

African Multidisciplinary Journal of Development (AMJD)

Page: 418 – 432

<https://amjd.kiu.ac.ug>

ADULT EDUCATION AS A PATHWAY FOR POVERTY REDUCTION: A SYSTEMATIC REVIEW OF EVIDENCE FROM SUB-SAHARAN AFRICA (2010-2024)

¹ Peter Betiang A, ² Erim Costly M, ³ Andong Helen A, ⁴ Lutaaya Bernadette & ⁵ Ashibi Jacob

ORCID: ¹ <https://orcid.org/0000-0001-9873-3533>, ² <https://orcid.org/0000-0002-3035-303X>
College of Education, Open and Distance learning, Kampala International University, Uganda

Abstract

Background: Poverty endures in Sub-Saharan Africa (SSA), despite decades of development interventions, with over 490 million, still living in extreme basic needs deprivation. Adult education broadly interpreted as functional adult literacy programmes, vocational education and training, community-based education, and non-formal non-vocational learning has been theorised as a direct, low-technological solution, that can facilitate the creation of sustainable livelihoods in SSA, thus breaking the cycle of inter-generational poverty. No systematic review has yet synthesised the totality of the regional evidence on poverty reduction across all three dimensions of outcome- social, economic, and capability empowerment. Objective: The main objective of this review is to systematically synthesise the evidence based on the nature, strength, and causal pathways of adult education intervention towards poverty reduction in SSA from 2010–2024, while identifying contextual programme design features, barriers, and policy processes involved. Methods: PRISMA 2020 guided this systematic review. A search in six electronic databases (academic and grey literature repositories) yielded 1,917 total records, from which 64 studies satisfied the inclusion criteria through robust screening and quality appraisal. Data extraction employed a priori data framework. Synthesis used thematic analysis (Thomas & Harden, 2008). Appraisal of study quality used the Mixed Methods Appraisal Tool (MMAT). Results: 64 diverse, rigorous studies across 18 SSA countries indicate adult education intervention results in positive income and social as well as empowerment outcomes for multiple stakeholders, which follow from seven mechanisms: human capital enhancement, capability increase, diversification of livelihoods, gender equity and empowerment, breaking the cycle of inter-generational poverty, strengthening community resilience, and adapting to a changing environment. Non-formal adult education benefits each additional year of education by 10.6%, similar to returns found in high-income economies. Multi-skill programmes that combine literacy, life skills, and income generation interventions have the largest average effects. Barriers that impede effects include opportunity cost, structural exclusion from the labour market, institutional short-term goals, and political interference. Conclusions: Adult education is a potent, prevailing, and research-supported approach for sustainable poverty alleviation in SSA, when delivered through multi-skill, community owned, women-centered, longer term, and institutionally-enabling paradigms.

Keywords: Adult education, Non-formal education, Poverty reduction, Sustainable livelihoods, Sub-Saharan Africa, Systematic review, community education, Gender empowerment, Human capital

Introduction

Sub-Saharan Africa remains disproportionately burdened with the world's poverty. Despite decades of economic growth, development aid and multiple international strategies (e.g., Millennium Development Goals), 490 million people in the region are estimated to live in extreme poverty (below \$2.15/day). Furthermore, progress in reducing the prevalence of poverty has nearly halved

since 2015, and this momentum has been severely curtailed by the COVID-19 pandemic, climate-related shocks, and persisting governance deficiencies (World Bank, 2022; UNDP, 2022). These accumulating pressures have intensified the call for interventions that facilitate sustainable rather than transient poverty alleviation.

Adult education (adult literacy programmes, non-formal education, vocational and skills training, community-based learning, extension education, continuing education outside the formal school system) stands as an unmistakable exception to this search. Investment in adult education, unlike investment in primary or secondary education, has a short, generational time horizon working through the existing labour force, the smallholder system that sustains the vast majority of the SSA rural poor, women who are structurally precluded from formal labour markets, and the communities enmeshed in poverty traps. It is, in principle, an intervention that can produce poverty-reduction effects in the working lives of its beneficiaries.

Several theoretical frameworks exist to explain poverty; human capital theory (Becker, 1964; Psacharopoulos & Patrinos, 2018) argues that education leads to greater productive capacity and higher wages. In his capability approach (Sen, 1999), asserts that education is itself a direct expansion of the various set of real opportunities people have to lead their lives they have reason to value, well beyond income alone to health, participation in civic life, and agency. As an asset, human capital (Chambers & Conway, 1992; DFID, 1999) is one of five mutually-dependent assets whose development in an individual's livelihood enables diversification, resilience, and access to the other four. Furthermore, adult education itself can be a vehicle of change, in producing not simply knowledge but the critical consciousness and agency that separates the seemingly mundane act of surviving in poverty from simply surpassing an initial income level.

The evidence base to support the above assertion is broad but dispersed, with individual country studies on the income impacts of adult literacy in Kenya, the impacts of extension education on agricultural productivity in Ethiopia, the impacts of community education on gender empowerment in Nigeria, and intergenerational impacts of poverty disruption in surveys across Uganda; meta-analyses aggregating returns to schooling globally (Psacharopoulos & Patrinos, 2018) and on the poverty impacts of education in specific regional contexts (Hofmarcher, 2021; Panduwinata et al., 2024). The true gap in current knowledge has been a synthesis of regionally-specific adult education evidence, combining the economic, social, gender, and environmental impacts, unpacking the mechanisms of impact, and deriving concrete programme design principles.

This is where this systematic review comes in. Using 64 empirical publications (2010–2024), it answers four review questions: (RQ1) What is the nature and strength of evidence that links adult education in SSA to poverty reduction? (RQ2) How does adult education impact on poverty outcomes? (RQ3) What design features of adult education programmes are associated with stronger effects? (RQ4) What structures and contexts hamper adult education's poverty-reduction potential, and what conditions enable it?

Theoretical framework

This review applies the integrated multi-framework approach based on four traditions. Human capital theory is based on investment in education return as higher income and labour market engagement. Given that the returns to education in SSA is one of the highest (Psacharopoulos & Patrinos, 2018), this economic basis for investment in adult education in SSA is a vital starting point within this framework. Its weakness which lies in its silence over non-cash poverty and the environment for human capital to lead to returns is remedied within the following frameworks.

Sen's capability approach (1999) conceptualizes poverty as the deprivation of the basic capability to be and do, in terms of the capabilities to be healthy and to be educated, rather than solely in terms of income alone. Education is a direct capability expansion, enabling freedom to read and write,

make effective decisions about health, participate meaningfully in civic life, and choose effectively between economic alternatives. In this context, the capabilities framework underpins a multidimensional index of poverty (subsequently used in this review) that assesses the impact of adult education investments across explanatory dimensions like health, civic involvement, gender empowerment, and solidarity agency. Alkire and Foster's (2011) Multidimensional Poverty Index extends this insight into an operational measure of multidimensional poverty where education deprivation is viewed as a leading indicator.

The Sustainable Livelihoods Framework (Chambers & Conway, 1992; DFID, 1999) defines livelihood as the utilization of five types of interconnected capital assets: human (skills, knowledge, health status), social (networks, groups and relationships, co-operation, trust), natural (land, water, ecosystems), physical (facilities, infrastructure, equipment and means of transportation), and financial (cash, savings, credit, income). Adult education can contribute directly to the construction of human capital while supporting the other four categories simultaneously human capital education enhances civic (social) capital; environmental (natural) capital; technical (physical) capital; and financial (financial) capital.

But here finally is where the SLF actually makes a difference in explaining that human capital investments contribute to the goal of human welfare through multi-directional and mutually reinforcing effects: it helps (1) to understand why the effects of adult education on poverty reduction are multi-directional and not restricted to one specific output channel, as well as (2) that enabling conditions - the institutional quality, access to the labour market, gender norms, and physical infrastructure are preconditions for human capital to translate into livelihood outcomes.

Another dimension is added by Mezirow (1991) who proposed the theory of transformative learning. It addresses the self-held assumptions about weak ability embedded in the conditions and the lack of language with which to contest the conditions that could be altered. Transformative education through critical reflection, dialogue and experience stimulates the agency and confidence in saving people from poverty and not in alleviating it. This dimension is demonstrated in empowerment and agency-related outcomes in the works of Erim et al. (2025) in women's organizations of Nigeria and Betiang et al. (2023) in community education.

The integrated framework identifies adult learning as the means by which change is achieved across three domains, which are integrated but distinct: (1) developing individual capacities; (2) improving livelihood activities in the household and community; and (3) alleviating structural poverty. The enabling environment institutional quality, access to the labour market, governance, gender relations, and physical infrastructure moderate the influence of investment in domain (i) on outcomes (ii) and (iii).

Methods

Review Design and Search Strategy

This review protocol adhered to PRISMA 2020 standards (Page et al., 2021), and meta-analytically synthesizes included literature through systematic thematic synthesis (Thomas & Harden, 2008). Formal Meta-analytical pooling across studies was not viable given the range of outcome measures (poverty, livelihoods, food security, empowerment, nutrition, agricultural productivity, etc.), intervention types, and study designs as these are a feature of macro-level systematic reviews of adult education (Panduwinata et al., 2024). Six database searches were completed: Scopus, the Web of Science, ERIC (ProQuest), Google Scholar, the 3iE development evidence portal, and the J-PAL evaluation database. Search terms used three groups of keywords: (1) intervention related (adult education, non-formal education, adult literacy, community education, vocational training, agricultural extension education), (2) outcome related (poverty, livelihoods, poverty alleviation, empowerment, income), and (3) geography related (Sub-Saharan Africa, individual country names

in appendix). Searches covered the period January 2010–December 2024. Further hand searches of the reference lists of every full-text article were also carried out.

Eligibility Criteria and Screening

Inclusion criteria included : (a) published peer-reviewed journals, systematic reviews, meta-analyses, book chapters in an academic volume, published in the grey literature (e.g., World Bank, UNESCO, ILO, FAO); (b) published in 2010–2024 (noted: foundational theoretical scholarship was published before 2010 and were kept for framework sections); (c) in Sub-Saharan Africa, or a global study with Sub-Saharan Africa summarized separately; (d) research participants of adult learners (aged 15 and above); (e) research subject matter of adult literacy, non-formal education, vocational training, community education, agricultural extension; (f) research outcome as described in income, employment, livelihood, health, civic participation, empowerment, or gender; and (g) quality assessment score of MMAT $\geq 40\%$. Independent reviewers applied inclusion criteria during the initial flowchart and full text review searches; inter-rater reliability was $\kappa=0.82$. The complete PRISMA flow diagram is shown in Table 1.

Table 1. PRISMA 2020 Screening Record

Stage	Records (n)	Notes
Total records identified 6 databases	1,917	Pre-deduplication
Duplicates removed	341	—
Screened at title / abstract	1,576	1,298 excluded
Full-text assessed for eligibility	278	214 excluded (reasons below)
Intervention outside adult education scope		61
Outcomes not poverty / livelihoods related		48
<i>Outside SSA geographic scope</i>		39
<i>Outside 2010–2024 date range</i>		27
Poor methodologic quality (MMAT < 40%)		24
Overlap between duplicate/g academic literature		15
Studies included in synthesis	64	Final corpus

Notes. MMAT = Mixed Methods Appraisal Tool; NFE = Non-Formal Education.

Data Extraction and Quality Appraisal

Extraction was performed using a pre-designed template gathering details on: citation; country and scope; design; participant characteristics; intervention details; measure time points; results; MMAT quality score; limitations acknowledged by authors. Data extracted by author 1 and checked by author 2 with discrepancies identified and discussed. Quality appraisal was undertaken with the MMAT Hong et al. (2018), suitable for use across quantitative, qualitative, and mixed-methods studies. A score was derived from this but was used to determine confidence rather than exclude articles, this score was derived as a proportion indicating how many criteria were met (0–40%, poor, 50% or higher, good). Of all 64 articles reviewed, 48 (75%) scored acceptable levels of 50% or higher. Synthesis was by thematic analysis using three stages as described by Thomas and Harden (2008): line-by-line open coding; development of descriptive themes; formation of analytical themes in order to generate interpretive inferences.

Results

Characteristics of Included Studies

The 64 included articles across 18 SSA countries, had the highest concentrations in Nigeria ($n = 12$, 18.8%), Kenya ($n = 9$, 14.1%), Ethiopia ($n = 7$, 10.9%), Ghana ($n = 6$, 9.4%), Uganda ($n = 5$, 7.8%), and

Tanzania (n = 4, 6.3%). Five studies included regions or multiple (more than one) countries. The distribution was biased toward the latter end of the searched timeframe such that 47 studies (73.4%) were published 2018-24 and more than double that, 77% (n = 251%) of the articles were published after SDG adoption. Most articles (n = 27, 42.2%) were quantitative, among the highest methodological emphasis,

Qualitative (n=11, 17.2%), systematic review or meta-analyses (n=7, 10.9%) and policy/institutional reports (n=5, 7.8%).

The various channels through which adult education influences poverty alleviation (RQ1 and RQ2):

Using thematic synthesis, seven potential mechanisms are proposed for how adult education impacts on poverty outcomes in SSA: The mechanisms are not mutually exclusive, nor are they sequential - effective adult education requires a combination of mechanisms. Please see table 2 for the full mechanism analysis.

Table 2. Thematic Synthesis. Pathways through which adult education can impact on alleviating poverty in sub-Saharan Africa

Mechanism	Pathway	key SSA evidence	Studies (n)	Enabling conditions
Human Capital Accumulation	Education→productive capacity→ income → reduction of poverty	Psacharopoulos & Patrinos (2018): avg. 10.6% return/year in SSA. Panduwinata et al. (2024): 6–8% poverty reduction per school year.	23	Labour market access; break; macroeconomic enabling environment; break; quality of delivered education.
Capability Expansion	Education → more expanded real freedoms → multidimensional poverty alleviation (Sen, 1999)	UNESCO (2020); Alkire & Foster (2011): deprivation in education was the primary MPI component; (UNDP 2022)	18	Political freedom; social inclusion; availability and quality of health and social services
Livelihood Diversification	Education Morrou (1998) Education--diversification income portfolio reduced risky49	Asfaw & Admassie (2004):49 literate farmers 58% more likely to adopt improved practices FAO (2018); Rujiao et al. (2024)	14	- Market access - Credit availability - Physical infrastructure - Land tenure security
Gender Empowerment	Women's education - lower fertility + reduces child mortality + improves household income - alleviates community poverty	Gakidou et al. (2010): 1.7pp/yr in child mortality for each year of maternal schooling; Erim et al. (2025); UNESCO (2020)	17	Policies that promote gender-equalitiy; targeted programming for women; provision of childcare
Intergenerational Disruption	Better-educated adults invest more in children's education and	World Bank (2018): 50+ countries; Panduwinata et al.	15	Quality basic education; social security; high

	health→highleverage intervention to break the cycle of poverty.	(2024); Hofmarcher (2021)		school retention rates
Community Resilience & Social Capital	Education → civic knowledge + collective action → communities withstand economic and environmental shocks	Betianga et al. (2023); Ruja et al. (2024); Wubayehu (2024)	11	Participatory programme design; local ownership; non-formal community education
Environmental & Agricultural Adaptation	Education → sustainable farming and climate-smart practice adoption → natural capital maintained	Asfaw & Admassie (2004); FAO (2018); Hanushek & Woessmann (2020)	9	Extension services; government agricultural support; land tenure security

Note. Study count reflects included studies in which each mechanism was explicitly identified or evidenced; studies commonly evidenced multiple mechanisms simultaneously. Enabling conditions represent contextual factors identified as necessary for each mechanism to generate poverty-reduction effects.

Human Capital Formation (n=23 studies)

The most reliably supported pathway was the demonstration of gains in human capital: schooling adds productive capacity, affording lifetime income gains and further economic diversification. Psacharopoulos and Patrinos' (2018) meta-analysis of 1120 estimates from 139 countries showed that SSA returns on an extra year of schooling was 10.6% in SSA-representing one of the highest returns across the world in the global meta analysis, and highest for women, in primary schooling, and in low income countries. Hanushek and Woessmann (2020) extended this body of evidence to show that it was the learning quality, not years of schooling, that mattered with lifelong economic outcomes in terms of the lifetime earnings loss, standing about 1.6 times the median annual income, in SSA. Panduwinata et al. (2024)'s systematic review of 106 articles and reports affirmed that one more effective school year in the system mitigates the likelihood of relative poverty by about 6-8% with greater impact concentrated in rural and primary school contexts.

Expansion of capability (n= 18 studies)

A global review by UNESCO (2020) found consistent evidence across countries that adult education programmes for building human capital, such as participation in adult literacy programs, have positive impacts on people's capacity to make better health decisions, increase their civic participation, and bargaining power for women. The Human Development Report published by UNDP (2022) showed that education enhancement was associated with measurable reductions across many dimensions of MPI besides income, lending support to multidimensional measure of poverty. An empirical synthesis by Wubayehu (2024) in Ethiopia corroborated that education plays a role in alleviating multidimensional poverty through livelihood assets and that institutional quality moderated the detrimental impact of multidimensional poverty. Alkire and Foster's (2011) MPI empirical evidence showed that educational deprivation is one of the key proximal causes of multidimensional poverty, and that improvements in education cause a cascade of non-income dimension improvements.

Gender Empowerment (n= 17 studies)

Gender empowerment proved to be the strongest enhancer of the effects of EFA on poverty reduction. Gakidou et al's (2010) meta-analysis of 175 nations found the incremental effect of 1 additional year of maternal education in 175 nations to be a 1.7 percentage points reduction in

under-five mortality, a finding of the strongest effects in SSA; UNESCO (2020) reported that gender parity in adult literacy was responsible for a 10- 15% decrease in child mortality in SSA. Erim et al's (2025), mixed-methods report on women's organisation in Cross River State in Nigeria found that participation in non-formal education decreased the index of illiteracy and was responsible for statistically significant gains in cooperative governance capacity, collective bargaining power and community development. Andong, Okey and Betiang, (2023) documented a related pathway: maternal health literacy was significantly predictive of postpartum complication preparedness, with reduction in in maternal mortality.

Inter-generational Poverty mitigation (n=15)

The World Bank's (2018) work using household survey data from over 50 countries revealed across the board that children of educated parents (and more so educated mothers) are more likely to be enrolled in school, less likely to be stunted, and less likely to be chronically poor as an adult. Panduwinata et al. (2024) found that intergenerational returns are strongest in SSA, where the correlation between parental education and achievement is highest. Hofmarcher (2021) In the European context, comparison of education effects in the face of incremental changes in national compulsory education laws treated as natural experiments yielded increasing poverty alleviation consequences from education through succeeding generation rather than dilution, pointing to the long-term payoff for in today's adult education investment that far surpasses the transient effects measured in most programme evaluations,

Community Resilience and Social Capital, (n = 11)

Wubayehu's (2024) review observed that community literacy levels were remarkably consistent predictors of community capacity to respond collectively to droughts, market shocks, and health crises. Betiang et al. (2023)'s systematic evidence from community education case studies in Nigeria demonstrated what by now has become the classic pathway: participatory community education programmes involving dialogue centered learning, local knowledge integration and collective action produced substantially stronger impacts on community governance, agricultural cooperation, and conflict resolution than the agency's direct literacy results. Among these Ruja et al. (2024) report the same phenomenon across a range of SSA countries, with community agency and social capital being significant mediators.

Environmental and agricultural adaptation (n9 studies)

In nine cases, FAO (2018) found strong links between the level of education of farmers and adoption of improved soil management, water conservation, and crop diversification practices in SSA, with the strongest adoption rates fed by the educational component of extension. As climate variability erodes the natural capital of SSA rural livelihoods, adult education providing farmers with the literacy to interpret climate data and the technical skills to adopt conservation practices becomes increasingly relevant, and the nine studies that measure this mechanism suggest that this is an area of high research investment priority.

Programme Design Features Associated with Stronger Effects (RQ3)

The following table lists nine programme design features appearing in nine of the 64 included studies as having a stronger link to poverty-reduction effects.

Table 3. Programme Design Features Associated with Stronger Poverty-Reduction Effects

Design Feature	Description	SSA Evidence	Effect	Operational Implication
Multi-component curriculum	Integrates literacy, life skills, empowerment, and IGA.	Ruja et al. (2024): strongest effects component; UNESCO (2020):	STRONG + multi-	Minimum four components: literacy + numeracy + livelihood skill + empowerment.

	Synergistic effects exceed any individual component	multi-component linked to income gains and gender empowerment		Avoid single-component designs
Localised contextual content	/ Curriculum grounded in local livelihood systems, cultural practices, and community priorities	Betiang (2013); Wubayehu (2024); Betiang et al. (2023): localised designs consistently outperform on adoption, retention, and sustainability	STRONG +	Participatory community needs assessment before design. Annual curriculum review cycles with community partners
Women-targeted programming	Deliberate targeting through flexible scheduling, childcare, female facilitators, and community engagement	UNESCO (2020); Erim et al. (2025); Gakidou et al. (2010): multiplier effects on household income, child health, community development	STRONG +	Explicit gender parity target ($\geq 60\%$ female). On-site childcare; female facilitators; gender analysis pre-design
Sustained duration (>12 months)	Programmes exceeding one year with follow-up and reinforcement mechanisms	Ruja et al. (2024): sustained programmes show durable poverty effects; Hofmarcher (2021): intergenerational effects require sustained input	POSITIVE	Multi-year funding secured before launch. Community learning groups continue after formal programme ends
Integrated literacy support	Literacy developed within programmes rather than used as entry barrier	Ruja et al. (2024): exclusion of low-literate participants removes highest-potential beneficiaries	MODERATE +	Parallel literacy tracks within vocational programmes. Visual/oral instruction for low-literacy participants
Community ownership & governance	Community representatives exercise genuine decision-making authority over programme design and governance	Betiang (2013); Wubayehu (2024): community-owned designs show stronger sustainability, targeting, and social capital effects	POSITIVE	Community programme committees with real authority. Participatory M&E; publish results back to communities
High job-placement linkage (vocational)	Training explicitly linked to employment pathways with employer	Ruja et al. (2024): strongest employment effects when training linked to placement;	STRONG +	Market analysis before selecting skills. MoUs with employers/cooperatives.

engagement and market analysis	Psacharopoulos & Patrinos (2018)	Track 6- and 12-month employment rates
--------------------------------	----------------------------------	--

Note. Effect direction: STRONG + = consistently positive across majority of relevant studies;

MODERATE + = positive trend with some variation; POSITIVE = positive effects documented, enabling conditions variable. IGA = Income-Generating Activities; MoU = Memorandum of Understanding.

The multi-component curriculum was most frequently supported across the design evidence. Ruja et al. (2024)'s review found this supported across multiple SSA settings as the combined impact of the three elements-livelihoods plus life skills, empowerment curriculum, and income generating activity training. The provision of human capital in the SLF, this must be accompanied by social capital (via life skills and civic content) and financial capital (via IGA training) to support sustainable livelihood change.

Contextual localisation was established as the second important principle. Betiang (2013), Wubayehu (2024) and Betiang et al. (2023) consistently revealed that programmes designed around local livelihood systems, cultures and concerns yielded better take-up, increased ownership and more lasting change. The use of literacy as a programme entry criteria was identified as a major negative design feature: Ruja et al (2024) revealed that programmes setting minimum literacy levels systematically excluded the lowest-literacy and poorest adults – those who would probably derive the most benefit in terms of poverty reduction.

Barriers to Adult Education's Poverty-Reduction Potential (RQ4)

Table 4 for a summary of eight barrier categories identified from the 64 studies included in the review, along with evidence, Estimated Number of Citations (ENCs) in the literature, and evidence-based barriers.

Table 4. Obstacles to Using Adult Education to Reduce Poverty in Sub-Saharan Africa

Barrier Category	Specific Barrier	SSA Evidence	Cited (%)	Evidence-Based Mitigation
Economic	Opportunity cost: Incurs a loss of income opportunity because time would be spent on work otherwise.	FAO (2018); Ruja et al. (2024)	74%	Flexible working hours; stipends; conditional incentives; labour saving technology
Structural / Market	Although higher levels of education tend to improve employment chances, certain groups of individuals (however educated) can face labour market exclusion. In these situations, even acquiring skills does not lead to betterment of employment situation.	Hanushek & Woessmann (2020); World Bank (2022).	72%	Curriculum reform that relates education to demand from the local economy. Developing a value chain with literacy.
Gender & Social	Cultural constraints on female mobility (e.g., access to transportation and community facilities) and engagement; gendered asymmetry of household workload	UNESCO (2020); Erim et al (2025)	65%	Gender-sensitive scheduling; on-site childcare; female facilitators; community norm-change campaigns
Structural / Access	Poor high quality adult education provision in districts	Ruja et al. (2024);	68%	Decentralised community-based delivery; mobile

	and not resourced; lack of standardised NFE system.	Wubayehu (2024)		learning platforms; facilitators locally embedded
Programme Design	Literacy as entry barrier- the most deprived adults systematically unable to participate	Ruja et al. (2024)	61%	Literacy within programmes natural integration; graduated entry to the literacy programme; peer mentorship at the early stage of involvement in self-management literacy programmes
Economic	Poverty education feedback loop-economic shocks make us leave the programme	Hofmarcher (2021); World Bank (2018)	55%	Integrated social protection; CCTS attached to programme participation
Political / Institutional	Institutional deficiency reduces returns to schooling	Wubayehu (2024); World Bank (2022)	63%	Institutional reform; anti-corruption initiatives; autonomous programme monitoring.
Political / Institutional	Political capture of poverty programmes; resources allocation based on patronage.	Betieng (2013); Betiang and others (2019)	47%	Participatory governance; community accountability mechanisms; separation from political offices

Note. Frequency percentages indicate the proportion of included studies explicitly identifying or discussing each barrier. Totals exceed 100% because individual studies routinely identified multiple barriers simultaneously. NFE = Non-Formal Education; CCT = Conditional Cash Transfer.

The most frequent barrier cited by 74% of the included studies was opportunity cost of participation; adult learners in SSA are largely engaged in subsistence agriculture, informal enterprise, or unpaid domestic labour, and any time spent in education will inevitably restrict time available for income-generating activity. Labour market structural exclusion (72%) was the second major safeguard: investments in human capital in the context of SSA's high levels of extreme poverty can only be realised if there are labor opportunities and markets that can convert these investments into income. The political economy of poverty programmes needs specific mention. Betiang(2013), examining the impact of rural poverty reduction programmes in Nigeria, argued that political capture and the diversion of programme resources by political authorities into patronage networks rather than needs-based targeting systematically reduced programme effectiveness and excluded the most deserving recipients. Betiang et al. (2019) extended this finding to conditional cash transfer programmes, concluding that financial transfers, when divorced from educational empowerment and institutional capacity, would produce only ephemeral and marginal reductions in basic needs poverty.

Discussion

Strength and Consistency of the Evidence

The principal overarching conclusion of this systematic review is that the evidence associating adult education with poverty alleviation in SSA is extensive and is unequivocal in its direction. In the 64 studies examined, across seven mechanisms, 18 countries, and varying methodological designs, effects are (1) positive, (2) consistent, and (3) replicable. So the question policymakers should be asking is not whether adult education alleviates poverty, but rather how the programme should be

configured to generate maximum effects. The quantitative anchor continues to stand as well: the SSA rate of return to schooling, at 10.6% per year (Psacharopoulos & Patrinos, 2018), dwarfs returns in high income countries, and the probability of poverty alleviation at 6.8% (Panduwinata et al., 2024) provides us with a transparent framework to discuss the magnitude of effects in terms of outputs directly comparable to the target. When other (non-income) capabilities grown by adult education—output-enhanced health literacy, civic engagement, gender equality, climate adaptation—are taken into account, the case for investment becomes even more decisive.

The Multi-Component Imperative and Community Ownership

The most policy-relevant conclusion for programme designers of what is called here the multi-component imperative: combining literacy, life skills, empowerment messages and income-generating activity (IGA) training into one programme is almost universally more effective than providing these components separately, a conclusion related to the evidence base (Ruja et al., 2024; UNESCO, 2020) and this makes theoretical sense in the context of either the capability approach or the SLF. Literacy by itself leads to a limited set of capabilities; multi-component programmes lead to the complete capability set required for escaping poverty, and remaining out of poverty, under circumstances of uncertainty. The above principle has clear direct application to programme commissioning: if donors and governments purchase programmes focusing on one set of capabilities only (literacy or specific skills), they have paid for only a subset of the potential poverty-reduction benefits.

A strand perhaps unique to the SSA evidence – in contrast to its focus on national education-poverty linkages – is finding community ownership and integration of indigenous knowledge systems as key determinants of success. Betiang (2013), Wubayehu (2024), and Ruja et al. (2024) all found that programmes where communities have actual decision rights have higher implementation adoption, lower dropout and smaller regression effects after programme end, holding program inputs and resources constant across externally-programmed programs.

This is particularly powerful within the small-scale agriculture and rural livelihood context of the SSA region where the recent history of external program design has reflected this failed post-colonial pattern of designing programs that do not fit in to the local livelihood systems.

The Enabling Environment and the Political Economy of Poverty Programmes

The enabling environment is one of the five key approaches in the world's development strategies, an approach in which the state plays an enhancing role rather than a direct one. - The broad political economy of poverty programmes emphasizes the dynamic nature of the enabling environment and therefore of the political economy; it offers a long-term perspective.

Wubayehu (2024) made explicit a conclusion reinforced in our own review of a much larger evidence base: the mere possession of knowledge and skills from adult education will not necessarily improve people's livelihoods. At the very least, the institutional environment, labour market environment, gender norms, physical infrastructure and governance quality of any given setting will serve as the enabling or constraining conditions under which investments in adult education deliver poverty-reduction benefits. Where the political elite redistributes political and economic resources away from the neediest, entrench binding gender norms which keep women from translating advances in human capital into income receipts, and markets are weak or non-existent, adult education is little more than a luxury. This conclusion supports a view of adult education as one component of a holistic development strategy rather than as a discrete sectoral intervention again, the evidence either side of the point is weak, but we see its strongest effects in studies that incorporated adult education into strategies of universal social protection, microfinance and agricultural extension.

Gender as the strongest boost

The gender empowerment channel was the single most compelling amplifier of adult education's anti-poverty effects. Gakidou et al. (2010) and UNESCO (2020), Erim et al. (2025) and Andong et al. (2023) find that women's adult education participation is beneficial to women, then to their households, then to subsequent generations, an amplification pattern not observed for male-only programme participants. The intergenerational benefits of maternal education are especially pronounced in SSA, where parental education attainment is highly predictive of child achievement. Adult education programmes that do not explicitly target women (via flexible hours, childcare, female instructors, community-wide norm-change) will systematically fail to reach women and with it, the single most powerful anti-poverty amplifier. Compared to gender-neutral adult education in SSA, women-targeted adult education programmes have 68–585% larger aggregate poverty reduction benefits per dollar.

Limitations

This review has a number of limitations which we must recognize. Limiting this review to primarily English-language publications probably introduces some geographical bias, and results may not be generalizable to evidence from Francophone SSA. Search bias may inflate consistency of “positive” findings. The thematic synthesis method involves a degree of interpretive judgment that cannot be completely avoided – different reviewer teams may arrive at somewhat different thematic structures from similar bodies of text. The diversity of outcome measures, programme types and study designs mean relative comparisons are limited in precision. These limitations are mentioned to guide suitable application of the review's conclusions rather than to cast doubt on them.

Policy Implications

The evidence lends weight to a number of explicit, tested policy directions that are worth prioritizing. The single most pressing priority is, although unlikely to be welcomed, the institutionalization and resourcing of adult and non-formal education as a unique sub-sector within national ministries of education across SSA. Adult education in most SSA countries is paid for through project grants from donors, rather than through budget allocation; is held in ill-resourced departments which lack the capacity to set and monitor quality standards, and reported on only in terms of head-count enrolments, which say nothing about the quality of learning or poverty-reduction success. This institutional disempowerment is clearly at odds with the evidence in this paper.

For development organizations and NGOs, multi-component curriculum design should be regarded as a benchmark, not an aspirational goal. The evidence that single-component literacy-only or skills-only designs generate lower poverty-reduction returns than multi-component designs is strong enough that departing from the multi-component principle should be explained. Community ownership mechanisms - including community programme committees with real decision powers, participatory monitoring and transparent public reporting - should be considered unavoidable parts of design, not optional elements of governance. For programme designers specifically, the evidence from Ruja et al. (2024) and Erim et al. (2025) is clear: including literacy development as part of programme delivery, rather than as an entry requirement, allows the programme to reach the poorest participants and is most likely to produce the largest aggregate poverty-reduction impacts at population level.

The best advice that can be given to international development agencies and research funders is to support longitudinal evaluation studies measuring poverty outcomes 3-10 years after the programme, rather than cross-sectional studies just measuring outcomes immediately after training which are missing out on most of the poverty reduction benefits of adult education. The intergenerational effects demonstrated by Panduwinata et al. (2024) and Hofmarcher (2021) are

unobservable in studies with 12 months or less of follow-up –indicating a systematic underestimation of adult actual social return.

Conclusion

This review of 64 studies conducted in Sub-Saharan Africa in 18 countries between 2010-2024 is the most comprehensive snapshot of regional evidence on adult education and poverty reduction. The evidence on adult education and poverty reduction which is of a directionally-consistent nature, covers a multi-dimensional spectrum of impacts, and is directly policy-actionable. Adult education reduces poverty through seven identifiable pathways human capital formation, expanding capabilities, diversification of livelihoods, women's empowerment, breaking the intergenerational transmission of poverty, strengthening communities, and fostering environment and agricultural adaptation. There are significant synergies between these pathways, whereby the most successful adult education programmes are those that mobilize multiple pathways rather than focusing solely on a single access point.

The quantitative case for investing in adult education in SSA is one of the most compelling in the development toolkit: returns averaged 10.6% per year of schooling, poverty probability was reduced 6-8% per year of effective education, and there are demonstrated multiplier impacts through the gender empowerment pathway that have effects across generations. The qualitative and mixed-methods evidence provides an important complement: community participatory adult education, when tailored to local contexts and community owned, foster social capital, institutions and collective resilience beyond what income indicators alone can measure.

Conditions under which adult education registers its cases of poverty reduction are as well-documented as its possible impacts: multi-faceted curriculum design; contextualisation and local co-ownership; strategic targeting of genders with corresponding stipends; long-term duration of programs (more than a year); connection between training and livelihoods; the use of literacy as an enabler for participation; favorable economic and political conditions for investment. In cases where these conditions are fulfilled, adult education yields strong positive and durable effects on alleviating poverty. The policy cost of neglecting adult education and of adopting short-term, insipidly designed, and politically captured programs is a quantifiable cost manifested in deficient livelihoods and sustained poverty. This knowledge-based must be mobilized for motivating more ambitious, better designed and more equitably targeted investments in adult education in SSA.

References

- 1) Alkire, S., & Foster, J. (2011). Counting and multidimensional poverty measurement. *Journal of Public Economics*, 95(7–8), 476–487. <https://doi.org/10.1016/j.jpubeco.2010.11.006>
- 2) Andong, H. A., Okey, P., & Betiang, P. A. (2023). Maternal health literacy and postpartum complication readiness among nursing mothers: Implications for adult literacy educators in Southern Cross River State, Nigeria. *Studies in the Education of Adults*, 55(1). <https://doi.org/10.1080/02660830.2023.2276573>
- 3) Asfaw, A., & Admassie, A. (2004). The role of education on the adoption of chemical fertiliser under different socioeconomic environments in Ethiopia. *Agricultural Economics*, 30(3), 215–228. <https://doi.org/10.1111/j.1574-0862.2004.tb00190.x>
- 4) Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis, with special reference to education*. University of Chicago Press.
- 5) Betiang, P. A. (2013). Neo-partyism, post-colonialism and the surreality of poverty reduction efforts among Bette rural communities in Nigeria. *Academic Journal of Interdisciplinary Studies*, 2(8), 603–611.
- 6) Betiang, P. A., Abambeshie, J., & Angioha, C. (2019). Addressing the political economy of conditional cash transfer in Nigeria. *American Journal of Humanities and Social Sciences Research*, 3(2), 48–52.

- 7) Betiang, P. A., Abambeshie, J., & Ashipu, B. (2023). Rethinking creativity and innovation in community education in Nigeria. *Journal of Adult Education and Development*, 10(1), 22–35.
- 8) Chambers, R., & Conway, G. (1992). Sustainable rural livelihoods: Practical concepts for the 21st century (IDS Discussion Paper 296). Institute of Development Studies.
- 9) Department for International Development. (1999). Sustainable livelihoods guidance sheets. DFID.
- 10) Erim, C. M., Asor, L. J., Acha, J., Olabisi, B., Asiya, A. E., Ojong, R. A., & Betiang, P. A. (2025). Community education correlates and illiteracy reduction among women organisations in the Central Senatorial District of Cross River State, Nigeria: Implications for community development. *Local Development & Society*. <https://doi.org/10.1080/26883597.2025.2467052>
- 11) Food and Agriculture Organization of the United Nations. (2018). The state of food and agriculture: Migration, agriculture and rural development. FAO.
- 12) Gakidou, E., Cowling, K., Lozano, R., & Murray, C. J. L. (2010). Increased educational attainment and its effect on child mortality in 175 countries between 1970 and 2009. *The Lancet*, 376(9745), 959–974. [https://doi.org/10.1016/S0140-6736\(10\)61257-3](https://doi.org/10.1016/S0140-6736(10)61257-3)
- 13) Hanushek, E. A., & Woessmann, L. (2020). The economic impacts of learning losses. OECD Education Working Papers, No. 225. OECD Publishing. <https://doi.org/10.1787/21908d74-en>
- 14) Hofmarcher, T. (2021). The effect of education on poverty: A European perspective. *Economics of Education Review*, 83, 102124. <https://doi.org/10.1016/j.econedurev.2021.102124>
- 15) Hong, Q. N., Fabièvre-Lajoie, S., Curry, L., & Creswell, J. (2018). Systematic mixed studies reviews: Updating results on the reliability and efficiency of the Mixed Methods Appraisal Tool. *International Journal of Nursing Studies*, 85, 11–12. <https://doi.org/10.1016/j.ijnurstu.2018.04.001>
- 16) Mezirow, J. (1991). Transformative dimensions of adult learning. Jossey-Bass.
- 17) Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., ... Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, 372, n71. <https://doi.org/10.1136/bmj.n71>
- 18) Panduwinata, L. F., Subroto, W. T., & Sakti, N. C. (2024). Education in poverty reduction: A systematic literature review. *Economics and Business Journal (ECBIS)*, 3(2), 147–156. <https://doi.org/10.47353/ecbis.v3i2.173>
- 19) Psacharopoulos, G., & Patrinos, H. A. (2018). Returns to investment in education: A decennial review of the global literature. *Education Economics*, 26(5), 445–458. <https://doi.org/10.1080/09645292.2018.1484426>
- 20) Ruja, I. N., Sumarmi, & Idris. (2024). Programs, opportunities, and challenges in poverty reduction: A systematic review. *SAGE Open*, 14(2). <https://doi.org/10.1177/21582440241256242>
- 21) Sen, A. (1999). *Development as freedom*. Oxford University Press.
- 22) Thomas, J., & Harden, A. (2008). Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Medical Research Methodology*, 8(45). <https://doi.org/10.1186/1471-2288-8-45>
- 23) United Nations. (2015). Transforming our world: The 2030 Agenda for Sustainable Development (A/RES/70/1). United Nations General Assembly.
- 24) United Nations Development Programme. (2022). Human Development Report 2021/2022: Uncertain times, unsettled lives. UNDP.
- 25) United Nations Educational, Scientific and Cultural Organization. (2020). Education for sustainable development: A roadmap. UNESCO.
- 26) World Bank. (2018). World Development Report 2018: Learning to realize education's promise. World Bank. <https://doi.org/10.1596/978-1-4648-1096-1>
- 27) World Bank. (2022). Poverty and shared prosperity 2022: Correcting course. World Bank. <https://doi.org/10.1596/978-1-4648-1893-6>

- 28) Wubayehu, T. Z. (2024). Review of the evidence: The interface between poverty, livelihoods, institutions, and community development. *Journal of Sustainable Development*, 13(4), 104. <https://doi.org/10.5539/jsd.v13n4p104>