Educational Challenges for Economic Emergence in Africa.

Abstract

This article examines the conditions under which education can contribute to the economic emergence of African countries. It updates an analysis published in 2019 through a narrative review of human capital research, education policy studies, and recent institutional data. The analysis revisits eight sets of challenges: civic, pedagogical and institutional, legal, demographic, economic, political, security-related, and environmental. Gains in school enrolment in sub-Saharan Africa coexist with persistent educational exclusion and learning difficulties. The economic effects of education depend on the quality and distribution of learning outcomes and on the capacity of economies to put acquired skills to productive use. The discussion proposes prioritising foundational learning, reducing geographic inequalities, and strengthening links among education and training, research, and employment.

Keywords: education, economic emergence, foundational learning, equity, Africa.

Introduction

In the economic emergence strategies of African countries, education is expected to support productivity, innovation, and participation in public life. Tchagnaou et al. (2019) examined this contribution in a chapter identifying eight challenges that education systems needed to address. The World Bank's (2017) assessment of Côte d'Ivoire had already illustrated the importance of skills for economic transformation. This update situates the analysis within Sustainable Development Goal 4 and Agenda 2063, whose educational priorities are set out in the Continental Education Strategy for Africa 2026–2035 (United Nations, 2015; African Union, 2024, 2025).

Enrolment trends in sub-Saharan Africa illustrate the difficulty of extending educational gains to all learners. Since 2000, primary enrolment has more than doubled and secondary enrolment has more than tripled. In 2024, approximately 108 million children and young people in the region remained out of school, out of a global total of 273 million (UNESCO, 2026). Growth in the school-age population and the uneven distribution of educational provision help explain how these trends coexist. Assessing the reach of school expansion

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therefore requires examining who enters school, who remains enrolled, and what students learn.

The challenge extends beyond schooling. Literacy and numeracy facilitate access to further qualifications, while the use of those qualifications depends on opportunities for continuing education, employment prospects, and work organisation. The research problem thus concerns two transitions: from educational access to effective learning and from learning to economic and social uses. Geographic and social inequalities can impede both transitions and limit the reach of national gains.

Under what conditions can expanded access to education support sustainable and inclusive economic transformation in African countries? This article analyses those conditions and identifies corresponding policy options. It first examines how education can foster productivity, innovation, and the exercise of rights. It then reinterprets the eight challenges identified in 2019 in light of more recent scholarship and institutional data. Finally, it proposes implementation priorities and monitoring indicators. The analysis proceeds from the proposition that education's contribution depends jointly on equity in educational pathways, demonstrable mastery of knowledge and skills, and opportunities to use them in work and public life.

The study draws on a narrative review of scholarly publications, education policy studies, and institutional reports with differing geographic coverage and observation periods. After defining the concepts and presenting the analytical framework and review approach, the article examines the eight challenges. The discussion brings together policies that could address them before considering implementation priorities, monitoring indicators, and future research.

1. Education, Growth, and Economic Emergence

Durkheim (1922) defines education as a process of socialisation through which a society transmits knowledge, dispositions, and ways of acting. This perspective clarifies the role of schooling in learning shared rules and gaining exposure to different social settings. Here, education also encompasses early childhood education, vocational training, higher education, and adult learning. This definition makes it possible to examine continuity across pathways. Literacy and numeracy, for example, are prerequisites for some later qualifications and facilitate a return to study.

Economic growth refers to an increase in real output. Changes in output per capita indicate how average production relative to population varies. For Perroux (1961), development involves structural and social transformations that accompany and can sustain rising output.

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Sen's (1999) approach directs attention to the substantive freedoms these transformations create. Living standards, education, and health thus complement the information supplied by gross domestic product. The distribution of opportunities across the population also matters.

Economic emergence is used here to analyse national trajectories. It refers to a transformation combining productive diversification, productivity growth, innovation capacity, and a broad distribution of gains. Growth concentrated in an extractive activity can raise public revenue and finance infrastructure. The extent to which it diversifies the economy also depends on the jobs it creates, its links with domestic firms, and the skills it helps develop. The same reasoning applies to services-led growth, where job quality and stability can vary considerably.

Education's contribution can be examined at several levels. For individuals, learning expands access to information, occupations, and public participation. Within organisations, it facilitates work coordination, the adoption of new processes, and problem solving. At the local level, the use of skills depends on infrastructure, employment prospects, and institutional resources. Studying economic emergence therefore requires assessing the tasks workers actually perform, job quality, and the geographic distribution of opportunities alongside qualification rates.

2. Theoretical Framework and Mechanisms

In Lucas's (1988) model, human capital accumulation increases productivity and may generate benefits beyond the individual receiving education or training. Mankiw et al. (1992) incorporate human capital into a growth model in which it helps explain income differences across economies alongside physical capital. These frameworks shed light on the rationale for education spending, although their empirical application is sensitive to how human capital is measured. Equal years of schooling or equivalent credentials can correspond to different levels of proficiency. Hanushek and Woessmann (2008) highlight the importance of cognitive skills when examining growth differences across countries.

A second mechanism concerns technology adoption. Nelson and Phelps (1966) argue that education can accelerate the adoption of available technologies. Benhabib and Spiegel (1994) examined this relationship using aggregate data. On a farm, in a cooperative, or in a maintenance workshop, this capacity is evident in interpreting instructions, adjusting procedures, and sharing know-how. Access to equipment, finance, and support services partly determines whether these gains can be realised. Adaptation also requires an understanding of local practices and production conditions.

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A third mechanism operates through innovation. Romer (1990) assigns a central role to idea production in technological change. Toivanen and Väänänen (2016) used an expansion of educational provision in Finland to examine the relationship between engineering education and inventive activity. This case illuminates a mechanism in a specific institutional context. Examining comparable mechanisms in African countries requires attention to universities' research capacity, their relationships with producers, patterns of funding, and forms of innovation that patent statistics capture poorly.

Finally, the capability approach (Sen, 1999) helps assess how education affects people's ability to understand their rights, participate in decisions, and make career choices. These dimensions matter for assessing the quality of development. Combining the approaches distinguishes what learners acquire, the conditions that allow them to use it, and the expected economic or social outcomes. Each stage requires specific observations and offers a point of intervention for public policy.

3. Review Approach and Scope

The article combines a narrative review with thematic analysis. The 2019 chapter provides the initial analytical framework. Theoretical publications were selected for the mechanisms they explain. Institutional reports, mostly published between 2020 and 2026, were included where they document access, learning, teachers, financing, transitions into employment, or educational continuity. The 2017 publication on Côte d'Ivoire provides a historical benchmark, while the 2020 PASEC2019 publication illustrates how learning outcomes can be compared.

Geographic coverage varies by source. African Union policy frameworks cover the continent. The Global Education Monitoring Report and the global report on teachers provide data for sub-Saharan Africa, as does the International Labour Organization (ILO) brief on youth. The International Telecommunication Union (ITU) uses its own statistical region for Africa. Findings from one country or a group of countries participating in an assessment are used to address specific questions and interpreted at the corresponding scale.

Table 1 : Indicators and Scope of Interpretation

Indicator and geographic coverage	Value and period	Source and interpretation
Out-of-school children and youth, sub-Saharan Africa	Approximately 108 million in 2024	UNESCO (2026). Estimate of educational exclusion to be examined by level and area.

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Indicator and geographic coverage	Value and period	Source and interpretation
Additional primary and secondary teachers needed, sub-Saharan Africa	15 million by 2030	UNESCO and International Task Force on Teachers for Education 2030 (2024). Projected need.
Young people aged 15–24 not in employment, education, or training, sub-Saharan Africa	21.9% in 2023	ILO (2024). Includes young people outside the labour force.
Individuals using the Internet, ITU Africa region	36% in 2025	ITU (2025). Measures usage in the population. School connectivity requires a separate measure.

Source: Compiled by the authors.

The thematic selection brings together complementary sources. It supports diagnosis and the assessment of priorities at the scale for which the figures were produced. The review design does not estimate joint trends in the four indicators or identify continent-wide causal effects.

4. Civic and Ethical Challenges

The original article linked moral education to respect for others, concern for the common good, and community participation. This orientation can be expressed as observable learning objectives. Students practise citizenship when they learn to listen to an argument, identify reasons for disagreement, take part in a decision, and explain its consequences for others. UNESCO's (2023) recommendation on education for peace, human rights, and sustainable development places this learning within a framework that connects knowledge, attitudes, and participation.

Classroom activities give these principles practical meaning. A class might evaluate alternatives for developing a water point using data on distance, cost, and frequency of use. The exercise draws on mathematics and oral communication and brings competing interests into view. Students can justify choices using shared criteria, ask what information is missing, and revise a proposal. The educational value lies in the reasoning, the quality of the evidence, and the opportunity for every student to participate.

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Schools themselves are settings for civic learning. Clear rules, predictable enforcement, and access to an appeals process influence students' trust in the institution. Addressing bullying and discrimination requires clearly defined responsibilities for adults and reporting channels that protect students. Student councils and bodies involving families can report which issues they addressed and how decisions were followed up while protecting the confidentiality of individual cases.

Digital environments create a further need to verify information. Students can practise comparing sources, identifying data presented out of context, and checking automated outputs in several subjects. Assessment instructions should specify what counts as independent work, how to disclose assistance, and which criteria to use when verifying claims (Miao & Holmes, 2023). These practices have indirect economic implications. Workers who can document decisions and discuss procedures bring skills that help organisations coordinate work. Students develop these dispositions through everyday school practices as well as through the formal civics curriculum.

5. Pedagogical and Institutional Challenges

The capacity to benefit from scientific, vocational, or university education develops from the earliest years. Foundational learning includes oral fluency, reading comprehension, writing, and mathematical reasoning. PASEC2019, conducted in 14 countries, documents disparities in proficiency across participating systems and provides information on learning contexts (Conference of Ministers of Education of States and Governments of the Francophonie [CONFEMEN], 2020). Its value for policy lies in identifying specific competencies to develop and groups requiring support. Interpretation should account for languages, curricula, the populations enrolled in school, and the assessment framework.

The global report on teachers estimates that sub-Saharan Africa will need 15 million additional primary and secondary teachers by 2030 (UNESCO & International Task Force on Teachers for Education 2030, 2024). Meeting this need requires coordinated planning for recruitment, qualifications, deployment, and retention. National totals can conceal substantial differences across schools, delays in reporting vacancies, and shortages in particular subjects. Recruitment data should be compared with enrolment by area, and teachers' access to materials and support should be assessed.

Kenya's Tusome programme illustrates how instructional materials, teacher support, and monitoring tools can be combined to scale up a reading policy (Piper et al., 2018). The Global Education Evidence Advisory Panel (2023) also identifies structured pedagogy and teaching at students' actual learning levels as interventions supported by available

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evaluations. Transferring these approaches requires examining curricula, working conditions, and the capacity to support local teams. The effects of changing textbooks vary with how well texts match students' proficiency and whether teachers receive feedback on classroom use.

The language of instruction shapes the relationship among materials, teaching practices, and learning outcomes. Multilingual education requires phased decisions about the languages used for initial literacy and transitions to other languages. Written resources, teachers' language and pedagogical training, and assessments of comprehension need to be planned together (UNESCO, 2025). Local planning can start with the languages students actually use, which vary across areas and within classrooms.

6. Legal Challenges and Realising the Right to Education

The Continental Education Strategy for Africa 2026–2035 ties government action to realising the right to education (African Union, 2025). This right becomes effective when children can reach a school, be admitted, learn safely, and continue their education under conditions suited to their circumstances. Access to administrative documents, re-enrolment procedures, and the ability to appeal exclusion decisions therefore warrant attention in education research. National legislation records a formal commitment, while school records show the practices that determine its reach.

Financial barriers illustrate this gap. Even where enrolment is free, transport, supplies, and accommodation costs can lead to absenteeism. Establishing a lower secondary school, subsidising transport for eligible families, and providing supervised boarding address different barriers. The first reduces travel distance, the second lowers costs for families, and the third allows students to live near the school in safe conditions. The choice depends on a local assessment of reasons for absenteeism and the total cost of each option.

Inclusion of learners with disabilities requires examining whether they can participate in regular learning activities. Physical accessibility, communication materials, staff training, and assessment accommodations serve distinct purposes. A student may be able to enter a building and still face substantial barriers to accessing texts, following instructions, or taking part in discussions. Adapted materials are also insufficient when transport or sanitation facilities make classroom attendance difficult. UNESCO (2026) emphasises policies that combine measures within education with coordination across social services.

This analysis of the legal challenge also applies to vocational and higher education. Recognition of qualifications, pathways between programmes, and clear work placement rules affect students' ability to continue. To assess how well these arrangements work,

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authorities can track re-enrolment requests, appeals, the proportion of accommodations implemented, and response times. The quality of these data depends on straightforward procedures, trained staff, and appropriate handling of personal information.

7. Demographic, Geographic, and Gender Challenges

A young population increases demand for education and can expand the labour force. The demographic dividend is a potential benefit arising from changes in the age structure. Realising it depends on access to healthcare, the quality of education and training, and the ability to create productive opportunities. School planning should therefore link enrolment projections to geographically mapped needs. An area receiving displaced families and a rapidly growing urban neighbourhood may experience similarly sharp increases in demand while requiring different responses.

Barriers vary by stage. Difficulties entering pre-primary and primary education direct attention to the location of services, entry costs, and the language of instruction. At the transition from primary to lower secondary school, available places, distance, and safe travel become especially important. At entry to upper secondary school or vocational training, costs, guidance, programme specialisation, and employment prospects carry more weight in decisions. Where reliable data permit, completion rates should be examined by age, sex, and locality.

Girls' schooling can contribute to their economic autonomy and access to health information. This requires safe learning environments, adequate sanitation, re-entry arrangements, and guidance on education and career choices. Disaggregated data can also reveal settings where boys leave school early to undertake paid work or work for their families. National averages for gender gaps may conceal difficulties concentrated in particular programmes or household groups.

Young people who have already left school also need opportunities to return to education and obtain qualifications. A bridging programme can combine literacy and numeracy support, recognition of prior learning, and guidance towards a diploma or other qualification. Evaluation can track attendance and what participants go on to do. Cost, transport availability, and scheduling around participants' commitments affect whether the programme reaches its intended population. Attention to these material conditions is consistent with the equity priority in the African Union's (2025) strategy.

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8. Economic Challenges, Employment Transitions, and Research

In 2023, 21.9% of 15- to 24-year-olds in sub-Saharan Africa were not in employment, education, or training (ILO, 2024). This indicator captures circumstances that the unemployment rate only partly reflects, including young people who are not actively seeking work because of family responsibilities or discouragement. It calls for separate examination of barriers to training, job availability, and transition difficulties. Job stability, earnings, and opportunities for advancement are also relevant to assessing labour market integration.

Technical and vocational education and training can connect classroom knowledge with workplace practice. Agriculture, food processing, maintenance, construction, and services present opportunities that should be assessed locally. Effective work-based learning programmes sequence tasks, specify the skills to be acquired, and provide supervision by both the training institution and the host organisation. Workshop training and apprenticeships with artisans can be strengthened through shared competency standards, supplementary literacy and numeracy classes, and accessible certification.

University policy geared towards economic emergence can support research on problems arising from community and industry needs. Partnerships with associations, local authorities, and firms provide settings for investigation and experimentation. Research on preserving agricultural products, for example, can yield new processes and training and affect post-harvest losses. Monitoring should consider knowledge production, the use of findings, and partners' capacity to sustain the work. Training in research methods and recurrent funding for research teams help ensure continuity.

Côte d'Ivoire provides a documented precedent. The World Bank (2017) linked education reform to the Ivorian economy's capacity to diversify production and develop skills. The report's figures provide a historical benchmark for the country's policies. A current assessment should compare them with recent, comparable national data series. Tracer surveys conducted six or twelve months after training, combined with information on available jobs, provide more directly actionable evidence for adjusting programmes and developing pathways between them.

9. Political Challenges, Governance, and Financing

Education governance involves several levels of responsibility. Central authorities set policy, allocate major funding envelopes, and oversee data collection. Subnational offices identify needs, monitor staff deployment, and support school teams. Schools implement policy day to day. Clearly defined responsibilities help resolve gaps between plans and

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actual conditions. A school can, for example, report a vacancy while the competent office has the discretion to arrange a replacement.

An analysis of financing should consider the share of expenditure devoted to education, spending per student, and the distribution of resources across areas and levels. Education Finance Watch notes that rising total expenditure can coexist with stagnant or declining resources per child (World Bank & UNESCO, 2024). This is especially important when enrolment grows rapidly. Budget execution data show whether announced allocations translate into resources when schools need them. Timetables for funding posts, disbursing operating grants, and maintaining equipment should be coordinated.

Equity can be built into allocation formulas. A per-student grant provides a baseline that can be adjusted for remoteness, poverty, accessibility needs, or pressure from mid-year enrolment. Small rural schools face fixed costs that can make a strictly enrolment-based rule inadequate. A clear formula and a publicly available disbursement schedule help schools plan spending and communities understand differences in funding.

Accountability should also take working conditions into account. Examination results can inform management when interpreted alongside exclusion, learning delays, and inequalities in student intake. A review involving inspectorates, school leaders, and teaching staff can draw these data together and inform a support plan. The commitments set out in the Continental Education Strategy and the ten-year implementation plan for Agenda 2063 provide a shared framework for tracking progress. Operational objectives, budgets, and responsibilities must be defined at national and subnational levels (African Union, 2024, 2025).

10. Security Challenges and Educational Continuity

In the 2019 version, the seventh challenge concerned civil–military relations and education in republican values. This update focuses on the protection of students and staff, the right to education in emergencies, and continuity of learning. In September 2026, the African Union Commission launched the Education in Emergencies and Resilience cluster under the Continental Education Strategy (African Union Commission, 2026). This initiative recognises the need to coordinate responses to forced displacement, conflict, and other causes of disruption.

Preparedness starts with flexible enrolment procedures for displaced children and identification of schools able to receive them. Receiving schools may also need materials, teachers, language mediation, and the capacity to assess prior learning. Where psychosocial support is provided, it should be coordinated with the relevant services and local resources.

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Families need information about available school places and enrolment procedures, including when they move during the school year.

Depending on local conditions, continuity measures can combine printed materials, radio, offline resources, and group learning sessions. The ITU (2025) estimates that 36% of the population in its Africa region uses the Internet. This population-level indicator does not measure school infrastructure. It points to the need to check electricity, device availability, and connectivity before choosing a distance-learning channel. Materials may be distributed in print in one locality and delivered in audio form in another, with shared learning objectives and suitable channels for feedback.

Reopening schools requires identifying the skills students need to consolidate. The number of reopened schools and recovered teaching days indicate the restoration of schooling. Students' return, retention in the months that follow, and progress provide evidence of learning continuity. Monitoring should track educational pathways while protecting information that could put individuals at risk. Incorporating preparedness and recovery into regular budgets helps teams plan beyond the immediate emergency.

11. Environmental Challenges and Adaptation

Climate shocks reduce teaching time and can jeopardise access to school. UNICEF (2025) estimates that extreme climate events disrupted schooling for at least 242 million students across 85 countries in 2024. This is a global total. The nature, duration, and consequences of disruptions vary by context. In extreme heat, schedules, ventilation, and access to water shape teaching conditions. During floods, road access and building conditions can determine how long schooling is suspended.

Risk management can begin with each school and its catchment area. An assessment can examine building exposure, the condition of water points, students' travel routes, and alternative premises. Works should be incorporated into maintenance schedules. Their effects can be assessed by tracking teaching days lost, time to restore operations, and differences across exposed schools. Estimating costs helps decision-makers weigh immediate repairs against longer-term investments that reduce recurrent damage.

Education for sustainable development also creates opportunities for interdisciplinary learning. When studying erosion on a plot of land, students can compare measurements, interpret observations, and discuss the effects of different practices. Analysing water use at school draws on numeracy, the interpretation of readings, and discussion of competing uses. Producing verifiable results gives schoolwork scientific and civic value. Local enquiry can

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draw on the knowledge of farmers and artisans while subjecting hypotheses to observation and discussion.

Technical and higher education can support adaptation through training in solar system maintenance, more efficient water management, waste treatment, and improvements to buildings. Programmes benefit from collaboration with local authorities and employers able to use these skills. Equipment availability, maintenance, and local employment prospects influence the expected effects. The African Union's (2025) strategy and UNESCO's (2023) recommendation call for linking learning, institutional management, and participation in responses to environmental challenges.

12. Discussion

Different forms of evidence bear on the three conditions set out in the research problem. Research on cognitive skills highlights the value of measuring what students learn (Hanushek & Woessmann, 2008). Global Education Monitoring Report data show that enrolment expansion coexists with persistent exclusion (UNESCO, 2026). ILO (2024) data and research on technology diffusion clarify the conditions under which acquired skills can be put to economic use. Together, these findings help explain why longer participation in education can coexist with inequalities in learning and difficult transitions into employment, even when it meets strong social demand.

Foundational learning is a priority across policy areas because mastery of basic skills facilitates subsequent learning. Students entering lower secondary school with weak reading comprehension may encounter difficulty in several subjects that use written texts for instruction or assessment. The response combines early intervention, remedial activities, and teacher support. The Global Education Evidence Advisory Panel (2023) report and the Tusome study (Piper et al., 2018) illustrate possible approaches. Their effects depend on consistent support, appropriate materials, and school operations.

Equity also shapes systems' ability to translate improvements in average outcomes into lasting gains. Concentrating qualified staff in better-resourced schools may improve their outcomes while allowing difficulties to accumulate elsewhere. Budgets, staff assignments, and instructional support therefore need to be examined together. In crisis-affected areas, attendance and re-enrolment data complement learning assessments by showing whether students can access the intervention.

Education and employment influence each other. Greater availability of skills can encourage investment and technology adoption. Employers, professional organisations, and available jobs in turn generate demand that shapes education and training choices. Higher

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education institutions can strengthen this relationship by working with local authorities and industry on documented problems. Effects should be assessed over periods that reflect programme duration and employment conditions while accounting for infrastructure, financing, and economic cycles.

13. Implementation Priorities and Monitoring

Implementation can begin with a needs assessment for each area, establishing a baseline and defining the populations concerned. Responsible authorities can then select feasible interventions and set an appropriate time for measurement. Table 2 proposes actions and monitoring measures that can be adapted to available information systems.

Table 2 : Priorities, Responsibilities, and Monitoring Indicators

Priority	Actions and responsible actors	Proposed indicators
Foundational learning	Provide regular instructional support. School leaders, inspectorates, and teaching teams.	Share of students reaching reading or numeracy benchmarks. Gaps between areas.
Access and retention	Identify interruptions and fund responses. Schools, local authorities, and social services.	Completion by level. Re-enrolment and retention after one term.
Teaching workforce	Fill vacancies and provide staff support. Ministry and subnational offices.	Vacancies by area. Share of qualified teachers by level.
Employment transitions and research	Involve employers and practitioners in training and applied research. Training centres, universities, local authorities, and employers.	Graduate status at six and twelve months. Documented use of research findings.
Financing and continuity	Monitor disbursements and prepare for disruptions. Education and finance authorities and local governments.	Budget execution. School days lost and time to resume instruction.

Source: Compiled by the authors.

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Interventions should be sequenced according to their prerequisites. Improving reading in an understaffed area requires teachers to be assigned and materials delivered at the outset. Classroom observation can then document how materials are used. Measuring progress at a fixed point allows support to be adjusted. In technical training, the same reasoning links programme launch, access to equipment, practical training, and graduate tracking.

Indicator selection should account for what the data allow users to compare. Proficiency thresholds vary by assessment and test language. In graduate tracer surveys, response rates and respondent profiles affect estimates. Monitoring should therefore document denominators, sources, missing data, and changes in definitions. This transparency helps teams distinguish observed variation from changes attributable to measurement.

14. Limitations and Future Research

The reports differ in geographic coverage and time frames. Access data depend on the availability of censuses, surveys, and administrative statistics. Learning assessments primarily cover students enrolled in formal education. Employment surveys capture informal work and transitions differently depending on their instruments and reference periods. This narrative review brings findings together and identifies plausible mechanisms. Estimating the effect attributable to a specific reform would require longitudinal data and appropriate identification methods.

Further research could track cohorts at points where interruptions are concentrated, especially entry into lower secondary school and exit from vocational training. Studies combining school data and interviews could shed light on why learners leave school, return to training, or enter employment. Analysing costs and implementation conditions would help determine which interventions can be replicated at another scale. Comparisons across institutions should consider students' circumstances, available resources, and the curricula in use.

Conclusion

The analysis shows that expanding access to education can support sustainable and inclusive economic emergence when students acquire strong skills, opportunities to continue and complete education are distributed more equitably, and learning can be applied at work and in public life. Enrolment growth in sub-Saharan Africa, alongside persistent educational exclusion and difficult transitions into employment, underscores the importance of monitoring the full pathway. The eight challenges examined illuminate complementary conditions. Realising the right to education and ensuring educational continuity protect students' pathways. Teacher education and instructional quality support learning.

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Vocational training, higher education, and research can help put learning to use in the economy, while civic education prepares learners to exercise their rights and participate in public life.

For education authorities, the priority is to strengthen foundational learning by directing teacher deployment, instructional support, and funding towards areas where interruptions and learning difficulties are concentrated. In areas exposed to insecurity or climate hazards, this includes maintaining instruction and supporting learning recovery. Beyond school, links between training institutions, universities, and employers can ease the transition into employment and help align qualifications with local needs. Monitoring should combine data on attendance, completion, proficiency, and post-training outcomes.

The sources synthesised in this narrative review illuminate these mechanisms at different scales. Tracking their effects would require longitudinal data linking schooling conditions, learning outcomes, and labour market integration. Following cohorts at entry into lower secondary school and on completion of vocational training could help identify interruptions and establish which interventions lead to lasting improvements in educational pathways.

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