source: Egbujuo and D'Angelo, "Why Offering Multiple Transition Pathways is Vital to Ensuring All Learners Thrive after Accelerated Education," *Education.org,* June 24, 2025.

Transitions from flexible education to formal school

Flexible programs are more successful in promoting transition back to school when there is deliberate coordination between the flexible program and formal schools. Evidence identifies barriers at every stage of transition, including misaligned curricula or languages, inaccessible examinations or unrecognized certification, enrolment costs and administrative requirements, and insufficient academic, material, and social support to remain and thrive in formal school.[32] Secondary-level transitions face additional constraints where schools are remote and young people have little exposure to more advanced subjects.[33]

Closer coordination among program and formal education sector actors, including at the community and district levels, was identified as a critical lever for ensuring learners were successfully integrated, both academically and socially, into school environments. [34] For girls and young women, this includes working with schools to strengthen safeguarding protocols and addressing other gendered barriers that hamper their participation.[35]

Yet many young people who transition from flexible learning programs back into the formal school system eventually drop out. In Madagascar, about 90 percent of catch-up program participants re-enrolled in lower secondary school,[36] but more than one quarter left again within the school year, citing poverty, distance, or early marriage.[37] In Liberia, many learners who entered junior secondary school through an accelerated program dropped out because of prohibitive tuition costs, lack of nearby secondary schools, and pressure to earn income. The program evaluation also found that school feeding support was associated with higher enrolment and attendance.[38]

Limited follow-up data after transition makes it difficult to assess whether learners stay enrolled in formal school.[39] These cases nevertheless raise a broader question about whether formal schools are equipped to absorb and retain learners returning through flexible pathways. Learners may continue to be pushed out if the barriers that initially excluded them, such as poverty, distance, caregiving responsibilities, or the need to work, remain unaddressed, or if schools are unable to respond to their different learning and support needs.[40] Successful transition depends not only on creating pathways back into formal education, but on ensuring schools are ready to receive and support returning learners.

Continued financial, academic, and social support can improve retention. In Ghana, "transition kits" containing uniforms and school materials helped adolescent girls remain enrolled: 95 percent were still in school two years later, although the kits were considered costly to sustain.[41] In Zimbabwe, childcare, flexible session timing, and individualized support helped parenting learners improve literacy and numeracy even after their return to school.[42] Project staff also supported girls, caregivers, and schools during transitions.[43]

Learners may continue to be pushed out if the barriers that initially excluded them, such as poverty, distance, caregiving responsibilities, or the need to work, remain unaddressed, or if schools are unable to respond to their different learning and support needs.

Across Leave No Girl Behind projects, teachers and school leaders received support in gender-responsive and inclusive pedagogy (Chapter 6).[44] These examples illustrate that transition support is most effective when it addresses both the needs of marginalized learners and school readiness.

Transitions from flexible education to skills training and work

Flexible learning programs combine foundational, transferable, and work-related skills. Out-of-school young people often enter these programs with limited literacy and numeracy. Malawi's Transformational Empowerment of Adolescent

Marginalized Girls (TEAM Girl) project, integrated these skills with financial literacy, vocational training, and social-emotional learning; participants valued literacy and numeracy for finding work and running small businesses.[45] Sierra Leone's Every Adolescent Girl Empowered and Resilient (EAGER) project, implemented by the International Rescue Committee, combined foundational literacy and numeracy with financial literacy, communication, goal-setting, and planning, even though it did not offer formal equivalency.[46] Its financial literacy curriculum included budgeting, saving, market research, and planning income-generating activities. Participants developed individual Empowerment Plans to translate these skills into concrete goals. At endline, girls' savings had doubled and the share of girls who were neither working nor attending school had fallen sixfold.[47]

The type of skills training offered matters. Leave No Girl Behind evaluations found that girls' vocational options were often concentrated in traditionally female occupations, sometimes in saturated local markets.[48] Expanding access to non-traditional trades and aligning training with viable opportunities are therefore essential.[49] (Box 7.5; Chapters 3 and 4).

Skills training is more likely to translate into sustainable livelihoods when learners also receive financial and other follow-up support. Eight of 14 Leave No Girl Behind projects supplied start-up kits or capital, which an independent evaluation found helped girls establish and sustain income-generating activities.[51] In Sierra Leone, EAGER paired Empowerment Plans with mentoring and cash transfers; follow-up research found these helped girls enter training, start businesses, or accumulate savings, although further capital, equipment, or other support were often needed.[52] Village savings and loan arrangements and continued peer, parental, and mentor support after graduation were particularly valuable, especially for girls with disabilities.[53]

TEAM Girl also connected entrepreneurship training to village savings and loan groups and, for some participants, microloans. [54] In Kenya's Education for Life program, one fifth of 5,701 participating girls aged 15 to 19 remained unemployed after skills training, and 39 percent of those who started businesses saw them fail.[55] These findings underscore the importance of financing, follow-up business support, and mentoring to support transitions to work, especially for young women and marginalized groups.

Social barriers can also prevent young mothers and learners with disabilities from using their new skills. All 27 Girls Education Challenge projects included activities aimed at raising awareness among caregivers and communities.[56] Evaluations reported shifts in attitudes toward girls' education, particularly when boys and men participated.[57] In Zimbabwe, activities raised awareness regarding early marriage and early pregnancy, gender-based violence, and sexual abuse.[58] In Malawi and Uganda, communities reported greater awareness of the need to provide schooling to girls with disabilities, who described feeling safer.[59] Projects also provided menstrual health and hygiene resources, access to appropriate water, sanitation, and hygiene facilities, safeguarding mechanisms, and sometimes childcare.[60]

Reported benefits extended beyond learning and transitions to self-confidence, self-efficacy, social networks, parental and community attitudes, delayed marriage and pregnancy, and better health outcomes.[61] Section 7.5 considers what is needed to sustain such provisions beyond individual projects.

BOX 7.5

Kenya and Uganda: Flexible programs help adolescent girls build work-relevant skills

Independent evaluations of the Girls' Education Challenge Leave No Girl Behind initiative, one of the largest multi-country funding windows for girls' flexible pathways to date, provide promising evidence that flexible pathways can improve learning and support transitions into training, entrepreneurship, and work among marginalized adolescents.

In the Education for Life project in Kenya, over 4,200 previously out-of-school girls (ages 15 to 19) successfully transitioned into one of three work-related pathways of their choice: apprenticeships, entrepreneurship, or skills training. Those on the apprenticeship and skills track were engaged in tailoring (58 percent and 73 percent, respectively) and hairdressing (34 percent and 10 percent, respectively), while girls on the entrepreneurship track were engaged in shopkeeping and grocery vending (42 percent) or livestock rearing and farming (30 percent). Fewer than five percent of girls (or 119 in total) pursued specializations not traditionally associated with women, such as mechanics, construction, carpentry, electrics, or plumbing.

Uganda's Building Girls to Live, Learn, Laugh program combined creative learning centres with vocational training and community support for out-of-school girls, including girls with disabilities. An evaluation found that girls with disabilities reported gains in literacy, numeracy, and socio-emotional skills, while those earning income following vocational training described increased confidence and financial independence.[50]





7.3 Micro-credentials can ensure learning counts even when pathways are interrupted

Micro-credentials can certify competencies gained through short courses or discrete units of learning, offering a lower-cost, shorter-duration route to accreditation and rapid response to labour market needs. In a 2024 African Continental Qualifications Framework (ACQF) survey of 15 providers in Seychelles, covering 140 micro-credentials, respondents valued this accessibility and flexibility.[62]

Their potential is greatest where credentials can accumulate toward wider qualifications or be recognized by training institutions or employers.[63] This could be particularly valuable for secondary school-age learners whose pathways are interrupted or who acquire skills across multiple formal and non-formal settings, such as displaced or refugee youth, and those from mobile or pastoralist communities. Evidence of such use at the secondary level in Africa, however, remains limited.

Policy recognition is emerging unevenly. ACQF research found that most African countries do not yet address micro-credentials in their policies explicitly. Burkina Faso, Guinea-Bissau, and Zambia use them across sectors, while Angola, the Democratic Republic of Congo, Ghana, Malawi, Nigeria, and Rwanda include them within TVET.[64] Zimbabwe and Mozambique recognize partial qualifications in their NQFs,[65] while Kenya's National Qualifications Information Management System recognizes partial qualifications and short courses, representing a first step toward a fully functioning micro-credential system.[66]

Early examples suggest positive employment outcomes when employers recognize the skills involved, although evidence remains limited. In South Africa, the non-governmental organization Afrika Tikkun combines training in seven technical areas and soft skills with internships, certifying half the training through the non-governmental organization and half through the employer.[67]

Uganda's Refactory offers micro-credentials in digital skills[68] through practical projects and coding challenges developed with technology companies. It reports that 86 percent of learners have found employment. These examples suggest that micro-credentials are valuable when relevant to local livelihood opportunities and recognized by potential employers.

These examples suggest that micro-credentials are valuable when relevant to local livelihood opportunities and recognized by potential employers.





7.4 National qualification frameworks ensure that flexible pathways are valued

NQFs and RPL policies are being used by countries to institutionalize flexible pathways. As accreditation systems, NQFs organize qualifications and progression routes; RPL assesses credentials acquired outside conventional classrooms against recognized standards. Together they can enable young people to navigate entry and exit points and move between education, training, and work.

UNESCO's 2022 "Global Inventory of National and Regional Qualifications Frameworks" defines NQFs as frameworks that "integrate the diverse education and training sectors, build pathways, and generally support lifelong learning."[69] Although national approaches differ, they typically seek transparent and transferable qualifications, quality assurance, stronger links to labour markets, and alignment with international standards.[70] Even where NQFs do not yet reference flexible pathways, they establish the policy architecture - quality assurance, credit recognition, and equivalency - in which those pathways can be integrated.

The ILO defines RPL as "identifying, documenting, assessing, and certifying a person's competences, acquired through formal, non-formal, or informal learning, against established qualification standards."[71] In practice, RPL allows learners to demonstrate existing skills rather than repeat training, potentially earning partial or full qualifications and improving access to further education, training, and employment.[72]

Continental cooperation is helping countries make qualifications more connected, comparable, and portable. Launched in 2019 under the African Union's Skills Initiative for Africa (SIFA), the ACQF was initially funded through 2022 and has since been extended through 2026.[73] Its 10-level framework seeks to connect national systems.[74] Priorities for 2022 to 2026 include an RPL campaign, a digital qualifications database,

common profiles, and guidance on integrating micro-credentials into NQFs.[75]

Continental efforts are increasingly translating into national systems. By the end of 2024, ACQF supported 11 countries in developing and implementing NQFs, RPL, and credit accumulation and transfer systems, while seven countries had met the criteria for referencing their national frameworks to the ACQF.[76] RPL policies were developed with Eswatini, Ghana, and Somalia, with Sierra Leone's under development.[77] Most frameworks, however, remain at an early stage, and information on implementation is limited.

New qualifications frameworks increasingly connect previously separate education and training pathways. Ethiopia integrates general education, TVET, and higher education;[78] The Gambia's NQF organizes academic, TVET, and industry sub-frameworks.[79] Tanzania links general, vocational, technical, and higher education;[80] and Rwanda's NQF clarifies transitions between general, technical secondary, and tertiary study.[81]

Some countries are going further by recognizing skills gained outside formal institutions. Angola has a framework for assessing and certifying such competencies,[82] while Ethiopia's NQF provides routes to certify informally acquired skills.[83] The Gambia's NQF explicitly covers formal, non-formal, and informal education and training;[84] and Liberia's National TVET Qualification Framework places these approaches within a common qualifications matrix.[85]

Tanzania's network of non-formal vocational training providers offers recognized certificates alongside industry-specific informal apprenticeships.[86] Seychelles combines its NQF with a National Credit Accumulation and Transfer System, with both providing mechanisms for credit transfer and recognition of prior learning.[87] These mechanisms are particularly important for out-of-school youth because they can provide recognized value for learning acquired through flexible programs, work, and other non-formal routes. They can also provide pathways into further education, training, or employment.

However, evidence on the scale of implementation and learner outcomes from these newer frameworks remains limited.

RPL is moving from policy to implementation in some cases, although evidence on longer-term outcomes remains limited. Emerging evidence from Tanzania similarly suggests that RPL certification can support employment and self-employment among informally trained workers, although barriers to formal employment remain.[88] In Kenya, more than 600 candidates - youth and adults, many of whom are refugees - have received full or partial qualifications through RPL.[89] A tracer study of 221 participants, 10 percent of whom were ages 18 to 24, found that 73 percent reported that their qualifications were recognized and valued by employers, while 54 percent reported improved access to further education or technical training.[90] The system is also expanding among displaced populations: by July 2026, more than 6,500 potential candidates had been reached across Kakuma and Dadaab refugee camps, with more than 1,600 screened and prepared for assessment. Refugees represented 21 percent of surveyed RPL respondents, women accounted for 38 percent, and persons with disabilities only three percent. However, the evaluation did not disaggregate outcomes by age, gender, disability, or refugee status. More evidence is still needed on whether recognition translates into sustained improvements in employment, earnings, and progression into further education and training, particularly for youth and historically marginalized groups.

Recognition matters only if learners, families, institutions, and employers value it. Out-of-school youth consistently emphasized the need for recognized pathways that value skills, provide second chances, and connect learning to livelihoods. Youth consultations highlighted demands for recognized skills and genuine choices based on their talents rather than academic performance alone.[91] As one young woman consulted in Malawi said, "We left school, but we did not leave behind our dreams. Give us the skills to build, not just the certificate to chase."[92]

Where qualifications are not recognized or understood, flexible pathways risk becoming second-best options.[93] Morocco's École de la Deuxième Chance illustrates the potential to scale effective flexible provision, as well as the limitations of doing so without corresponding systems that recognize learners' skills and qualifications (Box 7.6).

Recognition also depends on awareness and trust. Kenya's 2024 RPL Policy Framework explicitly seeks to increase the visibility of previously unrecognized skills in the labour market, while also certifying competencies acquired through formal, non-formal, and informal learning.[98] At a continental level, the ACQF similarly includes a broad information campaign on RPL alongside common guidelines and support to countries, acknowledging that uptake depends partly on awareness of these pathways.[99]

For refugees and other displaced learners, recognition must accommodate interrupted education, missing documents, and differences in curricula and languages. South Sudan is integrating flexible pathways into the national education system with emerging mechanisms to certify qualifications and prior learning for displaced young people (Box 7.7).



BOX 7.6

Morocco: Scaling programs requires recognition of prior learning

Morocco's École de la Deuxième Chance (E2C) demonstrates how evidence of effectiveness can support the expansion of flexible provision, while also revealing the limits of scale-up without recognized certification. Developed to respond to roughly 300,000 school dropouts annually and a large population of out-of-school youth, E2C grew from an experimental pilot into a national network supported by government and delivered through 281 partner non-governmental organizations and approximately 1,500 trainers.[94] A 2025 government assessment of the *Nouvelle Génération* model reported that the share of participants who successfully transitioned into another pathway following program completion was 81 percent overall among 14 to 20-year-olds: 29 percent returned to formal education, 20 percent entered vocational training, and 32 percent entered employment.[95] Following this evidence, the government committed in February 2025 to expanding provision to 80,000 learners and 400 centres by 2030.[96]

Expansion alone does not guarantee that learning gained through a flexible pathway will be recognized elsewhere in the system. A survey of E2C providers identified sustainable financing and government certification as major barriers to further expansion, with nearly half reporting that the absence of an officially recognized diploma prevented graduates from translating their skills into formal careers.[97] The experience highlights the importance of coupling effective program design and expansion with recognized certification, equivalency, and RPL that enable learners to carry their learning into further education, training, and work.

BOX 7.7

South Sudan: Flexible pathways enhance access for displaced learners

Refugee experiences in South Sudan illustrate the multiple barriers displaced learners can face when trying to carry previous education credentials across borders. Refugees arriving from South Sudan may have utilized a different curriculum or studied in Arabic, the official language of Sudan, rather than English, the official language of South Sudan. They may also lack recognized documentation of their learning. In Maban, where around 219,000 refugees were living in early 2026, recent research found that some new arrivals who had studied in Arabic struggled with the transition to English-medium schooling.[100] Government policy is beginning to address different parts of this challenge.

South Sudan's Alternative Education System provides nationally recognized flexible pathways, including accelerated secondary education and Intensive English as a Second Language programming. The government is also working with UNESCO to introduce the Qualifications Passport, which provides a mechanism for assessing qualifications and prior learning when documentation is incomplete or unavailable.[101] Together, these approaches point toward a more integrated system in which displaced learners can bridge differences in curriculum and language while also gaining recognition for learning they have already completed.



7.5 More countries are institutionalizing flexible pathways, though barriers persist

Institutionalization means making flexible pathways a durable part of the education and skills system, rather than leaving them dependent on individual projects. Institutionalization does not necessarily mean that governments take over delivery. Rather, it means establishing systems through which diverse non-state providers can operate sustainably, meet common standards, and connect learners to recognized education, training, and employment pathways. This section explores how countries have institutionalized flexible pathways.

Four elements are central for institutionalization to succeed: policy and regulation, coordination and governance, sustainable financing, and integrated data systems.

Four elements are central for institutionalization to succeed: policy and regulation, coordination and governance, sustainable financing, and integrated data systems. Policy and regulatory frameworks can give pathways formal recognition while establishing standards for quality, equivalency, accreditation, and progression. Effective coordination by government can clarify government responsibilities and coordinate the diverse public, non-governmental organizations, and community actors involved in provision, including partnerships that preserve providers' capacity to adapt to learners and contexts. Sustainable financing can enable programs to move beyond short-term project cycles and provide more predictable opportunities for successive cohorts of learners. Finally, integrated data systems can make flexible provision and its learners visible to governments, supporting planning and financing while tracking participation, movement across pathways,

and ultimately outcomes. Together, these four elements (Figure 7.2) can help countries move from fragmented programs toward more coherent, recognized, and scaled systems of flexible provision, while preserving the flexibility that makes pathways effective.

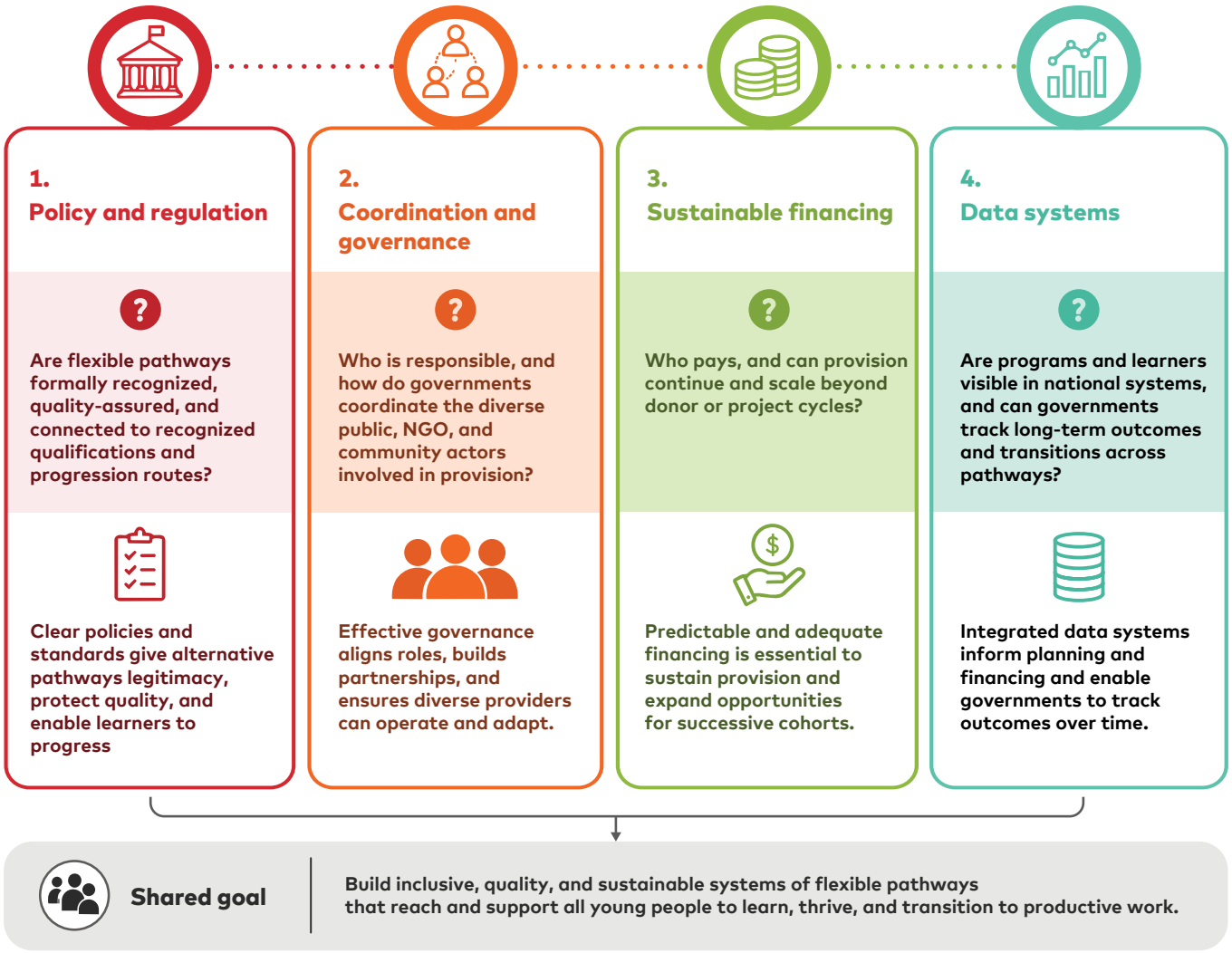
Policy and regulation

Countries are increasingly creating legal pathways and frameworks to institutionalize flexible pathways. Legal and policy architecture is important first elements of institutionalization. Table 7.1 maps how far countries have institutionalized flexible pathways, distinguishing systems embedded in law or national frameworks (formalized and institutionalized); programs formalized within sector plans (partially formalized); and commitments that remain at the level of strategy (policy-supported only). Among 32 countries with data, 12 were classified as formalized, 11 as partially formalized, and nine as policy-supported only.[102] These categories cover a mix of primary- and secondary-focused provision, and policy documents do not always identify the level served.

The most common institutionalization strategies include links to TVET, accelerated or bridging

FIGURE 7.2

Institutionalizing flexible pathways requires policy, coordination, financing, and data



Source: Authors, using ChatGPT (OpenAI), 2026.

TABLE 7.1

More countries are creating legal frameworks to institutionalize flexible pathways

Country	Level of formalization	Flexible pathway identified
Burkina Faso	Formalized / institutionalized	Non-formal education system with structured transition bridges to formal secondary and TVET
Ghana	Formalized / institutionalized	Complementary Education Agency with certified flexible education pathways linked to TVET
Mauritius	Formalized / institutionalized	Extended Program for learners failing primary exit exams
Morocco	Formalized / institutionalized	Diversified secondary pathways with structured bridges between academic and vocational tracks
Seychelles	Formalized / institutionalized	NQF with RPL and credit transfer system
Somalia	Formalized / institutionalized	Accelerated Basic Education linked to formal secondary progression
South Africa	Formalized / institutionalized	Three Stream Model (academic, vocational, technical occupational pathways)
South Sudan	Formalized / institutionalized	Flexible Education Systems and Accelerated Secondary Education Program
Tanzania	Formalized / institutionalized	Dual track secondary system (general and vocational streams)
Togo	Formalized / institutionalized	Structured "passerelles" between general, technical, and vocational education
Tunisia	Formalized / institutionalized	Écoles de la Deuxième Chance (Second Chance Schools) established by decree
Zambia	Formalized / institutionalized	Integrated academic and vocational secondary pathways
Cabo Verde	Partially formalized	Remedial assessment and second-chance progression mechanisms
Djibouti	Partially formalized	Non-formal education and post-literacy/skills programs
Ethiopia	Partially formalized	National remedial program for secondary examination re-sits
Gambia	Partially formalized	Second-chance education for out-of-school youth
Guinea	Partially formalized	Nafa accelerated learning centres enabling reintegration into formal schooling
Lesotho	Partially formalized	Accelerated Learning Programs and TVET pathways
Namibia	Partially formalized	Namibian College of Open Learning part-time schooling for over-age learners
Nigeria	Partially formalized	Skills acquisition and vocational certification pathways (NSQF-linked)
Senegal	Partially formalized	Non-formal apprenticeship and RPL
Sierra Leone	Partially formalized	Accelerated Education Programs
Uganda	Partially formalized	Accelerated Education Programs and re-entry support
Botswana	Policy-supported only	Re-entry policy, TVET expansion, foundational learning support
Côte d'Ivoire	Policy-supported only	TVET expansion and secondary access improvements
Eritrea	Policy-supported only	Nomadic education and boarding school provision
Malawi	Policy-supported only	COVID-19 remediation and remote learning measures
Mauritania	Policy-supported only	TVET expansion noted but no structured flexible pathway system
Mozambique	Policy-supported only	COVID-19 remote learning and curriculum adjustment measures
Niger	Policy-supported only	Re-entry and second-chance education for girls
Rwanda	Policy-supported only	Re-entry policy and retention support for adolescent mothers
Zimbabwe	Policy-supported only	Open and distance learning and flexible education modalities

Source: Authors, drawing on Niaz, *The Role of Flexible Pathways for Out of School Youth in Africa: A Scoping Review of Post 2020 Evidence* (The REAL Centre, 2026).

programs for over-age learners, and qualifications frameworks that recognize prior learning. The extent of formalization varies substantially across countries.

Coordination and governance

Coordination is especially important when learners move between programs and formal institutions. Flexible programs often operate alongside, rather than as part of, formal education systems. Collaboration among flexible education providers, formal schools, communities, and education authorities serves as a foundation for successful transitions, enabling shared planning, clearer expectations, better use of resources, and greater continuity and accountability.[103] Governments can establish accountability and create mechanisms through which national and subnational education authorities, non-state providers, schools, and communities can plan and support pathways together.

Countries are beginning to put such governance structures and coordination mechanisms in place. Sierra Leone uses an inter-ministerial steering committee for out-of-school children;[104] Nigeria's Accelerated Basic Education Programme coordinates state agencies, development partners, and non-state providers.[105] Such structures can enable governments to provide overall direction and accountability while drawing on the expertise and contextual responsiveness of diverse actors.

Sustainable financing

Public financing is essential to move flexible pathways beyond short-term projects and to provide opportunities for successive cohorts of learners, but it has not kept pace with policy commitments. A mapping of 60 education sector plans, including 33 from African national and subnational governments, found only two that allocated funding to accelerated education or explicitly committed to expanding it.[106] Without recurrent funding, flexible programs remain vulnerable to project cycles.

Some governments are beginning to offer sustainable financing for flexible pathways. In their Education Sector Plans, Guinea-Bissau has proposed a national fund for non-formal education, while the semi-autonomous region of Puntland in Somalia has committed to increasing investment in flexible basic education alongside the formal system.[107] These are steps toward including flexible pathways in regular budgets.

Tanzania shows why policy recognition needs to be backed by sustained financing. Its Complementary Basic Education program has a curriculum, standards, and guidelines and offers a condensed primary curriculum leading toward formal secondary education.[108] Yet an assessment by the Graça Machel Trust found that declining funds for paraprofessionals pushed mainstream teachers to deliver the program alongside regular classes, while shortages of space forced learners into overcrowded mainstream classrooms.[109] The experience demonstrates that financing must cover the staff, learning spaces, and other facilities needed to preserve quality and flexibility.

Integrated data systems

Integrated data systems are essential for creating flexible pathways that are visible within national education systems. Alternative provision is often delivered by providers whose data sit outside national information systems. Governments therefore lack a complete picture of participation and unmet demand. Integrated systems should follow learners beyond completion into longer-term education, training, and work. Ghana's Complementary Basic Education program illustrates how sustained evidence improves delivery and supports institutionalization (Box 7.8).

BOX 7.8

Ghana: Sustained evidence and partnerships can support institutionalization

Ghana's Complementary Basic Education program illustrates how evidence accumulated over time can help move a flexible pathway from a small non-state initiative toward government adoption. Beginning in 1995 as a small non-governmental organization-led initiative in two northern districts, School for Life expanded through successive partnerships between civil society organizations, government, and development partners. Over more than two decades, studies generated evidence on learning, transitions, cost-effectiveness, and implementation. An early assessment found that around two-thirds of participants transitioned into formal school, while later longitudinal research found that 95 percent of graduates in its sample had transitioned into formal education and remained there four years after completing the program.

Importantly, this evidence was produced and shared with government through sustained relationships rather than simply being presented at the end of the program. From 2013, a government-chaired steering committee provided a formal mechanism through which implementing partners and local researchers could regularly share results and experiences with the Ministry of Education.[110] Research increasingly tracked enrolment, completion, transitions, and longer-term outcomes, feeding findings back into program adaptation and government decision-making. The combination of credible evidence, a government culture receptive to research, and sustained formal and informal relationships among government, researchers, donors, and civil society was central to government adoption and scaling.[111]





7.6 Conclusion

Across Africa, policy recognition of flexible pathways is growing as countries try to teach the 77 million young people not in school. New qualifications frameworks, policies for recognition of prior learning, micro-credentialing, accelerated education, re-entry pathways, and flexible delivery models demonstrate growing efforts to ensure that learning outside conventional schooling can lead to recognized education, training, and work opportunities. Yet many programs remain inadequately financed through education budgets, insufficiently integrated into national systems, or disconnected from formal curricula, recognized qualifications, and progression routes. Governments need to build on recent progress by embedding effective approaches at scale, aligning policy and regulation, governance, sustainable financing, and data systems while preserving the flexibility that enables these pathways to reach learners whom conventional schooling has struggled to serve.

Endnotes

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CHAPTER 8

Using Technology to Strengthen Teaching, Learning, and System Efficiency

Harnessing digital innovation while centring people, systems, and equity



QUESTION THIS CHAPTER ANSWERS

How are technology and AI being used to expand access to secondary education, improve teaching and learning, strengthen systems, and reach young people more effectively and equitably?

What has changed since 2020

The technology landscape has changed substantially since 2020. COVID-19 accelerated remote and digital learning, while rapid advances in generative AI have created new possibilities alongside risks related to bias, misinformation, data privacy, cybersecurity, and overreliance. Governments are expanding digital education policies and investments, but infrastructure, teacher readiness, governance, and implementation have not consistently kept pace with ambition. Access to internet connectivity in secondary schools has barely improved, and major disparities persist across countries, with rural communities, girls, learners with disabilities, displaced populations, and other marginalized groups particularly affected.

What is needed now

Technology can strengthen teaching, learning, access, and system efficiency, but it is an enabler rather than a solution in itself. Its benefits depend on whether technologies respond to educational needs, strengthen rather than replace teachers, reach marginalized learners, and are supported by infrastructure, accessibility, governance, evidence, financing, and implementation capacity.



8.1 Technology's potential depends on the systems and people that use it

Technology has become increasingly embedded in the delivery and management of secondary education. The COVID-19 pandemic accelerated remote and hybrid learning across Africa through online platforms, mobile phones, radio, and television.[1] It also exposed deep inequities in access, particularly for marginalized learners. The pandemic thus acted as an accelerant, compelling governments, including those in Africa, to urgently address the digital divide, promote inclusive learning experiences, and reimagine education altogether.[2]

More recently, advances in AI have added new urgency to debates about the role of technology in education. An estimated 195 million young Africans aged 15 to 35, including 74 million young women, already have tangible access to AI-enabled opportunities, based on mobile connectivity, internet access, policy efforts, and government innovation.[3] AI offers new opportunities to extend learning beyond the classroom, support teachers, personalize instruction, strengthen assessment, and make education systems more efficient. But realizing this potential requires building the capabilities that learners, teachers, and education systems need to use AI effectively, responsibly, and equitably.

Technology is not inherently beneficial. Excessive or poorly designed use can affect learning, attention, and well-being,[4] while AI introduces risks of bias, misinformation, privacy breaches, cybersecurity threats, and the potential for students to outsource critical and creative thinking.[5] Although comparable data are unavailable for African countries participating in PISA 2025, analysis across OECD countries found that students who did not use AI scored higher on exams than regular users.[6] These tensions create a central challenge for education systems: how to harness the potential of technology while protecting the learners, teachers, and systems that use it.

Policy ambition is growing, but implementation remains inconsistent. The African Union's Digital Education Strategy and Implementation Plan 2023–2028 and Continental Education Strategy for Africa 2026–2035, alongside the African Union Development Agency New Partnership for Africa's Development (AUDA-NEPAD) Africa EdTech 2030 Vision and Plan, reflect growing recognition that African nations must shape how digital technologies are used to expand educational opportunity. National strategies are increasingly moving beyond standalone information and communications technology (ICT) initiatives toward more comprehensive approaches that combine connectivity, blended learning,[7] curriculum reform, teacher development, digital platforms, and, increasingly, AI.[8] Several countries are also beginning to address data protection for young people through education and digital governance reforms. Examples include Nigeria's Data Protection Act of 2023, Sierra Leone's planned framework for data collection, sharing, and use, and curriculum reforms in Ghana and Kenya that introduce data protection, data ethics, and responsible technology use.[9]

A rapid scan of publicly available policy documents across African countries suggests that digital learning is commonly governed through broader ICT, education, and digital-economy policies; dedicated EdTech strategies remain uncommon.[10] Policy ambition often outpaces change in schools and classrooms, as infrastructure and teacher support fail to keep pace.[11] Teachers and learners improvise, sometimes using personal devices and data, shifting the costs, responsibility, and risks onto individuals[12] and widening inequalities, especially in rural and remote areas.

Providing devices alone does not necessarily improve learning. Educational priorities, local context, and system readiness must guide technology selection and adoption. This chapter examines infrastructure and connectivity; technology for teachers and instruction; learner-facing technologies; education system efficiency; and the governance and financing needed to sustain them. Digital skills as a learning outcome are addressed in Chapter 3.

Educational priorities, local context, and system readiness must guide technology selection and adoption.



8.2 Digital divides continue to limit equitable access to technology

Access to digital infrastructure in schools across Africa has improved only marginally since 2015. The share of lower secondary schools with access to electricity increased from 63 percent in 2015 to 70 percent in 2025, while the share of upper secondary schools with electricity increased from 72 percent in 2019 to 76 percent in 2025.[13] Over the same period, the share of schools with computers increased only slightly, from 54 percent in 2015 to 56 percent in 2025, while the share with internet access rose from 40 percent to 44 percent.[14] The largest gains occurred during and immediately after the COVID-19 pandemic, but progress has since stalled, with the share of schools reporting internet access declining slightly after 2022.[15] Household internet access has now overtaken access in schools, with connectivity rising from under 15 percent in 2015 to 47 percent in 2024.[16]

Digital access remains highly unequal, not only across countries but also between schools. Rural schools consistently face challenges, reflecting wider rural–urban gaps in electricity, connectivity, and access to digital devices.[17] Inequalities are also seen between levels of secondary education. Among countries with available data, the share of lower secondary schools with internet access ranges from only two percent in Burkina Faso to 100 percent in Cabo Verde, Mauritius, and Seychelles.[18] Of 29 countries with recent data (post-2020), 12 report having internet connectivity in at least half of all lower and upper secondary schools.[19] Within countries, upper secondary schools have greater access than lower secondary schools to computers in 21 of 38 countries and to the internet in 23 of 34 countries. These disparities suggest that digital infrastructure often remains less developed at the lower secondary level, which serves the largest share of secondary school-age learners.[20]

Closing these gaps requires targeted infrastructure investment and sustained funding for operations and maintenance. Comparisons

also require caution because countries report data from different years, and reported access does not necessarily establish that equipment is functional, connectivity is reliable, or digital technologies are routinely available and used for teaching and learning.

The digital divide mirrors - and can deepen - existing inequalities associated with gender, disability, and displacement. These challenges often intersect. For example, a girl with a disability living in a rural or displaced community may simultaneously face barriers related to affordability, connectivity, safety, accessibility, and access to devices. Social norms can compound these barriers, particularly when concerns about girls' safety and security influence whether parents and caregivers allow them to use digital technologies or access the internet.[21] Among 15- to 24-year-olds, for example, internet use among females is substantially lower than among males in both East and Southern Africa (18 percent compared with 29 percent) and West and Central Africa (19 percent compared with 32 percent).[22] Moreover, individual internet use does not necessarily translate into access to the devices, connectivity, and learning environments needed to participate in structured digital learning.

These constraints can be particularly acute for refugees and other displaced learners. Research from Chad finds that few refugee young people use the internet for learning, because mobile and internet connectivity remain limited outside urban settlements.[23]

Persons with disabilities also face unique barriers to digital access and participation. On average, they have less access to the internet and digital technologies. Even when devices and software are designed with accessibility accommodations, these features may not meet the needs of all people with disabilities. Emerging evidence from Ghana, Nigeria, and Sierra Leone suggests that learners with visual and hearing impairments may be better served by existing assistive technologies such as screen readers and other accessibility tools, while learners with intellectual disabilities remain comparatively underserved.[24]

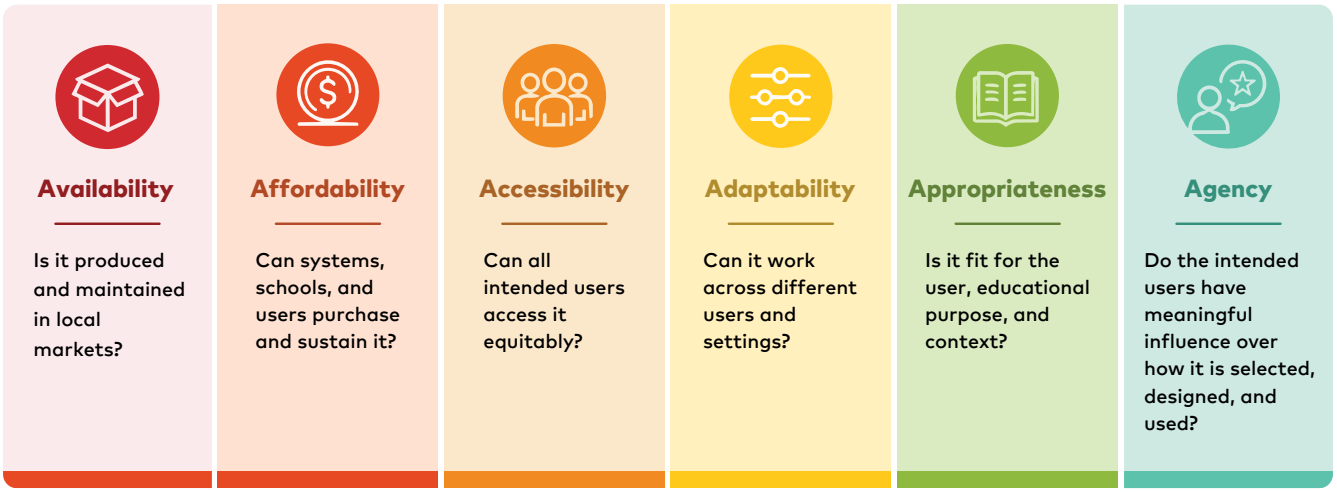
Limited access to appropriate and affordable assistive technologies presents an additional barrier. Across Africa, an estimated 85 to 90 percent of assistive technologies are imported, potentially making them less available and affordable than locally produced alternatives.[25] Expanding access will require investment in local production, distribution, and maintenance systems. At the same time, accessibility needs to be incorporated into technology standards, procurement specifications, product testing, and monitoring, rather than treated as an adaptation after technologies have already been selected or deployed.

Initial access to technology does not necessarily translate into sustained use. Access also depends on maintenance. Stakeholders in Ghana, Nigeria, and Sierra Leone reported that devices often become unusable when replacement and repair systems are lacking.[26] Investment plans need to cover technical support, spare parts, software updates, replacement, and safe disposal.

Reaping the educational benefits of technology requires more than simply making it available. As illustrated in Figure 8.1, meaningful use also depends on whether technology is affordable to buy, maintain, and repair; accessible to the target stakeholders expected to use it; adaptable to different contexts and changing needs; appropriate for national curricula, standards, frameworks, and education priorities; and agency-enhancing, enabling learners, teachers, and other intended users to meaningfully contribute to its selection, design, and use. Together with availability, these dimensions form the "6As Framework," building on the framework developed by the WHO and USAID. The framework provides a practical lens for assessing whether technology investments move beyond the provision of infrastructure to enable meaningful use by learners and teachers that ultimately translates into educational benefits.

FIGURE 8.1

The 6As framework can help ensure equitable and meaningful access to technology



Source: Authors, using ChatGPT (OpenAI), 2026, building on World Health Organization and United States Agency for International Development's 4As Framework (2011).[27]

The digital divide mirrors - and can deepen - existing inequalities associated with gender, disability, and displacement.

As a result of these digital inequities, some learners complete secondary education with little or no practical experience using the technologies that are increasingly shaping their further learning and work. Qualitative research conducted for this report highlighted the frequent example of the "computerless computer science graduate," a learner who completes a secondary ICT pathway without ever having used a computer.[28] As one stakeholder explained:

> **"We still have schools where children have to write an Information and Communication Technology exam, but they have never seen a laptop or a computer... they learn about it, but they do not have practical experience." — Education Expert[29]**

Without confronting these disparities, connected learners may gain further opportunities for learning and skills development, while those without reliable access fall behind. Equity should shape technology selection, financing, and monitoring. These considerations are discussed in Section 8.6.



8.3 Infrastructure investments can extend technology to where needs are greatest

Governments across Africa are increasingly investing in the infrastructure needed to connect schools and learners, including in rural and remote areas. A review of publicly available digital education policies and strategies across African countries finds that connectivity and digital infrastructure are among the most common strategic priorities.[30] Yet progress remains highly uneven, and policy commitments have not consistently translated into infrastructure that is reliable, affordable, and routinely usable for teaching and learning. An assessment of 54 African countries spanning educational outcomes, investment, connectivity, infrastructure, and technology and AI readiness[31] highlights different starting points and trajectories. Mauritania recorded the strongest improvement trajectory, driven primarily by greater education investment and improved school infrastructure and device access.[32]

Some countries are testing more integrated approaches to addressing the interrelated constraints of electricity, internet connectivity, and device access. Rwanda combines school connectivity investments with alternative technologies for hard-to-reach areas and expanded access to solar electricity (Box 8.1). Kenya plans to pair fibre-optic infrastructure with devices and community digital access points.[33] Different locations require different combinations of infrastructure, rather than a single national technology model.

Low-bandwidth and offline technologies offer another route to expanding digital access where continuous internet connectivity remains unavailable or unaffordable. The COVID-19 pandemic demonstrated the continuing value of low-tech approaches: across African contexts where internet and device access remained limited, radio and mobile phones often offered greater potential to reach learners than

BOX 8.1

Rwanda: Targeted investments expand infrastructure and internet connectivity

Rwanda illustrates how coordinated investments can address multiple infrastructure constraints simultaneously. Through its $30 million Smart Education Project, Rwanda connected 1,400 schools to high-speed internet, while the Ministry of ICT has used Starlink satellite internet to extend connectivity to hard-to-reach schools where the cost of fibre is prohibitive. These efforts are part of a broader expansion that increased the number of connected schools from 3,082 in 2023-2024 to 4,184 out of 4,996 schools in 2025-2026. Rwanda is addressing electricity constraints through solar-powered Starlink terminals and a 2025 agreement with the Rwanda Energy Group to provide solar electricity to 1,000 schools. Rwanda's experience demonstrates the value of treating electricity and connectivity as interdependent infrastructure challenges, while using various technologies to reach schools facing different constraints.

Source: Cameron et al., *Secondary Education in Rwanda: Country Case Study* (Laterite, 2026).

internet-dependent solutions.[34] Text messaging (or SMS) can provide information and learning support to rural populations at a relatively low cost by connecting teachers through mobile-based communities of practice and delivering learning activities and materials directly to students.[35] M-Shule, for example, is an SMS-based learning platform providing academic and life skills training in remote areas with low internet connectivity.[36] In Sierra Leone, where internet access remains limited, mobile connectivity has become a primary means of accessing digital services.[37] Yet neither access to mobile phones nor internet connectivity should be assumed to be universal, as discussed in Section 8.2.

For refugees and displaced populations, technology-enabled education may depend on solutions that can operate offline and without grid electricity, such as broadcast media, including television and radio. In Uganda, for example, Education for Humanity's SolarSPELL uses solar-powered, offline Wi-Fi hotspots to provide refugee young people with access to digital textbooks, while in Nigeria, the Technology Enhanced Learning for All initiative leveraged mobile and radio broadcasting to reach 22,000 internally displaced children, positively impacting their literacy and numeracy skills.[38]

Under Ghana's Secondary Education Improvement Project, the iBox system was introduced in underserved and low-performing senior high schools where internet access was unreliable. Local servers host curriculum-aligned multimedia lessons that teachers and learners can access without an internet connection.[39] The Smart Schools Project is distributing approximately 1.3 million locally produced or assembled tablets to senior secondary and TVET students. The devices include curriculum-aligned digital content and a learning management system that can function offline, while solar-chargeable power banks are intended to address unreliable electricity access.[40] While this approach is well suited to low-connectivity settings, such investments also require realistic plans for technical support, maintenance, software updates, replacement, and eventual disposal. Without these recurrent capabilities and costs, initial infrastructure gains may not translate into sustained access or use.

A review of publicly available digital education policies and strategies across African countries finds that connectivity and digital infrastructure are among the most common strategic priorities.

Context-appropriate technology still requires strong implementation systems. Malawi's MiLab addresses a different constraint: shortages of science laboratories (Box 8.2).[41] The experience illustrates that even technologies designed for local infrastructure constraints depend on effective implementation, including teacher preparation, school leadership, technical support, and alignment with curricula and assessment.

Teachers and families may reasonably choose to invest in connectivity and devices, but they should not be expected to subsidize the recurrent costs of public digital education. Teachers in Ghana, Nigeria, and Sierra Leone reported using personal phones, purchasing mobile data, and sharing their own devices with students to compensate for shortages of school-provided equipment.[42] Households similarly report purchasing data or providing phones and hotspots to facilitate access for young people.[43] While these investments demonstrate the commitment of educators and families, they also shift the costs of inadequate infrastructure onto individuals and households. Reliance on such private contributions can reinforce inequity for those whose families are not able to cover these costs.

BOX 8.2

Malawi: Offline virtual science laboratories enhance learning in remote schools

In 2022, Malawi adopted and piloted MiLab, an offline, virtual science laboratory, in 100 secondary schools, targeting those in rural and remote areas, including Open Secondary Schools. Developed in partnership with Mzuzu University, the app helps span the digital divide in a country where internet penetration in rural areas is just 9 percent and nearly half of secondary schools lack physical science laboratories. The app also supports learners with mobility challenges who may not be able to attend school regularly. Malawi's Ministry of Education aligned the app with the country's secondary-level science curriculum:

"These labs are equipped with computers preloaded with the MSCE and JCE syllabi and science simulation software, which teachers are trained to use to make science learning more practical and interactive." -Ministry of Education, Science and Technology official

For the roll out, the Ministry trained 300 secondary school science teachers. Teachers and students at schools with MiLab reported high levels of satisfaction, with the app rated 9.4 out of 10 for usability by students and 9.8 out of 10 by teachers. Schools reported improved learning outcomes in science since MiLab was introduced, though some survey evidence points to limited training and constrained integration at the school level. Evidence of its impact on learning also remains limited. The Ministry has since scaled the program to 123 schools, extending coverage to Physics, Chemistry, Biology, and Agriculture courses alongside efforts such as zero data costs for educational websites, the development of an additional 36 modules, and the training of 371 science teachers. Enabling factors for this progress include co-design by teachers, students, and ministry officials; the Ministry's dedicated budget for scaling; and a broader innovation ecosystem.

Source: Chirwa et al., *Secondary Education in Malawi: Country Case Study* (Centre for Education Training and Research, 2026).

The experience illustrates that even technologies designed for local infrastructure constraints depend on effective implementation, including teacher preparation, school leadership, technical support, and alignment with curricula and assessment.

Effective EdTech approaches are driven by educational needs and local realities rather than technology alone. Solar power, mobile technologies, offline tools, and local servers can make the difference in the impact of investments in digital learning, but responsive design and implementation determine whether technology translates into meaningful educational opportunity and learning.

Effective EdTech approaches are driven by educational needs and local realities rather than technology alone.





8.4 Technology can strengthen teaching, but teacher agency remains central

The growing role of technology in education makes teachers even more important. Digital platforms and AI can help teachers prepare materials, identify learning gaps, give feedback, and reduce routine administrative tasks. These gains could be valuable in systems facing severe teacher and resource shortages.[44] Research in Ghana, Sierra Leone, and Nigeria found cautious optimism among teachers about technology's potential to reduce workload, support lesson preparation, and expand access to learning materials, alongside concerns about student overreliance on AI and limited access to the devices, connectivity, and infrastructure needed to use these tools effectively.[45] Learning remains fundamentally social, shaped by interaction, trust, feedback, and the ability of teachers to understand and respond to learners.

The challenge is not whether technology should replace teachers, but how it can complement and strengthen their work. Generative AI can augment selected aspects of teaching, including planning, assessment, and feedback.[46] But teachers remain essential for contextualizing AI-generated outputs and exercising the empathy, ethical judgement, cultural understanding, and interpersonal responsiveness that technology cannot replicate.[47] When technology extends teachers' capacity, it can strengthen professional agency; when core pedagogical tasks are routinely outsourced to it, teachers risk becoming implementers of technology-generated content rather than designers of learning.[48] Emerging evidence from Senegal suggests that this risk is not merely theoretical. As one secondary student in Senegal observed:

> **"Sometimes teachers use artificial intelligence on their phones to give us information that they do not even fully understand themselves."**

Teachers will need digital literacy and AI fluency to fully harness the opportunities technology

offers. Mastercard Foundation's 2020 *Secondary Education in Africa* report identified building teachers' capacity to use digital technologies and integrate them effectively into classroom practice as a priority.[49] This agenda remains unfinished. Teachers need basic digital literacy to use computers, email, and common software; pedagogical digital skills to select and adapt technologies in ways that improve teaching and learning; and, increasingly, AI fluency to use emerging tools critically and responsibly. Teachers need to understand what AI can and cannot do, evaluate the accuracy and relevance of its outputs, recognize potential biases and other risks, and consider ethical and privacy implications.[50] Crucially, they also need the professional judgement to decide when – and when not – to use it.

AI fluency is becoming particularly urgent as generative AI tools become easier to access and increasingly embedded in everyday digital platforms. Qualitative evidence from Ghana, Nigeria, and Sierra Leone suggests that teachers are already innovating with AI, using ChatGPT, DeepSeek, Rafiki AI, and CapCut to develop lesson materials, generate multimedia resources, and support classroom activities, often with limited formal guidance or training.[51] As a teacher from a rural secondary school in Ghana stated:

> **"I have not received any formal training on artificial intelligence. Most of what I know about AI has come from my own efforts to learn through online Facebook and TikTok, and discussions with colleagues. We teachers are generally willing to embrace new technologies, but need the upskilling."**[52]

Embedding AI literacy and responsible use practices into pre-service and in-service teacher training and support is urgent. Without adequate preparation and support, teachers may accept generated content without proper evaluation, rather than harnessing it to strengthen pedagogy and respond to learners' needs.[53]

Expanding digital education will require greater investment in teachers' digital skills. Despite the African Union's affirmation that "digital competence should be a core skill for all educators," digital skills remain among the most consistently cited gaps in teacher development across the five countries where primary data was collected.[54] As part of its Digital Education Strategy, the African Union is developing the African Teachers' Digital Skills and Certification Framework to establish, disseminate, and promote the use of a common competency framework for educators to deliver digital skills across the continent.[55] The framework will be linked to an African Certificate for Teachers Digital Education to encourage participation and recognize educators' digital competencies.

Ensuring teachers have equitable access to training opportunities requires addressing existing digital divides. Access to digital training is itself unequal. In Rwanda, 49 percent of female teachers had computer access compared with 60 percent of male teachers. In Tanzania, limited laptop ownership, unfamiliarity with email, older smartphones, data costs, and poor rural connectivity constrain online professional development, especially for women.[56] Training design must account for these barriers.

When designed well, technology can help extend professional learning beyond one-off workshops and connect teachers to sustained support, expertise, and peers. Effective technology-enabled professional development creates opportunities for teachers to reflect, practice, collaborate, solve problems, and receive ongoing support.[57] Across Sierra Leone, Uganda, Kenya, Tanzania, and Nigeria, mobile-based teacher development and virtual communities of practice have expanded opportunities for continuous learning, including for teachers in underserved areas.[58] The Connected Learning for Teacher Capacity Building in STEM (CL4STEM) initiative in Nigeria and Tanzania, for example, combined Moodle-based learning with Telegram communities, enabling secondary STEM teachers to learn from peers and receive support from teacher educators.[59] In Tanzania, the MEWAKA Teacher Continuous Professional Development program (Box 8.3) demonstrates

BOX 8.3

Tanzania: Technology extends continuous teacher learning and collaboration

Tanzania's national program for Teacher Continuous Professional Development, known by its Swahili acronym MEWAKA, was inaugurated in 2020 and rolled out the next year in primary and secondary schools with the goal of shifting professional development from episodic, centrally delivered workshops toward continuous training and everyday practice in schools. Teachers meet regularly in Communities of Learning to review practical modules, plan and observe lessons, and reflect together on instructional challenges. Because secondary schools are often far removed from each other, teachers at that level meet in virtual communities of practice. More than 70,000 primary and secondary teachers have been trained, with secondary teachers accessing subject-specific content on inclusive education, how to teach in large classes, classroom management, digital integration, and pedagogy.

Technology enables and enhances the model. A government-owned learning management system provides standardized modules, instructional videos, and teaching resources in Swahili through web and mobile platforms, while offline access through shared devices and local servers extends availability in low-connectivity settings. Teachers then interpret and apply this digital content through locally led and online peer-learning discussions.

MEWAKA demonstrates how context-responsive technology can support quality and scale when integrated into national systems and collaborative professional practice. Early evidence indicates stronger teacher collaboration, lesson planning, and interactive teaching, although irregular school coverage, connectivity, workloads, and follow-up support continue to constrain consistent implementation.

Source: Elimu-Soko, *Secondary Education in Tanzania: Country Case Study* (Toronto: Mastercard Foundation, 2026).

how context-responsive technology can support continuous professional learning at scale.

Teachers also create their own networks. WhatsApp groups in Ghana and Facebook communities in Kenya enable peer exchange and problem-solving.[60] Blended approaches in Tanzania and Rwanda combine online platforms, mobile access, and school-based communities of practice.[61]

Digital platforms and generative AI help teachers prepare or adapt learning materials, develop lesson activities, and support learner-centred instruction. Evidence from Ghanaian senior high schools suggests that AI-supported lesson delivery has improved student engagement and supported more personalized learning and formative assessment, with teachers and learners reporting positive experiences.[62] In Ethiopia, GlobeDock Academy provides an offline-first, AI-powered application that has reached 200,000 learners, primarily in Grades 7–12. The platform offers more than 3,000 curriculum-aligned lessons, with much of the content generated through an automated agentic AI system.[63] Across the continent, technology-enhanced STEM approaches are utilizing simulations, virtual laboratories, and geographic information systems to support inquiry-based learning in contexts where specialist resources may be limited.[64]

Early trials suggest that generative AI can support learning when embedded within well-structured teaching and learning models. Randomized controlled trials in Sierra Leone and Nigeria have reported sizeable gains in mathematics and English, respectively.[65] Critically, however, these gains cannot be attributed to AI alone. In both cases, AI was integrated into curriculum-aligned lessons that combined carefully designed activities, teacher-led instruction, student

interaction with AI, and whole-class discussion. This makes it difficult to disentangle the contribution of AI from the wider instructional model. Moreover, these remain small-scale pilots; evidence on the effectiveness, scalability, and cost-effectiveness of AI in African contexts remains limited, underscoring the need for further rigorous evaluation before wider adoption.[66]

Technology strengthens teaching only when paired with pedagogical design, appropriate tools, and sustained professional support.[67] Digital platforms should be designed around teachers' existing devices, practices, and classroom realities, with teachers involved in the selection, shaping, testing, and adaptation of the tools they are expected to use.

As AI becomes more widely embedded in education, protecting teachers' agency will become increasingly important. Success should be measured by whether technology enables teachers to teach more effectively and respond more quickly to the needs of their learners. This also requires capable school leaders, teacher educators, and district-level support personnel who can help teachers translate new competencies and technologies into classroom practice.





8.5 Technology can expand and personalize learning opportunities for young people

Technology is expanding where, when, and how young people can learn. Technology is extending learning beyond the classroom, particularly where qualified teachers and instructional resources are scarce.[68] It cannot reproduce the relationships and social interaction at the heart of education. But it can provide additional practice, feedback, and continuity of learning.

Young people are already using technology to enhance learning beyond the classroom, highlighting the growing importance of equipping learners with relevant skills and knowledge to use these tools safely and responsibly. Focus groups with secondary students in Sierra Leone and Nigeria found that personal phones were their main learning-support device, used particularly for research, assignments, and exam preparation.[69] Emerging evidence suggests that AI can serve as an additional tutor or learning support tool.[70] While young people consistently identify teachers as the most important influence on their educational experiences, they also report using technology to complement classroom instruction, for example, through YouTube videos or step-by-step explanations from AI that reinforce concepts taught in class.[71]

However, concerns about young people's overreliance on AI reinforce the importance of positioning AI as a complement to, rather than a substitute for, teachers. Teachers in Ghana, Nigeria, and Sierra Leone express concerns that young people may outsource critical thinking and creativity to AI.[72] Young people themselves also recognized this risk. As a student from Ghana said, "*We need to know when it is appropriate to use AI and when we should work independently*."[73] As AI technologies continue to evolve, education systems will need to equip learners not only with digital and AI literacy, but with more durable capabilities like asking good questions, analyzing and verifying information, recognizing bias, protecting personal data, exercising independent

judgment and critical thinking, and knowing when AI should and should not be used (Chapter 3). These capabilities must be embedded across curricula and assessment, alongside safeguards to ensure the tools that learners use are safe, accurate, age-appropriate, and relevant to their languages and contexts.

As a student from Ghana said, "We need to know when it is appropriate to use AI and when we should work independently."

Technology can sustain access to learning when schools and classrooms are disrupted, but the most resilient solutions are not necessarily the most technologically sophisticated. The COVID-19 pandemic exposed the limitations of education systems that depended on a single mode of delivery. Since then, some countries have continued to combine radio and television broadcasts, mobile communication, offline materials, and online platforms to reach learners with different levels of connectivity. Multimodal approaches have, for example, been used to maintain access to learning in fragile and crisis-affected contexts including the Central African Republic, Sudan, and Somalia.[74]

Using radio, mobile, offline, and online channels reduces the risk that school closure or loss of connectivity cuts learners off entirely. Resilience requires more than providing multiple devices or delivery channels: consistent content, feedback, learner support, and pathways back to classroom learning need to remain coherent across these channels.

For refugees and displaced young people, distance technologies have supported accelerated learning, language support, and remote teacher training. However, interventions remain inconsistent and modest in scale, constrained by connectivity, funding, and policy environments.[75] Evidence of effective secondary-level interventions is limited, particularly in African contexts of forced displacement.[76]

Practical design choices can make digital learning more flexible and inclusive for learners who face barriers to participating in conventional schooling. In Malawi, Open Secondary Schools use technology to offer classes in the evening, increasing access for girls and young women whose domestic and caregiving responsibilities constrain participation during the day (Chapter 7).[77] In Senegal, the online tutoring platform Jangalma incorporates adjustable visual settings and audio- and text-based modes to support learners with visual and hearing impairments.[78] These adaptations are not technologically complex or costly; their value lies in being designed around the needs and circumstances of the learners they are intended to reach.

Personalized digital learning can improve outcomes, but its effectiveness depends on whether the technology is designed for the learners it is intended to serve. Rori, an AI mathematics tutor delivered through WhatsApp, has been deployed across seven African countries, providing more than 45,000 learners with direct, personalized support through a relatively familiar, low-bandwidth platform.[79] An eight-month evaluation involving approximately 1,000 grade 3 - 9 learners found that those who participated in two 30-minute sessions per week achieved significantly greater mathematics gains than the control group.[80] While these findings are promising, Rori was designed for English language use. Evidence on AI performance in African languages shows fewer positive results. For example, ChatGPT only recognizes 10 to 20 percent of sentences written in Hausa, a language spoken by 94 million people across Nigeria.[81] The contrast exposes a central limitation of AI-enabled personalized learning: the same technology can produce very different outcomes when the learner, language, and context change.

Where secondary education is delivered in English, French, or Portuguese languages, multilingual AI can help bridge language-of-instruction barriers by

translating or explaining content in learners' local languages. However, many AI systems have not been built around African languages or realities. Less than 0.2 percent of the data used to train AI models comes from Africa and other developing regions, and AI models are estimated to be 20 percent more likely to make mistakes when adapting outputs to lower- and middle-income country contexts than to higher-income settings.[82] Africa is home to more than 2,000 languages, yet fewer than 100 have meaningful representation in global AI training data.[83] In education, these biases have direct consequences: inaccurate explanations, unfamiliar examples, and weaker performance in underrepresented languages can affect the quality of instruction and feedback learners receive.

2,000

Africa is home to more than 2,000 languages, yet fewer than 100 have meaningful representation in global AI training data.

Emerging initiatives are beginning to address these linguistic and contextual gaps by developing AI tools tailored to African languages, curricula, and learning environments. Initiatives are training AI systems across local and instructional languages, including Bambara in Mali, Twi in Ghana, Kiswahili in Tanzania, and Kenyan Sign Language.[84] In Senegal, the Ministry of Education is working with the international nonprofit Libraries without Borders and the *Agence Française de Développement* to help teachers develop French-language instruction using AI trained in local languages.[85] In South Africa, FoondaMate provides AI-enabled study support in 13 languages, using natural language processing (NLP) for text-to-speech and real-time translation into local languages.[86] African universities and research institutions are also building the capacity to address linguistic biases and other limitations of AI: 56 universities and research institutions across 15 countries are developing language AI, training datasets, and AI safety frameworks.[87]

Investments in representative local datasets, African languages, inclusive design, and local testing can make AI more relevant to African learners. Governments, educators, learners, researchers, and local innovators need to shape these tools together.[88] As a Nigerian government stakeholder noted, "*Instead of using off-the-shelf [content], we're now developing it in-house for teachers as well as learners.*" Procurement should support testing, evaluation, and refinement before decisions are made to discontinue or scale these tools.[89] Africa should help shape educational AI, not just use it.

The growing use of AI by young people also brings risks to privacy, safety, data security, and learning that some countries are beginning to recognize and address. AI tools may collect sensitive information about learners, their performance, and their interactions, while opaque algorithms can make it difficult to understand how data are being stored, used, or shared.[90] These risks are particularly acute for minors, underscoring the need for age-appropriate safeguards and parental or caregiver consent where appropriate.[91] Overreliance on AI can also weaken opportunities for learners to exercise creativity, critical thinking, and independent judgement.

Policy and regulatory frameworks are beginning to respond to these risks but remain nascent. As of June 2026, 13 sub-Saharan African countries had introduced national AI strategies or draft policies. Yet education-specific guidance (Box 8.4) on the safe and responsible use of AI in education remains limited.[92] Education systems will need to develop AI-enabled instructional systems that bring together curriculum-aligned content, diagnostic assessment, differentiated learning support, teacher insight, and timely feedback. Realizing this potential will require education systems to shape how these tools are designed, tested, and governed to ensure alignment with national curricula, local languages, learner-protection standards, and equity principles.[93] However, policies alone are

BOX 8.4

African countries are beginning to address AI risks in education

Governments are beginning to develop policies that respond more explicitly to the opportunities and risks associated with digital education and AI. Seychelles' National Artificial Intelligence in Education Framework (2026–2030), for example, includes provisions for child protection, data privacy, cybersecurity, responsible procurement, and human oversight of high-stakes educational decisions,[95] while Rwanda has adopted both a National AI Policy and an Educational Technology Policy.[96] Rwanda's Basic Education Board and Ministry of Education have also partnered with the Massachusetts Institute of Technology Media Lab's Responsible AI for Social Empowerment and Education (MIT RAISE) program and Day of AI to develop an AI literacy curriculum.[97] Education systems are beginning to embed responsible technology use within curricula. Kenya's Grade 12 Computer Studies syllabus, for example, covers data privacy, data ethics, and responsible and ethical use of technology, while Nigeria's Digital Technologies curricula address online safety, cybersecurity, and safeguarding.[98] Zambia's secondary Computer Studies curriculum goes further on AI, introducing foundational AI literacy, basic machine learning concepts, AI ethics and societal impact, and applied AI automation[99] (Chapter 3). While it is too early to assess the impact of these developments, together they represent an important shift from viewing digital policy primarily as a question of infrastructure toward recognizing the wider skills, safeguards, and institutional responsibilities required for digital transformation.

insufficient: effective implementation also requires institutional capacity to monitor compliance, enforce existing data protection and safety rules, and adapt safeguards as AI evolves.[94]

The next frontier for digital education policy is translating broader commitments to equity into practice, including stronger implementation and monitoring capacity. A rapid scan of educational technology policies across African countries found that although equity is widely invoked, marginalized learners are rarely identified with enough specificity.[100] Gender, disability, displacement status, rurality, school type, and other forms of exclusion require different responses in design, procurement, implementation, and monitoring.



8.6 Technology can help education systems make better use of limited resources

Digital tools can help resource-constrained systems use information, resources, staff time, and funding more effectively. Potential applications include school management and lowering the costs of developing, translating, and distributing educational materials.

Better data systems can make learner performance more visible and actionable. Rwanda's Comprehensive Assessment Management Information System (CAMIS), for example, designed to function in low-connectivity settings, links schools, teachers, and standardized assessments to support continuous assessment and earlier identification of learners who may need additional support.[101] Teachers can upload data offline using desktop and mobile applications; the data is later synced once connected to the internet.[102] Piloted in 2022 and integrated with the School Data Management System in 2024, CAMIS now captures 91 percent of student grades nationwide, up from 58 percent the previous year.[103] The Ministry of Education plans to use these data to identify and support at-risk students.[104] In South Africa and Kenya, AI models using attendance, achievement, and socioeconomic data reportedly identified female students at risk of dropping out with more than 85 percent accuracy, enabling targeted support such as home visits; however, evidence is lacking on whether this translated into fewer dropouts.[105] Meanwhile, Zeraki Analytics analyzes assessment data to improve teachers' ability to identify and respond to learning gaps while reducing administrative burdens (Box 8.5).[106] Technology can thus capture assessment results, identify patterns in learner performance, and make information quickly available to adapt instruction, while also contributing to policy design.

Digitizing improves decision-making only when teachers, school leaders, district officials, and ministry teams have the capacity, authority, and practical tools to interpret and act on information.

BOX 8.5

Zeraki Analytics reduces teacher workload and makes better use of learning data

Zeraki Analytics, a mobile-first school management and data platform, operates across 6,000 schools in six African countries, supporting more than 150,000 teachers and 2.5 million learners.[107] An independent impact performance study found that in Kenya, 89 percent of teachers surveyed reported that the platform reduced time spent on administrative tasks, while 77 percent reported an improved ability to identify learning gaps.[108] Teachers described redirecting time saved toward supporting students, engaging with them one-to-one, and covering additional content and revision. As one teacher reported:

"*In terms of accuracy, it is very good, and it does not fail. It has made work easier compared to before when I was doing things manually and there was time wastage. With Zeraki, within an hour you are done. Even the parent can access results from Zeraki*." – Male teacher, 28 years, Kenya

Although these findings are based on teacher self-reporting, they illustrate a potentially important dual benefit: technology can make learning data more immediately useful while freeing teachers' time so they can focus more on the learners that the data identify as needing additional support.

Feedback loops ensure data collected from schools are returned in useful forms to support classroom practice, school planning, targeted assistance, and resource allocation.[109] This also requires interoperable education data systems that connect information on learners, teachers, schools, assessment, and resource allocation while maintaining clear standards for data quality, ownership, access, and protection.[110] South Africa is modernizing its national school administration system using the open-source OpenEMIS platform and aligning quality standards for data on schools, learners, teachers, and other staff.[111] The government is piloting the new system in approximately 1,000 schools.[112]

Technology can improve the information available to support teacher and resource allocation, supporting workforce planning in the context of teacher shortages. Tanzania has used geographic information systems to map schools and educational outcomes to support the allocation of resources to underserved areas, while Ghana has mapped secondary schools to inform decisions about teacher and resource allocation.[113] In Nigeria, Schoolinka uses teacher data to match teachers with schools and recommend online professional development based on identified needs.[114] Similar efforts have been undertaken in Sierra Leone (Chapter 5). While these are promising innovations, better information does not guarantee better deployment; its value depends on the policies, incentives, and institutional capacity to act on it.

Digital platforms and AI could substantially reduce the time and marginal cost of developing and adapting educational materials. Following COVID-19, several governments strengthened national digital content platforms and learning management systems to support more centralized and scalable distribution of curriculum-aligned resources across schools.[115] Nigeria's Learning Passport, for example, supports national content delivery through the country's Digital Learning Policy.[116] Other approaches, such as SolarSPELL's offline digital library model used in several African countries, demonstrate how technology can lower the recurring costs of reproducing, updating, and distributing educational materials, including in low-connectivity contexts.[117] In Mali, RobotsMali used AI to produce more than 180 children's books in Bambara in less than a year, while AI has also been used to draft, translate, and contextualize

textbooks in Benin, Cameroon, and the Democratic Republic of the Congo.[118] When aligned with national curricula, quality-assurance processes, and existing systems, these technologies can extend access to learning resources at scale. However, evidence on cost-effectiveness remains limited, particularly once localization and recurrent technology costs are considered.[119]

Technology could help governments target scarce resources more equitably. Stronger evidence from African settings is needed to determine whether they produce measurable savings or better resource allocation.[120]





8.7 Digital transformation requires coherent policy, governance, and financing

Technology only delivers results at scale when the systems needed to govern, finance, coordinate, and sustain it are in place. To move successfully beyond isolated technology projects toward integrated digital education ecosystems, governments must combine investments in infrastructure, digital content, learning and assessment platforms, teacher development, and financing around shared educational goals. Country experiences illustrate different approaches:

Ghana shows the value of integration across successive digital investments. Reforms have progressed from the iBox offline learning platform toward the Smart Schools Project, which combines devices, connectivity, digital content, and teacher training.[121] These efforts have expanded access to technology-enabled teaching and learning.[122]

Tanzania demonstrates alignment between technology and wider education reform. Digital technologies have been integrated into national teacher professional development, linking technology to pedagogy and instructional practice rather than treating them as stand-alone interventions. As a result, classrooms are becoming more engaging and interactive, and learners have more opportunities to develop work-relevant skills.[123]

Rwanda exemplifies greater policy and data coherence. Investments in connectivity and digital learning have been complemented by national education technology and AI policies, alongside integrated school and assessment data systems that support classroom practice and system decision-making.[124] Data are being used to identify learner needs and design more responsive schools and policies.[125]

These approaches are at different stages but show that sustainable digital transformation is more likely when technology is embedded within broader

education system reforms than when individual technologies are introduced as stand-alone projects. Policymakers should focus not only on whether a technology tool works, but whether systems can adopt and sustain it. Figure 8.2 sets out the foundations of tech-enabled reforms: evidence-informed policy, coordinated governance, and sustained financing.

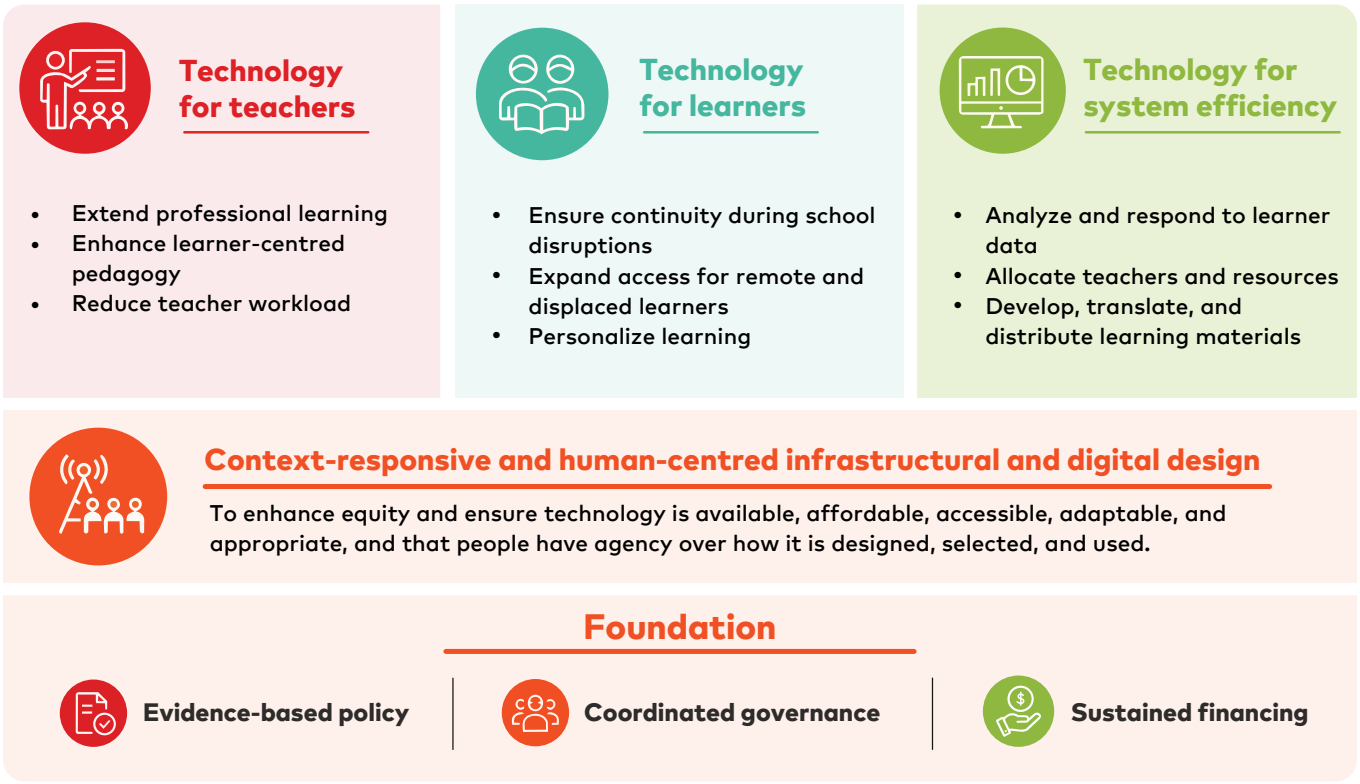
Policy alone will not ensure that technology works in practice; careful evidence-informed design is needed. Digitizing inefficient processes may simply reproduce their weaknesses.[126] Yet consultations with stakeholders reveal that digital tools are often considered without conclusive data on their impact.[127] To develop evidence-based policy, governments need to clarify responsibilities, simplify workflows, identify the decisions and outcomes better information should support, and then determine where technology can add value.[128] Investments can then be piloted and adopted according to system readiness, using evidence from implementation to inform further investment and scale-up.[129]

Across several African education systems reviewed by UNESCO, technology policies focused heavily on technology acquisition, connectivity, and implementation, while systematic mechanisms for evaluating whether technologies were educationally effective before or after procurement were less evident.[130] Stronger national evaluation systems are needed to assess whether technology improves learning, equity, and value for money, rather than simply whether devices or platforms have been deployed.[131]

Financing digital transformation is a constraint that increasingly requires collaboration between ministries of education, finance, industry, and other non-state actors. African governments and partners are experimenting with innovative

FIGURE 8.2

Strong foundations help technology enhance teaching, learning, and system efficiency



Source: Authors, using ChatGPT (OpenAI), 2026.

financing models, including universal service and access funds, zero-rating arrangements, earmarked capital investments, competitive grants, commercial models, and public-private partnerships to finance digital and education technology.[132] South Africa, for example, requires telecommunications companies to contribute through its Universal Service Access Fund and legislates at least a 50 percent discount on internet services for educational institutions. Morocco requires mobile network providers to contribute two percent of pre-tax turnover to its Universal Telecommunications Service Fund, which has financed major education programs.[133]

Rwanda has combined public investment with telecommunications and infrastructure partnerships to expand school connectivity.[134] Such arrangements can mobilize capital and expertise at a scale that education ministries may struggle to provide independently. However, donor or corporate-funded initiatives may stall when external support ends.[135] Sustainability requires government ownership, long-term financing, teacher support, maintenance, and integration within public education systems.

Ultimately, the readiness of an education system to implement new technologies will determine whether digital transformation reaches learners at scale. Evidence suggests that long-term success depends not only on technological quality but also on government ownership and integration into national systems. As one EdTech provider observed,

> **"Government is still the gatekeeper in essence [...] if the product is adopted by government and pushed through government and is standardized then it's almost compulsory for educators to use the product which then allows scale."**

Scaling depends on adoption within curricula frameworks, teacher support, and government implementation structures. While many countries have adopted digital or AI strategies, they have yet to establish the institutional coordination, implementation capacity, and enforceable safeguards required to implement them.[136]

This systems approach is consistent with priorities emerging from continental EdTech dialogue. The ten recommendations emerging from the 2024 Mastercard Foundation EdTech Conference similarly span infrastructure and connectivity, teacher capacity, data use, system-wide EdTech integration, context-relevant innovation, inclusive access, flexible learning pathways, and cross-sector collaboration.[137] This underscores that effective digital transformation depends on multiple parts of the education ecosystem advancing together.





8.8 Conclusion

African education systems are moving beyond standalone digital initiatives toward approaches that connect infrastructure, teaching and learning, data systems, and increasingly, AI. Technology can extend teacher development, expand and personalize learning opportunities for young people, sustain education during disruption, and help systems make better use of scarce resources. Yet technology, and increasingly AI, also present new risks, including data privacy and safeguarding concerns, and the threat of overreliance and the weakening of critical thinking and professional judgement. Despite government efforts, access to internet in schools across the continent has barely improved in the past decade, while gender, rurality, and disability compound the digital divide. Turning to offline and low-tech options will be increasingly necessary to realize the potential of digital technology. Without deliberate action, technology may deepen existing inequalities rather than reduce them.

Technology thus has the most to offer when it is designed around the needs of its users and with equity at the centre, when it strengthens rather than replaces human relationships and professional judgement, and when it is supported by the infrastructure, skills, governance, and sustained financing needed for meaningful use. To harness the full potential of technology, procurement and policy will need to look beyond devices to building the connective tissue that makes technology function at scale. The strongest examples of digital transformation seek to build integrated digital education ecosystems that align infrastructure, content, teachers, data, governance, and financing around shared education goals.

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Part III

How Transformation Becomes Possible at Scale

CHAPTER 9 Strengthening Secondary Education Systems to Provide Inclusive, Flexible Secondary Education


DIASPORA GIRLS
SENIOR HIGH SCHOOL

CHAPTER 9

Strengthening Secondary Education Systems to Provide Inclusive, Flexible Secondary Education

Strengthening financing, institutional, and technical capacity for better planning and implementation



QUESTION THIS CHAPTER ANSWERS

How are countries strengthening financing, leadership, governance, and partnerships to drive system transformation?

What has changed since 2020

Since 2020, countries have continued to adopt ambitious reforms across curricula, inclusion, flexible pathways, workforce development, and technology, making implementation capacity increasingly important. The evidence points to growing attention to equity-based and innovative financing, the middle-tier, evidence use, system leadership, and government-led partnerships.

What is needed now

The defining challenge is increasingly translating ambition into implementation at scale, while addressing gaps in equity and system and workforce capacity. Delivering the transformations described across the report requires adequate and equitable financing, coherent institutions, strong national and middle-tier leadership, integrated data and evidence systems, and partnerships that contribute expertise and resources while reinforcing government ownership.



9.1 Transforming secondary education requires stronger system capacity

Over the past 25 years, African education systems have been remarkably successful at expanding access, yet 77 million young people remain out of school. Many face intersecting barriers of geography, income, gender, disability, and displacement.[1] The preceding chapters have examined how more relevant curricula, stronger teaching, inclusive provision, and flexible pathways could reach and serve these learners. The challenge is to progress from individual reforms and promising pilots to implementation across entire systems.

Increasingly, system strengthening must be understood not only as improving performance, but also as improving resilience. Climate-related disruptions, conflict, displacement, and public-health emergencies are becoming more frequent across many African countries, requiring systems that can continue delivering learning and support under conditions of uncertainty.[2] Recognizing this, the AU's CESA for 2026 - 2035 includes Education in Emergencies as a core thematic cluster. It highlights education resilience and continuity in the face of conflict, climate change, displacement, and health emergencies as a system-level priority.[3] In September 2026, the African Union Commission launched the Education in Emergencies cluster to enhance coordination and provide an opportunity for countries to share practices, strengthen preparedness, and embed resilience within education sector planning.[4]

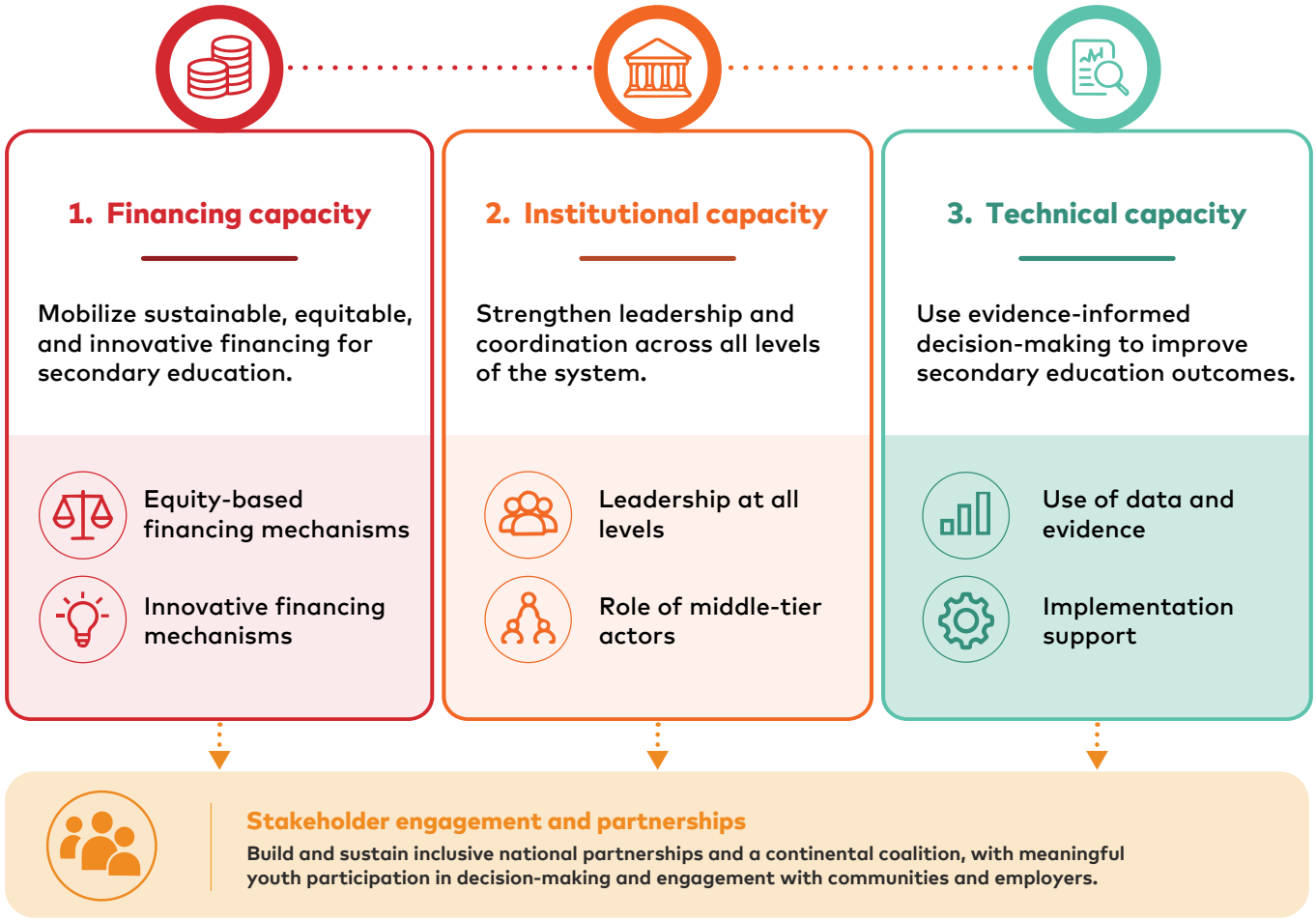
That challenge is intensified by rapid technological change, climate pressures, and shifts in the nature of work across Africa. Young people need foundational, transferable, and technical skills for livelihoods in the informal economy, as well as emerging formal sectors. They also need pathways into, through, and back into education as circumstances change. The report's vision is not simply wider access to high-quality secondary education but a system that enables diverse young people to learn, transition to productive work, and

return to reskill and upskill. Delivering this vision requires governments to make choices about financing, institutional responsibilities, and the pace of reform.

This chapter examines the financing, leadership, implementation, evidence, and partnerships needed to achieve sustained results (Figure 9.1).

FIGURE 9.1

System transformation requires financing, institutional, and technical capacity



Source: Authors, using ChatGPT (OpenAI), 2026.



9.2 System transformation requires innovative financing mechanisms and private sector engagement

As Chapter 2 shows, secondary education systems face severe fiscal constraints.[5] Countries in sub-Saharan Africa often face low levels of national revenue, limited ability to increase the share of public funding allocated to education, and pressures on external aid.[6] Aspirations for system expansion and transformation frequently exceed available resources, while improving quality and rapidly expanding systems are difficult to finance simultaneously. Communities and households already cover almost half the cost of secondary education, placing access at the mercy of rising living costs.[7] Sustained domestic public financing for education remains essential; international benchmarks call for education spending of four to six percent of GDP or 15 to 20 percent of public expenditure. The question addressed here is how governments can allocate scarce resources more equitably and mobilize other provisions. Importantly, sustained investment to improve learning and retention at the primary level is crucial for increasing transitions, retention, and learning in secondary education (Chapter 1).

Community actors - including families, local businesses, faith-based organizations, and community associations - also often contribute significant financial and in-kind resources to secondary education. Their contributions can help strengthen schools and support learners but should complement rather than substitute for adequate and equitable public financing, particularly given differences in communities' ability to mobilize resources.

Equity-based financing approaches

New approaches to financing secondary education systems are emerging. Equity-based financing operates through four channels: lowering household costs; directing additional public resources toward learners and locations with greater needs; rewarding specified equity outcomes; and financing packages

of complementary support.[8] In practice, the strongest approaches often combine these financing modalities as described in more detail below.

First, governments can lower household costs through fee abolition, caps on parental contributions, school meals, bursaries, and cash transfers. Rwanda expanded secondary school meals and capped mandatory parental contributions, while Ghana and Malawi abolished secondary school fees (Chapter 2).[9] Yet universal fee removal is not necessarily progressive when marginalized learners are less likely to enroll or still face transportation, uniforms, or boarding costs.[10] Nor does it directly benefit the 27 percent of young people who do not progress beyond primary education.

Second, governments can direct additional resources to underserved learners, schools, and locations through weighted school grants, targeted infrastructure, and scholarships. Ghana's Secondary Education Improvement Project invested in underserved districts and low-performing schools and provided scholarships for low-income students, particularly girls.[11] Sierra Leone allocates higher per-student subsidies to junior and senior secondary schools than to primary schools, reflecting higher costs.[12] Senegal's SEN/032 program[13] concentrated vocational investment in historically underserved rural and peri-urban areas.[14]

Third, financing can be tied to defined equity results, such as girls' participation, access in underserved areas, or completion among underserved learners. Tanzania's Secondary Education Quality Improvement Project uses results-linked financing to improve learning environments for girls and extend access to alternative flexible pathways for out-of-school adolescents.[15] Ghana's Secondary Education Improvement Project linked external finance to access, quality, and equity objectives.[16] Evidence from both projects points to substantial gains in access and transitions for marginalized youth, including girls and young women, though these impacts cannot be attributed to the financing mechanism itself (Box 9.1). Such mechanisms can strengthen accountability, but their effects on equity depend on how indicators are designed and verified and on whether under-resourced schools and regions receive sufficient support to achieve the specified results. Evidence on their equity remains limited.

Fourth, governments can finance packages that combine financial or material assistance with mentoring, learning support, re-entry programs,

BOX 9.1

Tanzania: Results-linked financing helps target equity

Tanzania's Secondary Education Quality Improvement Project links financing to specified results for girls and other disadvantaged learners. Program documentation reports that gender parity in upper secondary enrolment increased from 0.75 in 2019 to 0.91 in 2023. Data from the National Examination Council of Tanzania indicate that lower secondary exam pass rates amongst girls more than doubled (increasing by 114 percent) in the same period. These outcomes were explicitly included among the project's performance-based conditions. Emerging independent mixed methods research also identifies positive effects of the project's flexible education pathways on girls' access and participation, particularly due to the removal of fees and community sensitization, though implementation was uneven. Gender-sensitive learning environments, mentorship, psychosocial support, and teacher training also contributed to improvements in girls' confidence, and to a lesser extent, that of boys'.

Source: Kionywaki, "Transforming Learning Environments for Boys and Girls in Tanzania: Insights from the SEQUIP Alternative Education Programme."

and transition services. CAMFED's work in Tanzania combines assistance for marginalized girls with mentoring and community support, with independent studies reporting positive gains in retention and learning, cost-effectiveness, and positive spillover effects for other students.[17] Senegal's PFPI combines training, mentoring, employment support, and seed financing for groups facing exclusion.[18] Malawi's Open Secondary Schools and Senegal's bridge classes apply the principle to second-chance provision (Chapter 7).[19] The lesson from these experiences is to finance the combination of support learners need.

Innovative financing mechanisms

Innovative financing can supplement, but not replace, predictable public expenditure. Debt restructuring, results-based instruments, employer levies, training funds, natural resource mechanisms, direct industry co-financing, commodity sector funding, and earmarked public funds for skills development can supplement public financing for secondary education reform when transparently aligned with national priorities. Together, these models illustrate how governments and education systems can engage the private sector in building a stronger, well-financed Transition to Work system (Chapter 3).

Debt-swaps can channel resources for additional public investment. In Côte d'Ivoire, a World Bank guarantee in 2024 allowed the country to refinance roughly €400 million in costly commercial debt on more favourable terms, generating an estimated €60 million in net-present-value savings and approximately €330 million in additional budgetary resources over five years.[20] Most of the savings were directed toward education infrastructure, including 33 additional schools serving approximately 30,000 students.[21] In Angola, the World Bank Group's Multilateral Investment Guarantee Agency supported the refinancing of commercial debt, freeing up resources for additional secondary schools.[22] Such approaches require credible macroeconomic frameworks, transparent monitoring, and forward planning for financing once the additional resources taper off.

Results-based financing instruments are also increasingly being used to supplement available financing for education systems. Table 9.1 illustrates their different applications. Such instruments can direct additional resources toward measurable outcomes in access, equity, learning, and transitions, but work best alongside stable core budgets, independent verification, and safeguards against excluding harder-to-serve learners or rewarding only short-term results.[23]

Employer levies and training funds can provide predictable support for apprenticeships, workplace learning, and sector-specific skills development. South Africa's Skills Development Levy requires liable employers to contribute one percent of payroll, channelled through Sector Education and Training Authorities and the National Skills Fund.[29] Kenya's industrial training levy supports apprenticeships and employer-based training.[30]

In Senegal, an employer-paid levy, the Contribution forfaitaire à la charge des employeurs, finances vocational and technical training through the 3FPT fund.[31] Reforms after 2016 substantially increased the share of levy revenue reaching the training fund, and 3FPT has financed training, institutional investment, and employer-responsive training provision across the broader TVET system.[32] Such levies and funds can improve the predictability of employer contributions, although their effectiveness depends on transparent governance, strong employer participation, and safeguards against training benefits being concentrated among larger formal-sector firms. More evidence is needed on their effectiveness in improving access, equity, and labour market outcomes.

Natural resource revenue can support longer-term investment in education and skills but is volatile. Ghana's Annual Budget Funding Amount directs a share of petroleum revenues to the national budget and has financed education alongside other development priorities.[33] Senegal has considered establishing an education equalization fund linked to future hydrocarbon revenues.[34]

TABLE 9.1

Results-based financing can enhance access, equity, and skills development

Country / program	How the mechanism works	Reported results / relevance
Ghana – Secondary Education Improvement Project (SEIP) [24]	External financing was tied to specified results in senior secondary education and integrated with government budget lines. The project combined construction and rehabilitation in underserved districts, school performance improvement plans, and targeted scholarships and bursaries.	The World Bank reports nearly 568,000 students reached and financial support for more than 20,000 students, 60 percent of them girls. In the poorest districts, transition from lower to upper secondary reportedly rose from 39 percent in 2014 to 72 percent in 2019.
Tanzania – Secondary Education Quality Improvement Project[25]	A $500 million program financed by the World Bank's International Development Association links financing to agreed results while supporting secondary schools, teachers, flexible education pathways, girls' transitions, and infrastructure.	The program provides a country-level example of results-linked financing embedded in a national secondary education program rather than implemented as a stand-alone pilot.
Sierra Leone – Education Innovation Challenge[26]	An $18 million outcomes contract, launched in 2022 with the Education Outcomes Fund, links payment to measurable improvements in learning outcomes in primary education rather than inputs or activities.	The Sierra Leone case study reports statistically significant Year 3 learning gains, particularly in mathematics, alongside stronger data use, adaptive management, and accountability at the primary education level.
Ghana – Ghana Education Outcomes Project[27]	Service providers are paid against independently verified outcomes. Social investors can provide upfront capital, with repayment linked to results.	The program supports out-of-school children through accelerated and complementary learning. The Ghana case study reports that 17,340 out-of-school children had been reintegrated into mainstream primary schools by 2023.
Rwanda – Skills Development Fund / Priority Skills for Growth[28]	Competitive financing, employer-led training, labour market information, and graduate tracking are used to direct resources toward priority skills and programs with stronger employment relevance.	A 2026 World Bank results brief reports nearly 24,000 participants in the wider program, with 82 percent employed or self-employed nine months after graduation. Most participants were engaged in short-term or workforce training rather than formal secondary TVET.

Source: Authors.

Fiscal rules, transparency, and protections against revenue volatility are essential if these funds are to provide a sustainable source of education financing.

Climate finance is another potential source of funding for education. Climate finance through multilateral funds such as the Green Climate Fund or Adaptation Fund is beginning to provide education-related financing. The Green Climate Fund's $70 million Building Resilience of Affiliated Communities in Education (BRACE) facility supports climate curricula for climate awareness and green skills, resilient infrastructure, and early warning systems, including investment in South Sudan.[35] Finance remains limited. A recent analysis found that 49 percent of World Bank projects classified as climate-related allocated

only 10 percent of funding to climate-related activities.[36] Carbon-credit-funded scholarships have been established by some non-profits, but those initiatives remain limited and unevaluated.[37] In Kenya, carbon credits generated through reforestation went in part toward scholarships for secondary education. While promising for targeted support, climate finance is not a substitute for direct government education financing.[38]

Direct industry co-financing can provide equipment, workshop access, apprenticeships, trainee stipends, instructors, curriculum expertise, and assessment expertise. South Africa's School–Industry Collaboration Project seeks employer contributions of equipment, machinery, teacher training, and industry visits.[39] In Ghana, Sector Skills Bodies and employers help develop competency-based curricula and workplace assessment.[40] These arrangements, provided they are subject to equitable public oversight, can reduce the cost of practical training while improving its relevance.

Commodity-sector partnerships offer more targeted support in the communities where firms operate. These partnerships can complement, rather than substitute for, public financing.[41] Cocoa-sector actors in Ghana and Côte d'Ivoire, for example, have supported education, skills development for young people, and child-labour-remediation initiatives. Such initiatives can connect education with local economic opportunities, but the evidence is stronger for their role as targeted partnerships than as system-wide financing mechanisms.

Earmarked funds can protect investment in technical and vocational education and skills development. Ghana allocates two percent of the Ghana Education Trust Fund annually to TVET,[42] alongside enterprise-led Skills Development Fund grants. Earmarking can improve predictability but should add to rather than displace core education expenditure.

Across these mechanisms, the policy test is whether financing is predictable, equitable, transparently governed, and tied to clearly defined training, workplace learning, or equity objectives. The strongest models create institutional arrangements through which employers help finance, design, and deliver skills development, improving quality and relevance while mobilizing additional resources. No such instrument, however, eliminates the need for sustained public financing.

Together, innovative and equity-based financing models allow governments to both increase investments and make more efficient use of existing resources. Indeed, increased investments alone do not automatically translate into equitable access, improved learning, or efficient delivery. Botswana, Namibia, and South Africa, for example, have devoted substantial public resources to education, yet their experiences highlight different challenges in translating financial commitments into secondary education outcomes (Box 9.2). More efficient and equitable resource use also requires better access to data, and the ability of governments to analyse and use these data, as discussed in Section 9.5.

BOX 9.2

Namibia, Botswana, South Africa: More spending does not guarantee equitable outcomes

Evidence from Namibia, Botswana, and South Africa highlights that adequate financing is a necessary foundation for secondary education transformation, but its effectiveness depends on equitable allocations, efficient resource management, and sustained attention to learning outcomes.

In Namibia, sustained investment has supported secondary education expansion, but inequities in resource allocation and outcomes persist. In 2023-2024, Namibia allocated 9.4 percent of GDP to education, among the highest shares in Africa. Following the introduction of free secondary education in 2016, secondary enrolment increased from approximately 202,000 learners in 2016 to 219,000 in 2021. However, regions experiencing higher levels of multidimensional poverty do not systematically receive additional resources, while salaries accounted for approximately 80 percent of basic education expenditure over the preceding five years, limiting fiscal space for infrastructure and learning materials.[43]

Botswana has invested substantially in its teacher workforce, but this has not consistently translated into equitable teaching and learning conditions in secondary schools. Drawing on national education management information system data from 2020 and 2022, a 2024 analysis found that despite investment in teacher recruitment and qualifications, deployment does not always reflect school-level needs. Uneven distribution of teachers across secondary schools and subject areas contributes to disparities in staffing and learning conditions, while rural schools face particular challenges in accessing qualified teachers.[44] This underscores the importance of effective teacher allocation and management alongside investments in recruitment and professional development.

In South Africa, high public spending and improvements in secondary examination performance coexist with persistent inequalities. Public education expenditure reached 6.7 percent of GDP in 2024-2025, while the National Senior Certificate pass rate increased to 87.3 percent in 2024. No-fee schools, serving predominantly disadvantaged communities, also improved their pass rates from 81 percent in 2023 to nearly 86 percent in 2024. Nevertheless, disparities in school infrastructure, staffing, and educational quality remain, particularly for disadvantaged and rural learners. These results demonstrate progress in secondary examination performance while highlighting the continuing importance of equitable resource distribution and attention to learning quality.[45]





9.3 Strong leadership and political will help education systems deliver results

Many countries now have competency-based curricula, qualifications frameworks, re-entry policies, and more flexible education pathways. The next challenge is building the institutional capacity to implement them effectively. A study of more than 300 senior education officials in 12 low- and middle-income countries, including five in Africa, identified implementation capacity as the single largest barrier to improving learning outcomes.[46] The question for system leaders is how to translate commitments to reform into sequenced and coordinated action that reaches schools and learners. That means clarifying responsibilities; aligning financing, other resources, and support; monitoring progress; and empowering frontline actors to adapt when problems arise.

Institutional capacity involves aligning mandates, resources, and information around shared priorities and ensuring those priorities are implemented.[47] Five types of capacities are critical to success: setting priorities and expectations; aligning institutions and key stakeholders; monitoring delivery and accountability using data and feedback to adopt and adapt policies and programs; learning and leadership; and supporting frontline workers.[48] These functions are explained below and in Section 9.4 in relation to the role of middle-tier actors.

Prioritising and setting expectations

Given fiscal constraints, governments must identify which policy goals to prioritise and how to sequence reforms accordingly. At least three factors should shape these decisions: available financing; demographic trajectories and learner-flow patterns; and the institutional capacity to implement change.[49]

Countries with similar fiscal, demographic, learner, and institutional conditions may be able to learn from one another about how to prioritize, sequence, and finance secondary education

transformation. For example, in Mauritius, Seychelles, Cabo Verde, and Tunisia, where the rate of population growth is expected to stabilize, demographic change may create opportunities to redirect resources toward improving quality and diversifying secondary education pathways.[50] More research is needed to understand how countries facing similar circumstances can address difficult trade-offs among universal access, improved quality, and system diversification when planning secondary education transformation.

Given fiscal constraints, governments must identify which policy goals to prioritise and how to sequence reforms accordingly.

Aligning stakeholders

Alignment among stakeholders across the education and skills ecosystem can strengthen coordination and implementation. Many African governments, including those of Senegal, Ghana, and Tanzania, have introduced national skills or qualifications frameworks to improve coordination among TVET, qualifications, and labour market needs (Chapter 7).[51] Yet clear frameworks for coordinating stakeholders are often lacking. To effectively support young people's pathways to work, secondary education systems need to coordinate with the other two pillars of the Transition to Work System: employers and other government agencies that provide services such as childcare and psychosocial support (Chapter 4). Similarly, digital transformation requires coordination among ministries of education, schools, and districts, telecommunications providers, innovators, and the private sector (Chapter 8).

Teacher management systems can benefit from greater alignment and coordination with other components of the education system. Chapter 4 raised a crucial systems issue: teacher workforce systems often remain fragmented across recruitment, initial preparation, deployment, professional development, and retention, limiting the ability of national institutions to plan and manage the workforce as a whole.[52] More integrated teacher management systems can help governments identify shortages by subject, qualification, and location; match teachers to areas of greatest need; and improve the efficiency of existing teacher resources.[53] They can also help streamline and integrate additional roles to support teachers within the education workforce (Chapter 4).

Monitoring for accountability

Effective leadership and management of education systems require an emphasis on individual and organizational learning, in addition to accountability-driven reforms such as performance contracting.[54] Some education systems, including those in Tanzania, Ghana, and Sierra Leone, have recently adopted delivery approaches to advance national priorities.[55] These include annual performance contracts that track progress on key performance indicators, high-level accountability and reporting meetings, in-depth reviews of issues of joint concern, and meetings focused on solving implementation problems. Although the approach varies across systems, cross-national research finds that these models can help strengthen national-level coordination and outputs, but they are less effective at producing lasting changes in behaviour, implementation, and outcomes at subnational and classroom levels.[56]

Monitoring can help align policy priorities and budgets. Although earmarking budgets for priority programs is an important first step, resources may still be insufficient or fail to reach the areas of greatest need without data and information that accurately forecast costs (see Section 9.5 for more on data gaps). Planning can be strengthened by using multiyear operating budgets and clear methods for monitoring resource flows, learning outcomes, and workforce outcomes.[57]

Leadership and learning

Transforming secondary education requires strong system leadership and management that combines a clear vision, political acumen, and sound managerial stewardship. Systems leadership

includes setting high expectations, maintaining a focus on learning through monitoring and alignment, fostering collaboration, and developing people (Figure 9.2). Transformation of secondary systems requires technical expertise to develop effective policies and processes,[58] as well as the capacity to build a shared vision for secondary education, coordinate across education institutions, and negotiate trade-offs among competing priorities for attention and resources.[59]

In Kenya, Ghana, and Rwanda, system leaders identified data use and information technology, alongside financial management, implementation, and resource mobilization as training priorities.[60] Research also highlights the importance of change management, coalition building, stakeholder engagement, local problem-solving, and innovation as essential leadership functions.[61]

Capacity-building initiatives for education sector leaders are emerging, but institutionalized leadership and management training for

FIGURE 9.2

Effective education system leaders perform diverse roles, functions, and practices

Set expectations	
Function	Practices
Set a shared vision and goals and initiate policies	Develop and communicate a vision transparently and inclusively Articulate system goals, priorities, and values
Ensure coherent policy implementation	Embed directions in plans, regulations, and procedures Align resource allocation with policy goals and needs
Make evidence-based decisions	Commission, interpret, and use data to inform decision-making Encourage collaboration in interpretation and use of data
Focus on learning	
Function	Practices
Promote alignment	Ensure goals match curriculum, pedagogy, materials, and assessment
Monitor and evaluate	Set and monitor objectives in collaboration with local authorities and school leaders Inspect local authorities and schools, hold them accountable for their objectives, and provide support when results do not meet expectations
Foster collaboration	
Function	Practices
Help information flow	Encourage open, accessible, and collaborative two-way communication with and among local authorities and schools
Develop people	
Function	Practices
Develop capacity	Provide professional opportunities for local authorities and school staff

Source: United Nations Educational, Scientific and Cultural Organization, Global Education Monitoring Report, 2024/5: Leadership in Education: Lead for Learning (GEM Report UNESCO, 2024) 100, https://doi.org/10.54676/EFLH5184: drawing on Anderson and Young (2018), Crouch and DeStefano (2017), and Leithwood (2013).

national and regional leaders remains limited and often donor-driven. National and regional officials generally have fewer systemic training opportunities than staff. Kenya's Education Management Institute serves as the capacity-building agency for the Ministry of Education, yet its reach and impact is limited by cost of programs and flexibility.[62] Rwanda's capacity development programs have been limited by time, budgets, and insufficient information about available opportunities.[63] In general, capacity-building programs for system leaders tend to focus on specific skills required to implement individual programs rather than on broader coaching or mentoring. Essential for sustained reform.[64]

National universities and training institutes could provide leadership and management development, specialist expertise, and relevant research and policy advice. They can also develop local pools of technical specialists and education leaders capable of supporting secondary education system transformation.[65] In Senegal, Université Cheikh Anta Diop and UNESCO-IIEP have trained more than 700 Francophone African system leaders and specialists since 2006.[66] A 2021 review found that 84 percent of surveyed participants applied their learning at work, and all respondents said the program addressed departmental capacity gaps.[67]

Supporting frontline implementers

The remaining leadership function, supporting frontline implementation, depends on the institutions and people connecting national policy to schools. Since 2020, there has been growing recognition of the need to support middle-tier stakeholders. The next section examines the literature on this subject in more detail.





9.4 Strengthening middle management helps connect systems and schools

Middle management - regional, district, sector, ward, or cluster authorities - is emerging as crucial to translating national policy into classroom practice. Middle management officials support the implementation of secondary education policy through monitoring, coaching, and problem-solving with frontline actors in schools and training institutions. Governments across Africa are increasingly investing in the capacity of the middle-tier to support system transformation. Responsibility for different forms of secondary education, including general education, TVET, and flexible pathways, may be divided among these levels and shared with local political actors. To better understand the role of subnational systems in supporting secondary education in all its forms, governments could conduct a diagnostic of the middle management level. Frameworks such as the Middle Tier Capacity Framework developed by UNESCO-IIEP, the OECD, and the Education Commission's Learning Generation initiative can help identify strengths, gaps, and opportunities to improve system coherence.[68]

Investing in the capacity, tools, and resources available to middle management leaders, inspectors, and specialists can unlock system-wide improvements in secondary education, yet these actors remain neglected and under-supported in many countries.[69] Middle-tier offices frequently lack the operational resources and preparation required to succeed in their responsibilities.[70] Many are recruited from teaching with little orientation to the supervisory and policy implementation support functions of their new roles.[71] They may receive training to implement specific reforms but have few opportunities to strengthen their broader leadership and management capabilities or learn from their peers.[72] By building the capacity of teachers, school leaders, and middle-tier actors, governments can strengthen "bottom-up" implementation of education sector reforms. Ethiopia has taken steps to professionalize

secondary school leadership and school supervisor roles, recognizing the importance of these positions for school quality and learning (Box 9.3).

Heavy workloads among middle management officials and inspectors mean that secondary-level TVET, flexible pathways, and private schools may receive less oversight than mainstream schools, particularly when they are less fully integrated into ministry data systems.[76] In Malawi, inspectors did not always visit initiative sites, reducing oversight and support.[77]

When fee-free secondary or competency-based curriculum reforms outpace implementation capacity, middle management and frontline actors bear much of the responsibility for delivery without necessarily having the resources, authority, or capacity to fulfil it. As secondary schools enroll more students, classrooms grow larger, and reforms become more complex, the work of middle management officials expands accordingly. The scale and complexity of quality assurance and support increase while systems may face shortages of teachers, textbooks, and other learning materials.[78]

BOX 9.3

Ethiopia: Professional standards can help enhance school and middle-tier leadership[73]

Several recent policy directives in Ethiopia have professionalized standards for secondary school supervisors (2020) and school leaders (2021), alongside new training programs to increase school leaders' capacity.[74] These directives define the roles of these positions and aim to ensure accountability, professionalization, appointment by merit, and support for strong teaching and learning at the secondary school level.

Ethiopia's Directive for school supervisors is a step toward strengthening middle-tier management. It positions secondary school supervisors as supportive leaders able to ensure schools' adherence to reforms to improve instructional practices. It defines supervisors' competencies, including modelling effective learning, engaging in educational research, and supporting the development of secondary school principals. In parallel, Ethiopia institutionalized a General Education Inspection Desk that oversees secondary schools to promote accountability for learning outcomes rather than simply enrolment and retention.

Ethiopia's Directive for school leaders similarly establishes professional standards to transform this role from an administrative post into a merit-based profession. It creates professional licensing and renewal standards, including certification criteria and qualifications, with a master's degree recommended and training required prior to or immediately after appointment. Recruitment of secondary school principals is decentralized to allow regional and local education offices to oversee the process, often through selection committees composed of a range of stakeholders. Subsequent policies (2023) encourage equitable participation of women and persons with disabilities in educational leadership. Ethiopia has incorporated gender-responsive and inclusive competencies into standards for both school leaders and supervisors.

To strengthen the capacity of school leaders to uphold these standards, the Ministry established a two-month Special Summer Capacity Building Training implemented with 30 public universities nationwide. It focuses on instructional leadership, school improvement planning, education policy implementation, student achievement, and teacher supervision, as well as gender responsiveness and inclusiveness. Limited evidence exists on the impact of these reforms on school quality, though some analyses have noted weaknesses, including fragmented training and a lack of emergency preparedness and resilience planning to address emergencies.[75]

Competency-based curricula increase complexity. Middle-tier staff must help teachers adapt curricula, interpret new assessment requirements, and support implementation in schools with widely varying resources. This requires skills in instructional coaching, assessment literacy, data use, and change management, alongside practical monitoring tools, adequate staffing, and operational resources. In Ghana, only five percent of surveyed schools had the full range of facilities required for competency-based agriculture instruction.[79] Effective support calls for anticipating and resourcing such demands as part of reform design rather than adding them to already overstretched roles.

By building the capacity of teachers, school leaders, and middle-tier actors, governments can strengthen "bottom-up" implementation of education sector reforms.

As countries seek to improve the quality of secondary and TVET teaching, middle management is becoming an increasingly important provider of quality assurance, data collection, and ongoing support for schools and teachers. Quality ultimately depends on what happens in classrooms, and changing classroom practice requires investments in capacity building, monitoring, and accountability. Strengthening systems to improve quality is substantially more complex than expanding access. Through its School Quality Assurance Reform, Sierra Leone transformed its district inspectorate by establishing School Quality Assurance Officers and training them in supportive supervision, coaching, and the use of digital data tools.[80] The reform provides districts with more data for local decision-making and shifts the relationship from one centred on inspection toward one that places greater emphasis on support.

In the Mastercard Foundation-supported Leaders in Teaching program in Rwanda, Sector Education Officers played a key role in sharing effective practices across schools and facilitating teacher collaboration to improve teaching, particularly STEM.[81] A longitudinal study of 103 secondary schools participating in the program found significant improvements in teachers' mathematics and pedagogical content knowledge, as well as improvements in some classroom practices.[82] In Ghana, regional offices that were part of the Leaders in Teaching program established monitoring teams that strengthened oversight and instructional support for secondary schools and teachers implementing the new curricula, professional learning communities, and other national priority reforms.[83]

Decentralizing the delivery of traditionally centralized reforms can help scale policies and respond to local needs more quickly. Centralized cascade models of teacher training are increasingly being replaced by school-cluster approaches in Malawi and Tanzania. Bringing decision-making and support closer to schools strengthens local ownership and enables teachers to address challenges in classrooms. Examples include Rwanda's commitment to establish vocational training centres in every cell, Côte d'Ivoire's *École de la Deuxième Chance*, and Comoros's *Facilité Emploi initiative*.[84] Other promising initiatives include Sierra Leone's Districts of Excellence program and Ghana's Communities of Excellence, which facilitate dialogue and cooperation among district education offices, local political stakeholders, communities, and students.[85]

Quality ultimately depends on what happens in classrooms, and changing classroom practice requires investments in capacity building, monitoring, and accountability.

Decentralization can also introduce variation in implementation and quality. Representative surveys in Zambia, Ghana, and Tanzania reveal differences in district management capacity.[86] A well-supported middle tier must therefore

balance local adaptation with consistent national standards and direct additional assistance where implementation is weakest.

Strengthening the middle-tier can bridge the persistent gap between national policy and school-level support. It also creates demand for timely evidence on which schools and learners need that support.

Strengthening the middle-tier can bridge the persistent gap between national policy and school-level support.





9.5 Strong data and evidence systems can strengthen implementation

System transformation requires more than collecting data: governments need the systems and routines to use evidence in planning, implementation, and adaptation.

Enhancing data systems

Education management information systems are more digitized and integrated, providing increasingly accurate, timely, and relevant data for decision-making at national, subnational, and school levels.[87] Kenya's National Digital Master Plan supports its National Education Management Information System by equipping 40,000 schools and public institutions with fibre optic connectivity, establishing over 1,450 village digital hubs, and providing devices and digital skills training. The value of such infrastructure depends on whether local officials can access and use the information it generates.[88] Meanwhile, Rwanda has strengthened education planning, resource allocation, and accountability through better use of school-level data (Box 9.4).

Further strengthening the comprehensiveness and integration of education management information systems and the teacher databases remains an important priority as secondary education expands. Digital reporting systems remain incomplete while data on different forms of secondary provision, the teacher workforce, assessments, and learning outcomes are often fragmented across systems. Offline and mobile capabilities can help ensure all schools can report through updated education management information systems. Countries will also need to improve the comprehensiveness and disaggregation of the data collected by capturing information on inclusive school infrastructure, such as ramps and accessible pathways, and strengthening the measurement of learning outcomes for learners with disabilities.[89]

BOX 9.4

Rwanda: School data strengthens planning, resource allocation, and accountability

Rwanda is developing an increasingly integrated education data system to support evidence-based decision-making, improve the management of schools, and strengthen accountability for learning outcomes. The Ministry of Education's School Data Management System (SDMS) collects school-level information on student enrolment, attendance, and infrastructure, providing information that can inform planning and budget allocation. In 2024, Rwanda integrated its school-level data management system with its Comprehensive Assessment Management Information System (CAMIS), bringing together school administrative information and data on student learning.

Rwanda's CAMIS enables schools to record student grades and attendance and produces end-of-term student report cards. Designed to work in settings with limited connectivity, the system allows teachers to enter data offline and synchronize it when an internet connection becomes available. Uptake has been rapid: the share of student grades entered into CAMIS increased from 58 percent in 2023-2024 to 91 percent in 2024-2025.

Integrating administrative and learning data has created opportunities for Rwanda to make better use of scarce education resources. At the school and district levels, timely information helps identify students with poor attendance or declining performance who may need additional support to prevent dropout, and schools facing shortages of teachers, classrooms, or other essential resources. At the national level, these data can help the Ministry of Education identify disparities between schools and districts, inform budget allocations, monitor implementation of reforms, and target investments where needs are greatest. The integration of continuous assessment data also creates opportunities to track student learning over time and identify problems before end-of-year examinations.

As one Rwandan government official explained:

"We have the [School Data Management System] where all our schools are on that system. So, we can tell how many kids came to school across the entire country on a daily basis. We can tell how many teachers came to school. We can tell issues like which school is maybe struggling with the school feeding. And so, we are able to do all this tracking using technology."

Recognizing that the value of such systems depends on the quality and use of the information collected, the Ministry of Education partnered with the Mastercard Foundation, ADEA, and Laterite to train more than 8,000 school leaders from approximately 4,970 public, private, and government-aided schools in 2025. The initiative seeks to improve the accuracy of school data and strengthen school leaders' capacity to use information for management and decision-making.

Rwanda's experience illustrates how integrating school administrative data with learning assessments, supported by investment in school leaders' data capabilities, can strengthen the foundations for more responsive and accountable education systems. However, while system uptake has been substantial, evidence demonstrating improvements in resource allocation, student learning, or other education outcomes resulting from the use of these data remains limited.

Source: Cameron et al., *Secondary Education in Rwanda: Country Case Study* (Laterite, 2026).

Data systems should follow learners across public and private schools, general and TVET institutions, and accelerated learning programs and bridge classes (Chapter 7). Another core priority is integrating teacher databases, including information on personnel, licensing, languages, payroll, and deployment. Integrated data can strengthen workforce planning and help governments deploy teachers more effectively.[90]

Learning assessments become more useful for diagnosing learning needs. Ethiopia, Uganda, Tanzania, and Zambia have introduced low-stakes assessments in grades 9 and 10.[91] Tanzania analyzes results to inform feedback to teachers, school leaders, and administrators.[92]

International comparable assessments also offer key benchmarks. In South Africa, Grade 9 Trends in International Mathematics and Science Study results are used to track progress toward national education performance targets.[93] Zambia and Senegal participated in PISA for Development. Senegal's inclusion of out-of-school 14- to 16-year-olds gave a fuller picture of learning among secondary school-age young people.[94] Rwanda participated in PISA for the first time in 2025.

Domestic research institutions are essential to interpreting this evidence in context. Investing in such institutions, universities among them, must be a priority. Universities are also important as centres of local expertise and as the institutions training future education leaders, researchers, and policymakers.

Analysing and using data for decision-making

Producing better data is not enough: governments also need the institutional capacity, relationships, and routines to commission, interpret, and apply evidence as decisions are made. Across Africa, evidence-informed decision-making has increasingly shifted from producing research toward strengthening its use within government, including closer partnerships between researchers and decision-makers and greater investment in officials' capacity to interpret evidence.[95]

Planning processes also need to be responsive enough to incorporate new evidence as policies are implemented. Many African governments undertake sector planning and analysis in three-to-five-year planning cycles, with support from multilateral partners such as the World Bank and the Global Partnership for Education.[96] However, in complex transformation processes, planning, monitoring, and evaluation need to be more continuous, place a greater focus on implementation, and incorporate learning from innovation. Evidence-informed decision-making is strongest when evidence production and use are embedded within government systems rather than treated as distinct activities tied to periodic planning cycles.[97] South Africa has developed evidence maps and embedded evidence-use networks and training within government institutions. The goal is to make learning part of implementation.[98]

Knowledge brokers can play a critical role in mobilizing evidence and helping governments interpret and use the information available to them. At national and regional levels, knowledge brokers can facilitate the translation of research into policy and practice through communities of practice, research networks, and the co-production of evidence.[99] At the continental level, organizations and initiatives such as ADEA, the Africa Centre for School Leadership, and Education Sub-Saharan Africa, with its African Education Research Database, are helping strengthen cross-country learning and make African research more visible and accessible. Their long-term contribution depends on strengthening domestic demand for evidence.

Evidence brokering is most durable when driven by the questions government decision-makers need answered rather than by external research agendas.[100] Government-led evidence labs are one response. Ghana, Rwanda, Tanzania, South Africa, and Côte d'Ivoire are testing different models to identify research priorities and generate evidence that can inform implementation and planning.[101] Ghana's Education Evidence and Data Lab, for example, is embedded in the Ministry of Education and is developing a research agenda, evidence

repository, integrated database, and data use capacity.[102] Such arrangements reflect growing recognition that stronger evidence use depends not only on producing research but also on building the institutional capacity and routines that connect data and evidence to policy decisions.[103]

This report identifies persistent evidence gaps that must be addressed to strengthen system-level planning and policy and to support competency-based curricula, the integration of educational technology, and flexible and vocational pathways. Governments need rigorous implementation research and evaluations. Chapter 8, for example, highlights the need to assess actual classroom use and cost-effectiveness of technologies, including smartboards in Tanzanian classrooms.[104] Building this evidence base will help governments make more informed decisions about which investments to adapt, sustain, and scale.

For flexible and vocational pathways, evidence is needed on programs' short- and long-term education and employment outcomes, as well as on the experiences, needs, and aspirations of out-of-school and unemployed young people.[105] Chapter 3 also found few evaluations of vocational education and skills policies.[106]

Importantly, evidence should capture young people's perspectives directly. Research in Ghana and The Gambia found that policymakers and donors emphasized literacy and qualifications, while young people valued vocational training and apprenticeships, despite not having been consulted about education reforms.[107]

Governments also lack systemic evidence on labour market demand and on the transition outcomes of graduates of general secondary and TVET programs. Studies in Ethiopia and Senegal call for more employer surveys, labour market monitoring, and analysis of skills shortages to inform curriculum design and program planning.[108] Evidence gaps in Ghana include research on the informal sector and employers' perceptions of work-based learning.[109] Without this information, governments are left with little evidence when making decisions on where to allocate scarce resources.

Across country studies, there is a consistent call for implementation research, policy evaluation, and/or graduate tracer studies that focus on learners from different types of secondary schools and programs.[110] This includes research on marginalized learners, such as young people with disabilities, and participants in new skills development or informal apprenticeship programs.[111] Tracking efforts are under way in some countries; Rwanda, for example, has recently developed a system to track all secondary TVET and tertiary graduates.[112] Addressing these evidence gaps will require investment in local universities and other domestic research institutions to undertake intersectional and longitudinal studies of young people's post-secondary trajectories, alongside stronger national data systems to track completion and transition to further education, training, and work.[113]





9.6 Partnerships and coalitions can strengthen system capacity while reinforcing government ownership

Partnerships and coalition building solidify stakeholder engagement. The Mastercard Foundation's 2020 *Secondary Education in Africa* report highlighted the importance of stakeholder engagement; this section examines in greater depth the progress made since then.

Partnerships

Partnerships contribute most to system reform when they reinforce national plans and government ownership. Partnerships aimed at transforming education systems are most effective when governments retain responsibility for equity, regulation, and long-term financing, regardless of whether partners include the private sector, not-for-profit organizations, or international donors.[114] There are many innovative models in the TVET sector, including sector skills bodies and industry advisory bodies.

Partnerships flourish when partners are given functional roles rather than only consultative status. Senegal's SEN/032 program has a clear division of labour among partners: LuxDev provided technical and program financing, the national training fund (3FPT) financed training and institutional investments, the Ministry provided institutional anchoring, and employers helped shape curricula and provide workplace learning opportunities.[115] Program evaluations suggest steady improvements in youth employment outcomes and satisfaction, with 61 percent of graduates employed within 12 months and 63 percent of employed graduates working in a field aligned with their training in 2025.[116]

Employers in Ethiopia contribute to curriculum design, workplace learning, and skills assessment,[117] while industry actors in Ghana support competency-based curricula and assessment.[118] Across training funds, participation is most effective when employers have real authority over priorities, allocations, and training

design, rather than simply having seats on advisory bodies.[119]

Partnership arrangements contribute to education reform in catalytic ways. For example, they provide financing for evidence building and technical support that governments may lack.[120] Government-embedded education evidence labs foster more nationally-led approaches to evidence generation. Their effectiveness depends on government ownership, trusted relationships, clearly defined institutional roles, and the alignment of research with immediate policy and implementation needs.[121] ADEA also plays a partnership role at the continental level through its Inter-Country Quality Nodes on Secondary Education and Technical and Vocational Skills Development.[122]

Donor financing is most useful when it supports design, capacity, evidence, targeted equity measures, and time-bound investments that governments can eventually sustain.[123] Donor support should be aligned with national systems and fiscal realities, with particular attention to the sustainability of recurrent costs and the risk that fragmented projects may widen rather than reduce inequalities.[124]

Communities also contribute as partners in accountability and as advocates. Community actors may include parents and caregivers, community-based and faith-based organizations, traditional and local leaders, businesses, and civil society groups. In Malawi, local labour and resources helped establish Community Day Secondary Schools and leaders continue to mobilize for school development, encourage attendance, and help reduce dropout rates.[125] In Sierra Leone, communities played a historical role in restoring post-conflict participation.[126] Today, Community Teacher Associations and School Safety Committees have formal school-level implementation and accountability roles, including support for safeguarding and the inclusion of vulnerable learners.[127] Partnerships between schools and community actors can connect young people with mentoring, health and social services, practical skills development, and opportunities to engage with their communities. Effective partnerships can help make education more inclusive, relevant, and responsive to local needs, while complementing, not replacing, government responsibility for equitable financing and quality provision.[128]

Partnerships aimed at transforming education systems are most effective when governments retain responsibility for equity, regulation, and long-term financing, regardless of whether partners include the private sector, not-for-profit organizations, or international donors.

Community participation is especially valuable for reaching historically marginalized learners, including girls and young women, refugees and displaced learners, young people with disabilities (Chapter 6), and out-of-school learners more broadly (Chapter 7). Communities variously inform the design of curricula and education services, hold education stakeholders accountable, and mobilize support and financial or material resources. But community capacity to contribute funds varies sharply: reliance on local financing can further exacerbate inequality.[129]

Effective partnerships need transparent governance, defined responsibilities, and explicit safeguards. This is particularly important for integrating secondary education and skills agendas, in part because stakeholders in the skills sector have widely differing understandings of the problems such programs aim to solve and often work from different theories of change.[130] Ensuring the sustainability of such initiatives is also important. The risk that core parts of the education system are funded off-budget and fail after funding is withdrawn has been shown in Sierra Leone, where national inclusion efforts reportedly came under threat when external funds were withdrawn.[131] Integrating

partnership-based initiatives into long-term planning and budgeting, with clear tracking of costs and program participants, can help mitigate the risks associated with cyclical and short-term funding and contribute to longer-term system transformation.[132]

Engagement should be organized across the reform cycle, from diagnosis and design to delivery, involving regular consultation with stakeholders. Table 9.2 below sets out the actors and decisions at each stage.

Community participation is especially valuable for reaching historically marginalized learners, including girls and young women, refugees and displaced learners, young people with disabilities (Chapter 6), and out-of-school learners more broadly (Chapter 7).

Young people's participation is especially important. Recent research highlights a persistent gap between young people being consulted on education policy and having meaningful influence over decisions and implementation.[133] Learners and out-of-school youth can contribute to diagnosing problems, co-designing responses, monitoring implementation, and assessing whether reforms are improving their experiences and opportunities.[134] In the Democratic Republic of the Congo, a student-led accountability initiative trained more than 2,200 secondary learners to monitor education services and engage with public officials.[135] In the absence of administrative data, the participation of young people can help provide insights into lived experiences, barriers, and potential solutions (Chapter 6), but deliberate measures are needed to ensure that girls and young women, youth with disabilities, refugees and displaced young people, rural youth, and those outside formal education are represented.[136]

Coalition Building

Coalitions differ from delivery partnerships. They convene core stakeholders to build a common vision and understanding of secondary education transformation. They can overcome political-economy challenges while drawing on the engagement and expertise essential for successful implementation. These coalitions can be understood as a form of "political settlement" in which political and community support is stabilized around shared norms and interests.[144] For the integration of TVET into secondary education, for example, such a coalition would likely include parents, communities, teacher organizations, private- and public-sector entities, voluntary organizations, and international funders.

Coalitions can be especially effective if they include young people, particularly traditionally marginalized young people such as women, persons with disabilities, refugees and displaced youth, young people in rural communities, and others experiencing systemic barriers. Recent research on strengthening delivery and implementation frequently highlights the limited attention paid to investments in communication and engagement as part of system-strengthening efforts.[145] It also highlights the role these investments can play in fostering political will.[146]

Pan-African coalition building around the transformation of secondary education can also play an important role by reinforcing national political will and fostering cross-national learning. The Africa Foundational Learning Ministerial Coalition, supported by ADEA and Human Capital Africa, has developed peer accountability, benchmarks, and a continental foundational learning scorecard. These efforts are increasingly being institutionalized within the African Union through the Continental Education Strategy for Africa 2026–2035, the Learning Education and Research Network, and a new Continental Foundational Learning Monitoring Framework.[147]

TABLE 9.2

Staged governance can lead to effective stakeholder engagement

Stage	Who should engage	What engagement should accomplish	Illustrative evidence
1. Diagnose the problem	Young people; parents; school leaders; teachers; local government; employers; organizations representing underserved groups	Identify binding barriers, geographic variation, hidden costs, labour market needs, and implementation constraints before a solution is selected.	Senegal country-study fieldwork deliberately included girls, rural young people, young people not in education and training, persons with disabilities, and displaced people; ACET (2026) integrates young people and employer perspectives.[137]
2. Co-design reform	Government; implementers; employers; communities; parents and young people; technical experts and researchers; funders	Agree on objectives, delivery model, roles, cost-sharing, and equity safeguards. Co-design should affect decisions, not merely validate a finished proposal.	Senegal's SEN/032 participatory/demand-driven design and employer co-construction.[138]
3. Agree on governance and accountability	Responsible ministries; local authorities; provider associations; employers; civil society; funders	Specify who decides, who pays, who delivers, who verifies, how grievances are handled, and how conflicts of interest are managed.	3FPT/employer-levy governance; comparative training-fund principles.[139]
4. Implement through distributed capacity	Schools and training institutions; local government; firms; community actors; non-governmental organizations	Match operational responsibility to local capability and provide accompaniment to low-capacity areas rather than imposing uniform implementation requirements.	Ethiopia's General Education Quality Improvement Programme (GEQIP-E) regional capacity constraints;[140] Senegal's SEN/032 decentralized accompaniment recommendations.
5. Monitor and learn jointly	Government data systems; implementing agencies; teachers and learners; employers; independent evaluators	Use shared indicators on access, equity, learning, and transition, and combine administrative data with feedback from program participants and employers; allow adaptation during implementation.	SEN/032 longitudinal monitoring; ACET emphasis on tracer studies and labour market information.[141]
6. Decide on adaptation and scale	Government budget authorities; sector ministries; local authorities; partners financing recurrent costs; representative stakeholder bodies	Assess effectiveness, equity, affordability, and recurrent costs; identify what enters public budgets and which partner roles remain external.	SEN/032 final evaluation and scale challenge;[142] Rwanda dual-training cost-sharing experience.[143]

Source: Mastercard Foundation's elaboration based on the country case studies and background papers prepared for this report. The analytical framework draws particularly on Mastercard Foundation's *Secondary Education in Africa: Preparing Youth for the Future of Work* report (Toronto: Mastercard Foundation, 2020), Chapter 5, especially pp. 189–193, which identifies six factors associated with successful system reform: vision and political will; broad-based buy-in and coalitions for reform; attention to equity gaps; effective partnerships; data-informed decision-making; and clear roles and accountability for outcomes. See also Abdoulaye Diagne, Mashoudou Maman C. S., Soukeyna Diallo, and Mbarou Gassama, *Secondary Education in Senegal: Case Study* (CRES/Mastercard Foundation, 2026), sec. 2.3 and Table 2, which applies these six factors to Senegal's reform experience from 2020–2026.

Coalitions can be especially effective if they include young people, particularly traditionally marginalized young people such as women, persons with disabilities, refugees and displaced youth, young people in rural communities, and others experiencing systemic barriers.

A comparable effort for secondary education could combine ministerial leadership, common implementation tools, an accountability framework, regular peer review, evidence-generation mechanisms, and links to African Union structures.





9.7 Conclusion

Substantial progress has been made in expanding secondary education and introducing ambitious reforms to improve its inclusivity, flexibility, and relevance. The next phase of transformation will depend on the capacity to implement these reforms at scale. There is no single pathway to system transformation. Countries face varying fiscal, demographic, and institutional conditions and will need to sequence reforms accordingly. That said, across these contexts the evidence points to a common set of enabling conditions: institutional and technical capacity to align plans, budgets, and institutions around shared priorities; target resources equitably; support implementation from the national to the school level; and use data and evidence to continuously learn and adapt. Adequate, equitable, and sustainable public financing is essential to transforming secondary education, but resources must be used more strategically. Strong institutions and a capable middle-tier are needed to turn policy ambition into coordinated and sustained implementation. Better data will strengthen education systems, but only if institutions have the capacity and routines to use it. Together, these capacities can help governments move from promising policies and programs toward coherent, adaptive, and sustainable secondary education systems.

However, governments need not act alone. Partnerships can bring additional capacity, expertise, resources, and accountability to education reform while reinforcing government ownership. Employers, communities, young people, researchers, civil society, and development partners can provide financing, specialized expertise, evidence, and implementation support. Meanwhile, broader coalitions can also help maintain progress when leadership changes.

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Conclusion and Recommendations

Secondary education is the platform to work for the majority of Africa's young people. Given low tertiary enrolment rates for most young people, secondary education is their final stage of formal education before entering the world of work. As governments' last opportunity to reach their future workforce at scale, it is a crucial time to help young people develop the knowledge, skills, confidence, agency, and adaptability needed to navigate a rapidly changing world of work, entrepreneurship, and lifelong learning, while becoming active and empowered citizens able to shape the continent's future.



As this report has demonstrated, Africa has an opportunity to capitalize on the unprecedented demographic dividend presented by its young people. By 2035, Africa will be home to the majority of the world's young people.[1] If provided with the opportunity and support to build the human capital and agency needed to contribute to their economies and societies, this generation of young people will drive innovation and prosperity on the continent, shaping the future in unexpected and positive ways.

Realizing the promise of secondary education as a platform for young people's success in work and life will require mobilizing additional resources, data, technology, leadership, and institutional capacity over the coming decade. This effort will be led by governments and shaped through collaboration with young people, teachers and school leaders, communities, employers, civil society, research institutions, development partners, and philanthropic organizations. While governments shape education systems, they can also foster an enabling environment for job creation and entrepreneurship through maintaining stable macroeconomic policies, lowering barriers to business creation and access to capital, and fostering sustainable economic growth.

This report offers the following recommendations to strengthen the collective effort to transform secondary education systems. Many of these recommendations highlight practical reforms needed to deliver on priorities already articulated by African institutions, including the African Union, ADEA, and regional economic communities. They offer shared directions rather than a single blueprint: priorities, sequencing, and approaches will need to be adapted to the diversity of African education systems, institutional capacities, demographic and economic contexts, and young people's needs and aspirations. We must ensure that ambitions translate into real outcomes for all young people. Africa's young people are ready to help shape the continent's future, and they deserve learning systems that are equally ready to invest in their potential.

1 Invest in secondary education systems to meet the pace of demographic growth and reach the young people facing the greatest disadvantage, while ensuring continued investment in foundational learning and primary education.

Despite significant progress in enrolment, secondary education systems in Africa face a "demographic treadmill" whereby only constant expansion can maintain participation rates (Chapter 1). Poverty, rurality, displacement, and disability continue to push learners out of the system, and girls and boys facing intersecting barriers to education are amongst the most excluded. Given the tight fiscal space in which many governments operate, ensuring the effective use of existing resources while generating new financing for secondary education expansion, quality, and equity is of paramount importance. Protecting investments in foundational learning and primary school completion is essential both to prepare young people to succeed at the secondary level and to improve the effectiveness and efficiency of secondary education expansion.

> **"The reason why most of us succeeded is because of free education. Without free education, most of us would not have been able to continue school."**
> — Young man, Sierra Leone

1.1. Direct resources toward learners, schools, and communities facing the greatest barriers through fee-free education, equity-based financing, school meals, and inclusive physical and digital infrastructure.

1.2. Mobilize complementary resources through mechanisms such as debt-for-development agreements that redirect debt repayments to education, public-private partnerships, corporate social responsibility, and unlocking climate finance, while ensuring that these supplement adequate and equitable domestic public financing and align with national education priorities.

2 Accredit, recognize, and scale learning pathways flexible enough to meet young people where they are.

Given the approximately 77 million young people of secondary school age outside formal education, the formal school system cannot be the only route through which young people learn and prepare for work (Chapter 7). Flexible learning pathways respond to the reality that poverty, displacement, caregiving, work, pregnancy, disability, and crisis can interrupt conventional schooling. The evidence shows that flexible education programs and pathways can improve learning and support re-entry, training, entrepreneurship, and work. Yet these pathways are less valuable when learning within them is not formally recognized or when programs remain dependent on short-term, external financing. Accreditation, equivalency, Recognition of Prior Learning, sustainable financing, and integration of flexible pathways into national systems are central to achieving scale and creating credible routes forward for all learners.

> **"We left school, but we did not leave behind our dreams. Give us the skills to build, not just the certificate to chase... let our bursaries, loans, and second chances reach us, fairly and in full. Don't give up on us."**
> — Young woman, Malawi

2.1. Develop and strengthen multiple entry and progression routes through general and technical secondary education, including through National Qualifications Frameworks, equivalency policies, and Recognition of Prior Learning.

2.2. Recognize, finance, and scale flexible learning pathways as core components of national education systems, aligned with national curricula.

2.3. Provide support for learners across flexible pathways for their transitions into work through apprenticeships, work-based experiences, micro-credit, and other support for entrepreneurship.

2.4. Strengthen longitudinal tracking of learners across pathways and into further education, training, and work, so that governments can understand how young people's trajectories unfold and adapt policies accordingly.

3 Design secondary education systems that prepare all young people for work, livelihoods, and life-long learning.

Secondary education must go beyond academic content to prepare young people for the realities of the labour market. Nearly 90 percent of employed young people work in the informal economy and self-employment accounts for an estimated 78 percent of employment in sub-Saharan Africa.[2] At the same time, AI is rapidly transforming the nature of work, with nearly every occupation potentially becoming AI-enabled, creating new jobs and roles while replacing others. In response to these realities, African education systems are increasingly integrating relevant work-related skills and competencies into curricula reform. Yet realizing the promise of competency-based curricula will require implementing complementary reforms in teacher preparation, learning resources, assessment systems, and school infrastructure (Chapter 3). Secondary education must also go beyond skills to prepare young people for the world of work by addressing gaps in career guidance, mentorship, and work-based learning (Chapter 4). These measures are most effective when schools, employers, and government services work together and when young people facing additional barriers receive holistic support.

> **"Sometimes you finish school and don't even know which career your course prepares you for. There's no clear career path because there's no career guidance."**
> — Employed young person, Ghana

3.1. Realize the promise of competency-based curricula by implementing complementary reforms to teacher preparation, learning resources, assessment systems, and school infrastructure.

3.2. Develop policies and curricula to address both the opportunities and risks of AI for education and employment. Deliver digital and AI literacy training for teachers and students to prepare young people to use these skills in the world of work.

3.3. Enable transitions to work for young people by embedding labour market information, career guidance, mentoring, work-based learning, and entrepreneurship training and support within secondary education, including through stronger partnerships with employers.

3.4. Support young people facing the greatest disadvantage by combining transition interventions with holistic supports such as psychosocial services and school meals, while addressing harmful gender and social norms and policies that restrict access to education and work.

4 Strengthen and expand the education workforce, while advancing their ability to support students' learning, well-being, inclusion, and successful transitions.

An estimated 10.7 million additional secondary teachers are needed by 2030 to keep pace with population growth and achieve universal secondary education.[3] Teacher shortages are concentrated in rural, remote, and fragile areas. At the same time, expanding enrolment and implementing more ambitious curricula place greater and more diverse expectations on teachers and school leaders. The evidence points to a dual requirement: countries need more teachers, while teachers require stronger preparation, deployment, professional development, leadership, and well-being support. A growing body of evidence points to the important role that school leaders play in improving teaching, learning, and school environments.[4] A broader professional education workforce that includes counsellors, teaching assistants, inclusion and subject matter specialists, mentors, and well-being professionals can provide expertise and support that no individual teacher can supply alone, while ensuring qualified teachers remain central to instruction (Chapter 5).

> **"Teacher guidance motivates students to like school and not give up."**
> — Male student, Tanzania

4.1. Continue professionalising teaching through stronger professional standards, initial preparation, continuous professional development, clear career pathways, and fair remuneration.

4.2. Expand the number of teachers to address the estimated 10.7 million additional secondary education teachers needed by 2030, while improving recruitment and professional support for educators working in rural, remote, fragile, and underserved areas. Strengthen incentives for these educators, prioritizing the inclusion of underrepresented groups.

4.3. Incorporate mental health and psychosocial support into both pre-service and in-service teacher training as part of a wider system of teacher well-being policies, peer support, mentoring, and referral pathways.

4.4. Strengthen the capacity of school leaders to improve instruction, motivate and develop teachers, use data for continuous improvement, foster inclusive learning environments, and translate national reforms into school-level change.

4.5. Experiment with alternative roles in the education workforce, including teaching assistants, subject specialists, inclusion and well-being professionals, and community mentors to alleviate teacher shortages and create a support system for teachers and learners.

5 Strengthen the effectiveness, efficiency, equity, and implementation capacity of secondary education systems.

Strengthening secondary education is not only a question of adopting better policies. Education systems lose learners and squander resources due to weak foundational learning, repetition, dropout, and institutional transition barriers. At the same time, ambitious reforms frequently outpace the capacity of the institutions expected to implement them. Better data, stronger national and subnational leadership, properly resourced and trained middle-tier officials, and aligned plans and budgets are needed to turn policy commitments into sustained improvements in schools and classrooms (Chapter 9). A shared vision articulated through a normative, African-led framework on the competencies that secondary education should provide would unite actors around the higher goals that education reforms seek to achieve.

> **"We are not asking to be rescued; we are asking to be equipped with business and digital skills, with safe roads to school, with teachers who show up, with a system that connects what we learn to what we can become."**
> — Young man, Malawi

5.1. Invest in foundational and remedial learning, improved teacher capacity, and support for marginalized learners while removing barriers at critical transition points from enrolment in primary through completion of upper secondary education to create efficiencies and achieve better outcomes. Give particular attention to progression from lower to upper secondary education, including reviewing the financial, examination, capacity, and other barriers that prevent learners from continuing.

5.2. Improve the availability and quality of real-time data and AI tools, and strengthen the capacity of system actors to use them to target resources more equitably, track student learning and employment outcomes, and assess progress toward meeting national goals.

5.3. Invest in the capacity, resources, and tools of middle-tier education officials who are closest to schools in order to better implement reforms, assure quality, collect data, and support schools and teachers.

5.4. Develop an African-led framework for secondary education that articulates a shared vision for the knowledge, skills, values, and agency that young people need to learn throughout life, navigate work and livelihoods, participate as active citizens, and shape their communities and societies, while allowing countries to adapt the framework to their own contexts and priorities.

6 Build a coalition to advance secondary education in Africa.

No single actor can provide the financing, expertise, evidence, employer participation, or implementation support required to meet the combined scale of challenges and opportunities documented throughout this report. Spearheaded by governments and guided by continental and national priorities, a coalition for secondary education in Africa would help define, develop, and advance roadmaps for transformation, bringing a broad and inclusive range of partners together to support governments to achieve their vision for secondary education and catalyze systemic change. Such a coalition would help mobilize financing, evidence, technical expertise, and implementation support. It should be guided by government ownership and national priorities, and include clearly defined roles for young people, educators, employers, researchers, civil society, and development partners. Governments and coalition partners could develop and implement roadmaps for change across Africa while sharing expertise and experience. Together, such an effort could draw greater attention and resources to achieving transformation of secondary education in Africa, helping to expand pathways to work, livelihoods, and lifelong learning for all young people.

> **"I think the government and NGOs should take responsibility and give young people a chance to contribute to the development of this country."**
> – Sudanese refugee young woman, Chad

6.1. Bring together a broad range of stakeholders in a government-led Coalition for Secondary Education in Africa to mobilize additional financing, technical expertise, evidence, innovation, and implementation support to effectively deliver on the ambitious agenda for secondary education outlined in this report.

6.2. Ground the vision for this coalition in continental and national priorities, expertise, and long-term system strengthening rather than fragmented or short-term projects. The proposed coalition should build on and complement relevant continental and inter-country initiatives in alignment with the priorities of the African Union and the Association for the Development of Education in Africa (ADEA).





The opportunity is unprecedented. Africa's young people represent one of the greatest assets of the 21st century, but realizing their potential requires secondary education systems equal to the scale of their ambition. A Coalition for Secondary Education in Africa, spearheaded by governments and supported by other actors, can help build systems that are large enough to reach every young person, flexible enough to meet them where they are, practical enough to prepare them for a rapidly changing world, and supported effectively by the partnerships needed to deliver transformation at scale. Central to this report is a vision of young people's agency and ability to shape their communities as active citizens, innovators, and leaders. Young people themselves should be partners in building these systems and achieving the transformative change they seek. Delivering on the promise of secondary education in Africa will not simply prepare young people for the future. It will enable them to shape it.

Endnotes

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Annex: Research Approach and Methodology

An integrated evidence base linking continental trends, thematic research, country experience and youth perspectives

Purpose and continuity with Phase I

This report updates and extends the Mastercard Foundation's 2020 report, *Secondary Education in Africa: Preparing Youth for the Future of Work*. Phase I positioned secondary education as Africa's "next frontier" and highlighted the need to expand equitable access, strengthen relevance and quality, diversify pathways, and prepare young people for work and further learning. Phase II takes stock of progress against the 2020 recommendations, examines how the context and evidence have evolved, and identifies priorities toward 2030. The study combines continental quantitative analysis, qualitative inquiry, post-2020 evidence reviews, thematic research, country studies, stakeholder validation, and direct youth engagement to assess both system-level trends and how reform is experienced and implemented in different contexts.

Quantitative methodology

The landscape quantitative series used complementary sources and methods. Volume 1 combined UNESCO Institute for Statistics (UIS) and World Bank series with verified national and project-held data. To address incomplete enrolment reporting, it used a denominator-first, state-space-inspired imputation stack that modelled country trajectories, drew on related education indicators, applied residual correction where this improved validation, reconciled rates and counts, and assigned reliability classes that determined whether estimates were suitable for headline reporting, sensitivity analysis, or suppression. The model was tested by masking observed values and evaluating performance under different forms of missingness; completion and out-of-school series were excluded from the prediction layer to avoid circularity. Volume 2 triangulated system-level indicators and modelled enrolment estimates with administrative grade-by-grade records, Demographic Health Survey (DHS) and Multiple Indicator Cluster Surveys (MICS), national censuses and household surveys, and geospatial measures of school access. These sources captured different points in the pathway, including entry, current participation, age-grade progression, completion, and out-of-school status, and enabled analysis by gender, household wealth, residence, geography, and, where data permitted, disability. Volume 3 combined long-run UIS and International Labour Organization (ILO) indicators with harmonized labour-force and household-survey microdata. It examined employment status, not in employment, education or training (NEET) rates, job quality, and school-to-work transitions, including differences by age, education, gender, and residence. Across the three volumes, results are primarily descriptive rather than causal; samples vary by indicator and analysis, and survey definitions and country coverage are not fully uniform.

Core Research Inputs

Evidence stream	Scope, methodology and contribution
1 **Landscape quantitative and qualitative study**	Three linked quantitative volumes examined: (i) enrolment, progression, and completion; (ii) inequalities and intersecting disadvantages; and (iii) transitions from education to work. A complementary qualitative study examined changes since 2020, implementation constraints, and priorities toward 2030 through 18 semi-structured key informant interviews.
2 **Eight thematic scoping studies**	Targeted reviews synthesized academic and grey literature published from 2020 onward on (i) teachers and school leadership; (ii) competency-based curricula; (iii) youth agency and participation; (iv) transitions to work; (v) secondary-level TVET; (vi) technology and AI; (vii) flexible education pathways; and (viii) disability inclusion. The reviews prioritized African scholarship and policy evidence and helped identify developments, evidence gaps, and questions for deeper study.
3 **Six thematic background papers**	Mixed-method studies examined (i) education finance; (ii) teachers and school leadership; (iii) refugee and displaced young people; (iv) education technology and AI; (v) skills and the changing nature of work; and (vi) secondary-level TVET. They combined literature and policy analysis with primary research and prioritized perspectives that are frequently under-represented, including those of young women, learners with disabilities, and refugee and displaced youth.
4 **Seven country case studies and six youth reports**	Research in Ethiopia, Ghana, Malawi, Rwanda, Senegal, Sierra Leone, and Tanzania combined contextual updates since 2020 with analysis of three promising secondary-level reforms in each country. Methods included literature review, political economy analysis, secondary quantitative analysis, key informant interviews, focus groups, participatory consultations, and youth listening circles. Primary research prioritized perspectives of young women, learners with disabilities, and refugee and displaced youth. Six countries also produced dedicated youth-perspectives reports; Ethiopia did not.

Advisory, youth engagement, and validation

Strategic Advisory Group. A Strategic Advisory Group (SAG) helped connect the research to African and global policy, practice, and lived experience. Its membership included youth representatives, Ministers and other policymakers, education experts and practitioners, and people with strong networks across African and global education ecosystems. The SAG provided input at key stages, including the selection of country case studies and thematic topics, the interpretation and framing of key messages and recommendations, and engagement and dissemination strategies. Youth representatives and youth-led organizations were positioned not only as research participants or audiences, but as partners in shaping questions, generating insights, and validating findings.

Validation and quality assurance. The research was iterative, with various opportunities for feedback integrated throughout the process. Findings from each country case study were reviewed through validation sessions with the relevant Ministry of Education and other national stakeholders. The thematic background papers were similarly tested with subject-matter experts and practitioners. These sessions were used to check factual accuracy, strengthen contextual interpretation, identify omissions or disagreement, and distinguish promising practice from approaches whose evidence remains limited. Mastercard Foundation country teams also supported stakeholder engagement, government consultation, and quality assurance. The final report was developed in-house by a cross-functional Mastercard Foundation team, which led the intellectual framing, synthesis, interpretation, authorship, and quality assurance across the evidence base.

Synthesis, interpretation, and Limitations

The final report was developed through triangulation across all evidence streams. Continental data established the scale and distribution of change; scoping and background studies interpreted thematic developments and gaps; country studies examined reform implementation and political economy in context; qualitative inquiry brought system-level perspectives; and youth research foregrounded young people's experiences, priorities, and recommendations. Findings were compared across sources, and areas of convergence, divergence, and missing evidence were retained rather than resolved through a single hierarchy of evidence. The approach strengthened breadth and contextual relevance, but it does not eliminate limitations. Data availability and comparability vary across countries and indicators; household and administrative sources may measure different populations; some marginalized groups remain under-recorded in large datasets and qualitative research; and most quantitative relationships cannot establish causality. Claims in the report were therefore calibrated to the strength and coverage of the underlying evidence.

Use of Artificial Intelligence (AI)

Generative AI tools, primarily Microsoft Copilot, were used to support the research and writing process, including identifying relevant supplementary literature, extracting and synthesizing evidence from background research papers, critically reviewing emerging findings and arguments, supporting drafting and editing, and developing and refining visual materials, including infographics. All AI-assisted outputs were critically reviewed by the research and authoring team, with evidence and references subject to verification, including through an independent fact-checking process. The authors and Mastercard Foundation team retained responsibility for the report's key messages, analysis, interpretations, conclusions, recommendations, and final presentation.


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