

Developing an Integrated Development Education Framework for Advancing Resilient and Inclusive Early Childhood Education in Kenya, Tanzania, and Uganda

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Abstract

Reforms in early childhood education in East Africa have placed a greater emphasis on inclusive education, teacher professional development, and competency-based curricula. The provision of fair and resilient learning opportunities for young children is hampered by the ongoing gaps between educational policy and classroom practice, notwithstanding these efforts. In order to investigate how Development Education, Teacher Professional Learning, Social–Emotional Learning, educational leadership, inclusive pedagogy, and community engagement interact to strengthen inclusive Early Childhood Education systems in Kenya, Tanzania, and Uganda, this study synthesized data from the Strengthening Education Systems East Africa program and the Foundation for Learning longitudinal studies.

Using empirical data from program evaluations, learner assessments, classroom observations, longitudinal studies, policy papers, and pertinent academic literature, an integrated evidence synthesis design was utilized. In order to create an integrated framework for development education, thematic synthesis was employed to find recurrent patterns and connections throughout the evidence.

The findings indicate that rather than using discrete educational interventions, sustained educational transformation is accomplished through integrated investments in students, teachers, schools, leadership, families, and communities. Instructional quality, learner participation, resilience, and foundational learning outcomes were all enhanced by ongoing teacher professional development, integrated social-emotional learning, inclusive pedagogical practices, supportive educational leadership, and meaningful community engagement. Building on these conclusions, the paper suggests an evidence-based Integrated Development

Education Framework that views educational reform as a systems-oriented process that connects higher education to more general social development.

In addition to offering useful advice for policymakers, teacher education institutions, development partners, and researchers looking to improve equitable and sustainable education systems, the study contributes a contextually grounded framework for advancing inclusive and resilient early childhood education in East Africa.

Keywords: development education, teacher professional learning, social–emotional learning, inclusive education, educational leadership, community engagement, early childhood education

1. Introduction

Governments and development partners in East Africa have made large investments in curriculum modifications, competency-based education, and teacher professional development in an effort to improve the quality of Early Childhood Education (ECE) (Wanyama, 2025; Wango, 2026). Education reforms like Kenya's Competency-Based Curriculum (CBC), Uganda's Lower Secondary Competency-Based Curriculum and Tanzania's continuous teacher education reforms show the region's commitment to developing students with 21st-century skills, academic aptitude, and social consciousness. It is nevertheless challenging to convert legislative objectives into successful classroom instruction in spite of these efforts. Many teachers still struggle to implement learner-centered, gender-responsive, and inclusive pedagogies due to a lack of mentorship, inconsistent professional support, resource constraints, and differences in institutional capacity (Hamed 2026). These challenges are made worse by broader socioeconomic problems that affect families, communities, schools, and students.

To improve educational outcomes, strategies other than curriculum modification and isolated teacher training are required, as evidenced by these recurring implementation gaps. A lasting educational change necessitates strengthening the broader ecosystem in which teaching and learning occur, including family engagement, community involvement, school culture, instructional leadership, and teacher professional development. In this case, development education becomes especially important. Instead of viewing education as just classroom instruction, developmental education provides a systems-oriented framework that strengthens the capacities of educators, educational institutions, families, and communities to support equity, inclusion, resilience, and sustainable learning opportunities for all children. A more comprehensive systems approach is offered by development education, which sees advancements in education as inextricably linked to larger social, institutional, and community development. It places more emphasis on coordinated investments in educators, learners, schools, families, and communities to support fairness, participation, resilience, and sustainable learning than it does on curriculum change or teacher preparation. Despite its growing recognition on a global scale, development education's utility in early childhood education in East Africa is still poorly defined and empirically unsupported.

One of the most important phases for language, social, emotional, and cognitive development is early childhood education. High-quality inclusive early childhood education improves school preparation, educational equity, and lifelong learning outcomes while laying the groundwork for children's cognitive, linguistic, social, emotional, and physical development. Many young children in East Africa still have unequal access to high-quality inclusive learning opportunities, especially those with disabilities, those living in poverty, and those in marginalized communities, despite significant investments in competency-based curricula and teacher professional development. Clark, et al. (2024) caution that the role of governments in the provision of inclusive early childhood education is not only regulatory, but also a matter of accountability and transparency at the governance level to ensure that inclusive ECE is implemented and prioritised.

Evidence from two complementary educational programs run by the Aga Khan University Institute for Educational Development, East Africa (AKU-IED EA) is used in this study. In order to improve foundational learning through teacher professional development, social-emotional learning, inclusive pedagogy, educational leadership, and community participation, the SESEA program was implemented in Kenya, Tanzania, and Uganda. This work was supplemented by the Foundation for Learning (F4L) program, which conducted longitudinal research on the long-term effects of professional learning communities, mentorship, instructional leadership, and continuous teacher professional development on educational quality. In order to provide complementary data on how educational and developmental interventions contribute to resilient Early Childhood Education systems, both programs were based on building learning environments for young children and promoting inclusive educational practices.

This paper makes the case that integrated and mutually reinforcing investments that support both educational practice and the larger developmental environment in which learning takes place are more effective in bringing about long-lasting educational transformation than isolated interventions. Data from the two study strands demonstrate that the most successful educational transformation occurs when teacher professional development is integrated into a comprehensive development education approach that simultaneously strengthens students, teachers, schools, leadership structures, families, and communities.

The implementation of policies and programs in East Africa still prioritizes discrete educational interventions with little integration of more comprehensive developmental processes that impact children's learning, despite rising spending in teacher professional development and competency-based reforms. Additionally, there is still a dearth of empirical research, especially in the East African context, that looks at development education as an integrated framework for enhancing inclusive early childhood education.

Research evidence abounds showing that implementation of inclusive early childhood education is impeded by a constellation of factors (Clark, 2024; Adunga, 2024). In order to promote inclusive and resilient early childhood education, this paper proposes an Integrated Development Education framework based on data that were inductively synthesized from two five-year longitudinal research study strands, SESEA and the Foundation for Learning. The Integrated Development Education Framework views educational reform as the result of concerted investments in students, teachers, schools, families, and communities rather than regarding education and development as distinct sectors. It integrates educational quality with more comprehensive social development systems, hence extending current educational models. This paper therefore contributes a contextualised conceptual model to guide educational practice, research, and policy in the East African Community.

There are still large gaps between educational policy and classroom practice in East Africa, despite large investments in competency-based curricula, teacher professional development, and inclusive education reforms. The SESEA program and the F4L longitudinal studies provide evidence that, despite teachers' growing awareness of learner-centered, gender-responsive, and inclusive pedagogies, their successful implementation is still

hampered by a lack of professional support, inconsistent mentorship, insufficient resources, poor instructional leadership, and more general socioeconomic issues that impact students, families, and communities. These enduring difficulties imply that attempts to improve education have mostly been carried out as stand-alone treatments rather than as integrated systems that may address the larger educational ecology in which instruction takes place.

Although Development Education provides a systems-oriented approach that combines more comprehensive institutional, social, and community development with educational improvement, its application to bolstering inclusive Early Childhood Education in the East African context is still not well understood or empirically investigated. While research has similarly tended to look at Teacher Professional Learning, Social-Emotional Learning, inclusive pedagogy, educational leadership, and community engagement as distinct areas of inquiry, existing interventions have mostly concentrated on individual components like teacher training, curriculum reform, learner assessment, or school leadership. As a result, there is no data on how these interrelated aspects might be included in an all-encompassing Development Education strategy to improve inclusive and robust Early Childhood Education systems. Research in East Africa indicates that effective translation of policy into practice requires strengthened school-level mechanisms, teacher professional development, adequate resourcing, and alignment with local realities to improve learning outcomes for children with disabilities (Ahereza et al., 2026).

This study proposes an Integrated Development Education for promoting inclusive and resilient Early Childhood Education. The emphasizes the importance of coordinated investments in students, teachers, educational leadership, schools, families, and communities by combining data from Kenya, Tanzania, and Uganda. By doing this, it offers a unique, contextually grounded paradigm that promotes educational research and offers useful advice for practice and policy targeted at bolstering equitable, resilient, and sustainable early childhood education systems throughout East Africa.

1.1 Understanding Development Education

From its early connection to the understanding of worldwide development, development education has developed into a more comprehensive educational strategy that encourages critical thinking, social justice, equity, sustainability, and active citizenship (Bourn, 2020). According to modern viewpoints, development education is a transforming process that helps students, teachers, organizations, and communities comprehend and deal with the social, economic, and environmental elements that affect human development. Development Education stresses community participation, institutional capacity building, and participatory learning as crucial to attaining equitable and sustainable educational results rather than seeing education as only the transfer of knowledge (Bourn, 2020; UNESCO, 2024).

Since interactions between students, teachers, schools, families, communities, and larger policy settings impact educational quality (Wango, 2026), the theoretical underpinnings of development education closely coincide with systems thinking (O’Flaherty, 2018). This viewpoint is especially pertinent to Early Childhood Education (ECE) since children’s learning and development are impacted by health, nutrition, family support, social protection,

community involvement, and classroom experiences (Bailey et al., 2020; UNESCO, 2024). In order to build supportive and resilient learning environments, enhancing ECE necessitates coordinated investments that incorporate teacher professional development, inclusive pedagogy, educational leadership, and community collaborations (Wango, 2026).

Education reforms in East Africa that support competency-based curricula, inclusive education, teacher professional development, and increased community involvement in education are increasingly reflecting Development Education's tenets. However, there has not been much focus on how these reforms operate together within a cohesive Development Education framework; instead, they have mostly been implemented as independent projects. As a result, there is still a dearth of empirical data about the use of development education as a comprehensive strategy to improve inclusive early childhood education systems in Kenya, Tanzania, and Uganda. The dearth of research is exacerbated by the lack of a contextually grounded framework to guide the systematic application of development education in education contexts. Development Education in Early Childhood Education

ECE is one of the most important phases in the educational continuum since it lays the groundwork for children's cognitive, social, emotional, linguistic, and physical development (UNESCO, 2024). A growing body of research indicates that high-quality early childhood education (ECE) not only enhances academic performance and school preparation but also fosters equality, resilience, and lifelong learning, especially for children from marginalized and underprivileged households (Bailey et al., 2020). Therefore, inclusive early childhood education aims to guarantee that all children, regardless of gender, disability, socioeconomic status, or cultural background, engage meaningfully in learning through equitable, learner-centered, and supportive educational environments. This goes beyond simply granting access to education (UNESCO, 2024). To the contrary, available research shows that many children with disabilities in the early years of development lack opportunities to benefit from education provisions, while only 7.8% access inclusive ECE schools compared with those who attend special schools (52.1%) (Ejuu, 2015).

Development education acknowledges that classroom interventions are insufficient to ensure inclusive learning results. Rather, it encourages a comprehensive and systems-based approach wherein educational leadership, social-emotional learning, professional teacher development, family engagement, and community involvement work together to create environments that support children's learning and development (Bourn, 2020). This integrated approach is especially pertinent in East Africa, where continuing reforms have improved competency-based learning and teacher education but still face issues with educational inequity, limited funding, and dispersed implementation. Thus, integrating inclusive early childhood education into a development education framework offers a chance to improve educational quality as well as the more general developmental conditions that allow every kid to flourish.

1.2 Components of Development Education

1.2.1 Teacher Professional Learning (TPL)

Within a Development Education framework, TPL is a key mechanism for improving educational quality because it strengthens teachers' pedagogical competence, reflective practice, and capacity to implement inclusive, learner-centred instruction. Contemporary models emphasize continuous, collaborative, and practice-based learning through mentoring, coaching, classroom observation, and professional learning communities rather than one-off training workshops (Darling-Hammond et al., 2017; Opfer & Pedder, 2011). Evidence consistently shows that sustained professional learning enhances teachers' confidence, instructional quality, and ability to respond to the diverse learning needs of children, making TPL fundamental to inclusive Early Childhood Education.

1.2.2 Social-Emotional Learning (SEL)

SEL is widely acknowledged as a process that helps students gain and use the knowledge, attitudes, and abilities required to comprehend and control emotions, build healthy relationships, exhibit empathy, make responsible decisions, and accomplish both academic and personal goals (CASEL, 2023). Since academic success is increasingly seen as inextricably linked to students' emotional, behavioral, and social development, SEL has emerged as a key element of educational reform. Numerous studies conducted globally have shown that effective SEL programs improve classroom behavior, increase student engagement, improve academic performance, and promote psychological well-being (Davies, 2025). These competencies are particularly important in settings characterized by poverty, war, and social fragility since children require both academic knowledge and adaptive skills to deal with adversity. As competency-based education has expanded throughout East Africa, learner-centered pedagogies that promote transferable skills like collaboration, communication, creativity, critical thinking, and responsible decision-making have gained in significance (Thukia, 2025).

1.2.3 Inclusive Pedagogy

Inclusive pedagogy operationalizes the principles of Development Education by ensuring that all learners, regardless of disability, gender, socioeconomic status, or cultural background, are able to participate meaningfully in learning. Rather than treating inclusion as a separate intervention, inclusive pedagogy promotes learner-centred instruction, differentiated teaching, equitable participation, and culturally responsive practices that recognize learner diversity (UNESCO, 2024; Deroncele-Acosta & Ellis, 2024). Such approaches are particularly important in Early Childhood Education, where inclusive learning experiences establish the foundation for later educational participation and success. Studies in Kenya, Uganda, and Zimbabwe confirm positive stakeholders' perceptions toward inclusive ECE but also highlight concerns about limited understanding of inclusive ECE (Wickenden et al., 2023), inadequate pedagogical preparedness of teachers (Majoko, 2016), and a need for inclusive ECE learning centers in communities (Ejuu, et al., 2022).

1.2.4 Educational Leadership

By establishing institutional frameworks that facilitate efficient teaching and learning, educational leadership plays a crucial part in maintaining educational innovations. Through

supportive leadership techniques, school administrators have an impact on teacher motivation, instructional quality, professional collaboration, accountability, and continuous improvement. It has been determined that transformational leadership, instructional leadership, and distributed leadership are especially crucial for advancing teacher professional development and bolstering school improvement programs. Maintaining educational innovation and enhancing student results are greatly aided by leadership that fosters cooperation, trust, mentoring, and shared decision-making.

1.2.5 Community Engagement

The importance of community involvement in early childhood education is becoming more widely acknowledged. By offering emotional support, bolstering learning at home, mobilizing resources, and enhancing accountability in schools, families, communities, civil society organizations, and local institutions promote children's education. Research continuously shows that children's academic performance, attendance, mental health, and school participation are all improved by meaningful parental involvement (UNICEF, 2024). By fostering conducive learning environments outside of the classroom and bolstering local ownership, community engagement also improves the durability of educational programs.

1.3 Synthesis of Literature and Evidence from SESEA and the Foundation for Learning

The reviewed literature reveals that development education, teacher professional learning, social-emotional learning, inclusive pedagogy, educational leadership, and community participation are all important and mutually reinforcing factors that determine educational quality and inclusive early childhood education. All of this research points to the need for coordinated investments that support educators, students, schools, families, and communities rather than discrete educational interventions in order to improve children's learning outcomes. However, a large portion of the research currently in publication has focused on these elements separately, paying very little attention to how they work together within an integrated framework for development education, especially when it comes to early childhood education in East Africa.

Although competency-based learning, inclusive education, teacher professional development, and community involvement are increasingly emphasized in educational reforms in Kenya, Tanzania, and Uganda, there is still a lack of empirical data demonstrating how these components work together to create resilient and inclusive educational systems. Instead of creating an integrated conceptual understanding of how educational and developmental processes reinforce one another, the majority of available research concentrated on assessing specific programs or interventions.

This conceptual gap is filled by complementing evidence from the F4L longitudinal investigations and the SESEA program. The F4L studies offer longitudinal evidence on the role of mentorship, instructional leadership, professional learning communities, and teacher development in sustained educational improvement, while SESEA shows how TPL, Social-Emotional Learning, inclusive pedagogy, and community engagement enhance classroom practice and learner outcomes. The empirical basis for creating an integrated

Development Education framework for promoting inclusive and resilient Early Childhood Education in East Africa is provided by synthesizing data from these efforts.

2. Methodology

2.1 Research Design

To investigate how Development Education supports inclusive and resilient ECE in East Africa, this study used an integrative evidence synthesis design. In order to produce new conceptual understandings of complex phenomena, integrative evidence synthesis is a review methodology that methodically integrates evidence from a variety of sources, including empirical studies, program evaluations, policy documents, and theoretical literature (Whittemore & Knafl, 2005). Integrative evidence synthesis allows for the incorporation of both qualitative and quantitative evidence, making it especially useful for examining multidimensional educational interventions. In contrast, standard systematic reviews frequently concentrate on a single type of evidence.

This design was suitable since the study aimed to synthesize data from the SESEA program and the F4L longitudinal studies. The study investigated how Development Education, TPL, SEL-inclusive pedagogy, educational leadership, and community engagement interact to strengthen inclusive and resilient Early Childhood Education systems throughout East Africa by combining findings from complementary educational initiatives with pertinent literature.

2.2 Sources of Evidence

Two complementary sources of evidence were used to guarantee both conceptual breadth and empirical depth. The first data source consisted of peer-reviewed journal articles, books, policy documents, and reports on development education, social-emotional learning, resilience, teacher professional learning, inclusive education, educational leadership, and community involvement. These sources provided the theoretical and conceptual foundations for the review.

The empirical evidence for this paper was derived from two parallel strands of longitudinal studies conducted over a period of three years: the SESEA program and the F4L longitudinal studies.

The SESEA initiative provided evidence from multiple complementary evaluation studies carried out in Tanzania, Uganda, and Kenya. These included evaluations of the Early Grade Reading Assessment (EGRA) and Early Grade Mathematics Assessment (EGMA), classroom and school observations, teacher follow-up and monitoring activities, parent and community engagement studies, course and short-course evaluations, initiatives for teacher professional development and mentoring, and program monitoring and evaluation reports. Collectively, these studies provided evidence about student outcomes, classroom practices, teacher professional development, inclusive pedagogy, school leadership, and community involvement.

On the other hand, the F4L study strand provided evidence from long-term studies conducted in Kenya, Tanzania, and Uganda. These studies examined the evolution of mentorship, gender-responsive pedagogy, teacher professional development, instructional practices, and the creation of educational leaders and Champion Teachers. Combining these diverse sources allowed for a comprehensive understanding of the educational transition in East Africa by providing empirical data from a range of countries, educational environments, and stakeholder groups.

2.3 Procedure for Evidence Synthesis and Analysis

Four sequential steps were used in the synthesis, which were adapted from the integrative review methodology (Whittemore & Knafl, 2005): (i) finding pertinent literature and program evidence; (ii) choosing and organizing evidence pertinent to the study's goals; (iii) thematic analysis and cross-source comparison of findings; and (iv) integrating the synthesized evidence to create the suggested Development Education framework. This methodical procedure improved methodological transparency and guaranteed that the framework was supported by both empirical and literature evidence.

Using a thematic synthesis approach, the evidence was combined. First, concepts pertaining to development education, teacher professional learning, social-emotional learning, inclusive education, educational leadership, and community engagement were identified by reviewing pertinent theoretical literature and empirical data from the SESEA program and the F4L longitudinal studies. Second, the results were categorized into recurrent themes from the various sources. Third, in order to find regions of convergence, the programs' similarities and differences were examined. The suggested Development Education framework, which demonstrates how these interrelated elements support inclusive and resilient Early Childhood Education systems, was created by integrating the synthesis concepts.

2.4 Trustworthiness of the Evidence

The triangulation of many evidence sources, such as peer-reviewed literature, program evaluations, learner assessments, classroom observations, and longitudinal studies from the Foundation for Learning initiative and the SESEA program, increased the synthesis's credibility. The consistency and robustness of the results were improved by comparing evidence from various nations, educational environments, participant groups, and research methodologies. By ensuring that the suggested Development Education framework represented recurrent trends rather than results from a single study, the integration of different sources further enhanced its validity.

3. Findings

The AKU-IED EA conducted two complementary educational activities, the results of which are summarized in this section. Through TPL, SEL, inclusive pedagogy, educational leadership, and community involvement in Kenya, Tanzania, and Uganda, the SESEA initiative aimed to improve foundational learning. The F4L longitudinal research looked at

the long-term effects of collaborative learning, instructional leadership, mentoring, and ongoing professional development on educational quality. All together, these programs offer supplementary proof of how integrated development education interventions support resilient and inclusive early childhood education systems.

3.1 Development Education as a Systems Approach to Education Transformation

Educational transformation is most effective when teacher professional development is incorporated into a more comprehensive Development Education approach that concurrently strengthens educators, students, institutions, and communities. This is demonstrated by the SESEA program and the F4L longitudinal study. Rather than producing isolated improvements in classroom practice, the interventions caused changes at multiple levels of the educational system, including instructional practice, leadership, inclusion, and learner outcomes.

Quantitative findings illustrate this systems effect. Following teacher professional development interventions, learner outcomes under the SESEA program dramatically improved. The percentage of children who could correctly identify at least one number increased from 22.8% at baseline to 67.9% at endline, whereas the percentage of children who could not read a single word fell from 77.2% to 32.1% at endline. Comparable gains were seen in phonemic awareness, letter-sound recognition, and numerical sequencing, suggesting that teacher capacity investments led to measurable gains in children's basic learning.

The longitudinal F4L findings show that teacher educators, student teachers, and school administrators steadily developed learner-centered, gender-responsive, and reflective pedagogical practices over the course of consecutive implementation cycles. Increased use of inclusive teaching strategies, collaborative learning, and participatory teaching approaches was seen in the classroom throughout the practicum, suggesting that professional development had an impact on institutional teaching cultures in addition to individual instructors.

These quantitative patterns are supported by qualitative data. A teacher-educator clarified:

“My teaching style has changed as a result of the training. I now involve student teachers in reflection, conversation, and problem-solving rather than just imparting knowledge.”

Additionally, a student teacher noted:

“Every student, especially those who are typically left behind, should be involved, according to our mentors. That altered my perspective on teaching.”

By linking teacher professional development with improved student outcomes, inclusive pedagogy, institutional leadership, and continuous professional support, these findings demonstrate how Development Education operates as a systems approach. According to research, the secret to attaining long-term educational transformation is integrated interventions that support the entire school environment rather than one-time training

initiatives. These results show that the enabling conditions required to provide inclusive and resilient early childhood education are created by strengthening teachers, schools, leadership, and communities.

3.2 TPL as the Foundation for Inclusive Pedagogy

Evidence from the TPL interventions implemented through the Strengthening Education SESEA programme and the F4L longitudinal studies demonstrates that continuous professional learning is the principal mechanism through which Development Education strengthens classroom practice and promotes inclusive Early Childhood Education. Teachers who participated in ongoing professional development showed increased confidence in implementing learner-centred, inclusive, and gender-responsive pedagogies. Improvements were observed not only in pedagogical knowledge but also in lesson planning, classroom management, formative assessment, and reflective teaching practices.

Results from the SESEA programme showed that structured teacher training, classroom follow-up, and ongoing professional support improved the use of participatory teaching methods and instructional quality. Classroom observations demonstrated greater learner participation, collaborative learning, effective use of teaching and learning resources, and more engaging classroom environments. These improvements are particularly important in Early Childhood Education, where interactive and learner-centred pedagogies support children's foundational cognitive, social, and emotional development. Teachers also demonstrated an increased ability to integrate Social–Emotional Learning into everyday classroom practice, creating more inclusive and supportive learning environments. Collectively, these findings demonstrate that effective Teacher Professional Learning extends beyond one-off training workshops to include continuous mentoring, collaborative learning, reflective practice, and supportive educational leadership. By strengthening teachers' capacity to respond to diverse learner needs, continuous TPL enhances inclusive pedagogical practice and contributes directly to more equitable, resilient, and high-quality Early Childhood Education classrooms.

Evidence Source	Key Finding	Contribution to Inclusive Early Childhood Education
SESEA	Improved learner-centred teaching, classroom interaction, and formative assessment	Enhanced learner participation and inclusive classroom practices
SESEA	Teacher follow-up and coaching	Improved implementation of inclusive and learner-centred pedagogy
F4L	Mentorship and practicum	Increased teacher confidence, reflective practice, and inclusive teaching
F4L	Professional Learning Communities	Sustained pedagogical improvement and collaborative professional learning

3.3 Social-Emotional Learning and Learner Resilience

SEL is a key element of Development Education for enhancing inclusive Early Childhood Education, according to data from the SESEA program and the F4L longitudinal studies. Instead of being used as a stand-alone intervention, SEL was incorporated into Teacher Professional Learning, learner-centered pedagogy, collaborative learning, mentorship, and reflective practice throughout both programs. Teachers' ability to establish encouraging, interactive, and emotionally sensitive learning environments that supported kids' resilience and wellness was enhanced by this integrated approach.

The SESEA program's quantitative results show that significant improvements in student outcomes coincided with advances in Teacher Professional Learning. While the percentage of students who could properly identify at least one number rose from 22.8% at baseline to 67.9% at endline, the percentage of children who could not read a single word decreased from 77.2% at baseline to 32.1% at endline. Additionally, teachers indicated gains in their comprehension of child development (32.9%), teaching tactics (58.3%), evaluation procedures (35.5%), and collaborative learning (32.7%). These enhancements made it easier for educators to create learning environments in the classroom that promote students' academic success as well as their social and emotional growth.

Complementary qualitative information about how these pedagogical advancements improved learner participation and resilience is provided by the F4L longitudinal research. Student teachers in Kenya frequently reported employing learner-centered strategies that encouraged dialogue, teamwork, and involvement. A participant clarified:

"We understand communication and collaboration, and we will be able to infuse it to the learners so that they can also gain skills of communication and collaboration for them to learn effectively." (F4L Kenya)

Similarly, a student teacher in Tanzania thought about how valuable collaborative pedagogy was while doing her practicum:

"Perhaps using a learner-centered approach and group work are effective. Yes, I believe those are the methods I have taken for what I am doing at the moment." (F4L Tanzania)

Ugandan data showed that tutors did not just rely on standard teacher-centered methods, but also actively involved student teachers in collaborative learning processes. People who took part also said that locally made teaching materials helped kids with different levels of learning, especially those who were having trouble learning, participate more.

The results show that including social and emotional learning in development education makes kids smarter and better at getting along with others. By encouraging students to work together, show empathy, and take part in class, SEL directly leads to more welcoming and strong Early Childhood Education settings where all kids can better participate, learn, and do well.

3.4 Inclusive Pedagogy, Gender Responsiveness and Equity

The SESEA program and the F4L longitudinal studies show that gender-responsive and inclusive teaching methods are an important part of Development Education for making Early Childhood Education more inclusive. Both programs supported learner-centered teaching methods that promoted fair participation, teamwork, and appreciation for differences among students through Teacher Professional Learning, guidance, and support in the classroom.

Observations of SESEA program classrooms showed that teachers were better at using interactive teaching methods, formative testing, inclusive classroom management, and teaching methods that take gender into account. These changes made learning settings more supportive, where all kids, no matter where they came from or how smart they were, could take part in learning. In the same way, the F4L longitudinal studies showed that teacher educators and student teachers used learner-centered methods like collaborative learning, differentiated instruction, and making locally relevant teaching and learning materials to meet the needs of students with different educational backgrounds.

Participants kept talking about how these practices made teaching more inclusive. One student teacher from Tanzania mentioned:

“Perhaps using a learner-centered approach and group work. Yes, I believe those are the methods I have embraced for what I am doing at the moment.”

In the same way, a student teacher from Uganda stressed how important it is to make training materials that help students of all levels:

“Material production can help us to explain some of the hard content for the learners to pick very well, especially those with learning difficulties.”

Even with these improvements, both programs found that barriers to inclusive education still existed. These included classrooms that were too crowded, lack of teaching and learning tools, insufficient help for kids with special educational needs, and persistent gender stereotypes. These results show that Teacher Professional Learning makes teachers better at using gender-sensitive and inclusive teaching methods. However, for inclusion to last, institutions need to have policies that support it, as well as enough resources and ongoing professional support.

All of these results show that inclusive teaching is very important for making Early Childhood Education fair and strong. Development Education strengthens inclusive classroom practices and leads to better learning opportunities across East Africa by letting teachers meet the different needs of their students and encouraging all kids to participate equally.

3.5 Educational Leadership, Mentorship and Continuous Professional Learning

From the SESEA program and the F4L longitudinal studies, we know that educational leadership and ongoing mentoring are important parts of Development Education for making Early Childhood Education more inclusive. Leaders at schools, teacher educators, and supervisors were very important in both programs because they encouraged collaborative learning, reflective practice, coaching, and educational supervision.

The F4L longitudinal studies showed that teacher educators, mentors, and school leaders used collaborative leadership styles more and more, which improved the quality of instruction and kept teachers' professional growth going. Champion Teachers and Champion Leaders not only got better at teaching, but they also developed professional values like confidence, empathy, accountability, respect, and working together. One Kenyan student teacher talked about how important mentorship is by saying:

"The mentor guided me throughout my practicum and gave me confidence to improve my teaching methods." (Student Teacher, Kenya)

Additionally, a teacher educator from Tanzania stressed the importance of working together for professional development:

"We learn from one another through discussion and reflection. This has improved the way we teach our learners." (Teacher Educator, Tanzania)

Along with these results, the SESEA program showed that ongoing classroom follow-up, coaching, and school support visits helped teachers use more learner-centered, inclusive, and gender-responsive teaching methods. These long-term support systems helped teachers use what they learned in professional development to improve their teaching, which made the changes in schools last longer.

These results show that educational leadership is more than just managing paperwork. It also includes mentoring, helping teachers, and making learning environments where everyone works together. Effective educational leadership builds the institutions needed for fair, strong, and high-quality early childhood education by supporting teachers' professional growth and keeping open teaching methods in place.

3.6 Community Engagement and Sustainable Educational Change

Community involvement is an important part of Development Education for keeping inclusive Early Childhood Education going, as shown by the SESEA program and the F4L longitudinal studies. Both projects understood that for kids to learn better, schools, families, communities, teacher education programs, and local education authorities need to work together. This means that help for learning needs to go beyond the classroom.

Strengthening partnerships between schools, parents, and communities was shown to increase student participation, make schools more accountable, and make learning environments that are better for kids. Parent engagement activities helped kids learn at home and encouraged everyone to take part in their education. Similarly, the F4L longitudinal studies showed that for continuous teacher professional learning to happen and for better teaching practice, mentors, school leaders, and local education authorities must work together. One person said it this way:

"Learning does not end in college. We continue learning from mentors, colleagues, and the community during practice." (Student Teacher, Uganda)

Even with these good changes, both programs found problems that made it hard for the

community to get involved and for the educational reforms to last. These problems included a lack of money, teaching and learning materials that were not up to par, ICT infrastructure that was not up to par, and parents who were not always involved. These results show that to raise the level of education, we need to keep putting money into teachers and the educational system as a whole, which helps kids learn and grow.

The results show that strong partnerships between schools, families, communities, and education systems are necessary for Early Childhood Education to be inclusive and strong. Community engagement makes Development Education interventions last longer and gives all children equal chances to learn. It does this by encouraging shared responsibility, strengthening local ownership, and providing supportive learning environments outside of school.

3.7 Barriers to Sustainable Educational Transformation

The findings indicate that even though the F4L longitudinal research and the SESEA program have made a lot of progress, there are still a lot of institutional and structural barriers that make it hard for the changes to last. These problems go beyond what teachers can do and include institutional support, ICT infrastructure, mentorship, and a lack of resources.

The SESEA program found that teachers had trouble using learner-centered and inclusive pedagogies because their classrooms were too crowded, they did not have enough teaching and learning materials, some parents were not involved enough, and they did not have enough money. In the same way, the F4L Tanzania study found that while head teachers reported big improvements in collaboration (90%), teamwork (85%), mentoring (60%), and problem-solving (65%), progress in integrating ICT remained relatively low, with only 45% reporting the highest level of improvement. This suggests that there are still problems with infrastructure and technology.

The qualitative results also show that poor infrastructure is still a big problem when it comes to keeping educational innovation alive. A Ugandan student teacher said this:

“They introduced us to ICT compared to those in the past.” (Student Teacher, Uganda)

While this quote shows progress, the Uganda study also found that there were widespread shortages of ICT infrastructure, teaching materials, electricity, and inclusive learning facilities. This made it harder for teachers to use their newly acquired digital skills in the classroom.

Problems were also clear in mentoring and getting help from institutions. Even though many student teachers had positive experiences with helpful tutors, this was not always the case at different schools. One student teacher from Kenya talked about what happens when feedback during training does not work:

“That teacher never gives work... when it’s time for feedback, she just sits there... repeating the same thing instead of pointing out where we went wrong... we waste a lot of time looking for things we do not know.” (Student Teacher, Kenya)

The findings make it clear that the success of Teacher Professional Learning depends not only on the training itself, but also on how well students are supervised and given feedback during their practicum. Similarly, the Kenya study suggests that formal mentorship systems should be made stronger because beginning teachers still do not get enough consistent support, which slows down their professional growth.

The statistics shows that we need to do more than just improve teachers' knowledge and skills in how to teach. Long-term success requires ongoing investments in ICT infrastructure, mentorship, enough teaching materials, supportive educational leadership, and better communication between schools, communities, and educational systems. Because of this, development education provides a complete plan for removing systemic and pedagogical barriers to a more inclusive and resilient education system.

3.8 Integrated Development Education Framework (IDEF)

The current study's Development Education framework was created by putting together evidence from the SESEA program and the F4L longitudinal studies. This was done with help from other research on Development Education, TPL, SEL, inclusive education, educational leadership, and community engagement. A contextually grounded framework for strengthening inclusive and resilient ECE systems in East Africa was created by finding recurring themes and relationships across the two projects instead of adapting an existing framework.

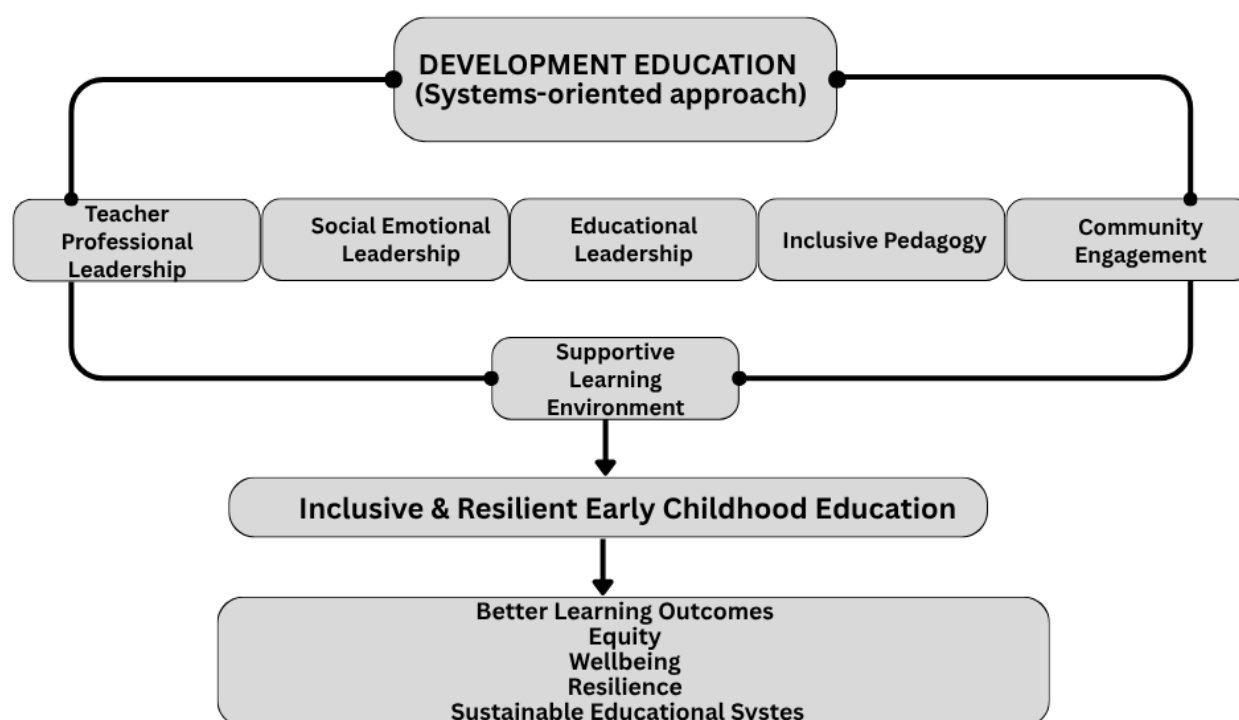


Figure 1. Integrated Development Education Framework for Advancing Inclusive and Resilient Early Childhood Education

As a model based on evidence, the synthesized framework helps with both study and practice by making Early Childhood Education more inclusive and resilient. Governments, schools that train teachers, and development partners can use it as a guide to make sure that investments in things like teacher education, student well-being, community involvement, and professional development are coordinated. Based on real-life examples from Kenya, Tanzania, and Uganda, this framework not only looks at how integrated Development Education approaches can be used, but also how well they work in different school settings.

4. Discussion

4.1 Development Education as a Catalyst for Educational Transformation

The study shows that Development Education is a complete, systems-based way to improve inclusive and resilient early childhood education by focusing on both the educational and larger social factors that affect learning. The combined data from the SESEA program and the F4L longitudinal studies shows that student outcomes improved when investments were made in teacher professional development, student well-being, and community involvement, rather than when educational interventions were made one at a time. Systems thinking says that if we want to change education in a way that lasts, we need to use approaches that strengthen both the teaching and the learning environment as a whole (Bourn, 2020; UNESCO, 2024). These results back up this suggestion. They also say that combining TPL and SEL in a Development Education framework makes processes that improve the quality of education, the resilience of learners, and inclusive ECE. This adds to earlier research that mostly looked at these parts separately instead of seeing how they fit together to change education.

4.2 Teacher Professional Learning, Social–Emotional Learning and Inclusive Pedagogy

The findings confirm that Teacher Professional Learning is the most important thing that can be done to improve teaching and move inclusive ECE forward. As Darling-Hammond et al. (2017) found, teachers who took part in ongoing professional development, mentoring, and reflective practice were more confident in using learner-centered, gender-responsive, and competency-based pedagogies. It was seen that students did better in participating, working together, and basic reading and math skills. This suggests that improving teachers' pedagogical skills directly affects kids' academic and social-emotional growth. These results back up what CASEL (2023) and Durlak et al. (2022) say about how SEL works best when it is part of regular lessons and not a separate program. SEL can help teachers in early childhood education (ECE) make their classrooms more helpful and welcoming, which helps all students be resilient, participate, and grow in a healthy way.

4.3 Leadership, Mentorship and Institutional Capacity

The study emphasizes that educational leadership and mentoring are important ways for institutions to keep improving teaching. The longitudinal studies of F4L show that collaborative leadership, professional learning communities, and structured mentoring all helped teachers improve their teaching methods and keep learning as professionals. These

results agree with what Hallinger (2011) says about how instructional and distributed leadership can help schools get better. The rise of Champion Teachers and educational leaders shows that good leadership is more than just managing people. It also involves teaching, coaching, and creating work environments where people work together. However, problems with ICT infrastructure, institutional support, and mentoring keep happening. This means that leadership development needs to be paired with ongoing investments in school resources and policy environments that make learning easier for everyone.

4.4 Community Engagement and Sustainable Educational Change

The findings show that lasting changes in education go beyond schools and involve families, communities, and education systems working together. The SESEA program showed that community involvement improved student participation, accountability, and support for their education, which is in line with Epstein's framework for school-family partnerships and UNICEF (2024). These results back up ecological views of child development, which say that kids learn from more than just what they do in school. Their family and community environments also play a big role in how they learn and grow. So, Development Education expands the ways that education can be made better by combining community involvement and social support systems with educational methods. This makes Early Childhood Education systems more fair, strong, and long-lasting.

4.5 Theoretical and Practical Implications

A significant contribution of this study was the creation of an Integrated Development Education framework that combines inclusive pedagogy, community involvement, teacher professional learning, and social and emotional learning into a single model that is focused on systems. Previous research has mostly looked at these parts separately, but the proposed framework shows how they work together to make Early Childhood Education systems stronger, more inclusive, and more resilient. The framework expands our knowledge of Development Education by placing educational quality within larger social development processes. It also gives a fuller explanation of how to change schools in a way that lasts.

When it comes to policy and practice, the results show that governments, teacher education institutions, and development partners should do more than just changing the curriculum or training teachers. Instead of that, money spent on education should go toward coordinated plans that make teachers, school leadership, student well-being, institutional ability, and community involvement stronger all at the same time. Using these kinds of unified approach is more likely to raise the quality, fairness, and stability of education while also helping to reach Sustainable Development Goal 4.

The proposed framework can also be used as a base for future studies that look at how integrated Development Education approaches can be used and evaluated in various school settings. We need comparative and longitudinal studies to find out if the framework can be used outside of East Africa and to see how it can help make Early Childhood Education systems in other low- and middle-income places stronger.

5. Conclusion

This research shows that to make Early Childhood Education more inclusive and stronger, we need to look at more than just individual educational interventions. We need to look at bigger systems of educational and social development as a whole. The study uses data from both the Strengthening Education SESEA program and the F4L longitudinal studies to show that Teacher Professional Learning, Social–Emotional Learning, inclusive pedagogy, educational leadership, and community engagement all work together to make schools better in the long term. Collectively, these interconnected parts improve teachers’ professional skills, raise the participation and health of students, and make schools more supportive places that encourage inclusion and resilience.

One important contribution that this study adds is an integrated Development Education approach that thinks of how schools can change by investing in students, teachers, schools, families, and communities all at the same time. The framework goes beyond current approaches that look at these parts separately by combining educational quality with larger social development processes. It gives East Africa’s Early Childhood Education systems a way to become more inclusive.

These results have significant implications on policies about education, how teachers are trained, and how development work is done. Integrative interventions that improve professional learning, educational leadership, learner wellbeing, inclusive pedagogy, and community partnerships should be a top priority for governments, teacher education institutions, and development partners. These well-planned investments are more likely to help make school systems more fair, strong, and long-lasting, while also speeding up progress toward Sustainable Development Goal 4. The suggested framework can also be used as a starting point for future studies that look at how well integrated Development Education methods work in different types of schools.

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Authors contributions

Dr. Nyagwegwe Wango was responsible for data collection, study design and revising. Dr Nyagwegwe Wango and Prof. Jane Rarieyadrafted the manuscript and Dr Patrick Ojock revised it. All authors read and approved the final manuscript.

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Data sharing statement

No additional data are available.

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