



Advancing Early Learning with Sustainable Funding For EdTech Solutions: Comparative Study of Policy Approaches in Nigeria and Kenya

Kasim Sodangi, A Abra Dangnan

CONTENTS

- 1.0 Executive Summary
- 2.0 Background
- 3.0 Global Trends in Early Learning Literacy
 - 3.1 Context Case Study: OECD vs Africa
 - 3.1.1 OECD Countries
 - 3.1.2 Africa
- 4.0 Current State of Funding Early Learning Literacy: Understanding the Drivers for Sustainable Funding
 - 4.1 Nigeria
 - 4.2 Kenya
 - 4.3 The Relevance of EdTech as a Key Tool for Early Learning
- **5.0 Stakeholder Analysis for Funding EdTech as Part of Early Literacy Program in Kenya and Nigeria**
- 6.0 Our Perspective on Crafting Strategies for Sustainable EdTech Funding as Part of Early Literacy Programs in Nigeria and Kenya
 - 6.1 Nigeria-Institutional Drivers for Funding EdTech-Enabled Learning in Nigeria 16
 - 6.1.1 Universal Basic Education Commission (UBEC)
 - 6.1.2 States in Nigeria
 - 6.2 Kenya-Institutional Drivers for Funding EdTech-Enabled Digital Literacy in Kenya
 - 6.2.1 Free Primary Education (FPE) Grant
 - 6.2.2 Development and Donor Partners
- 7.0 Policy Agenda Setting: Nigeria and Kenya
- 8.0 Conclusion

About API

Advocacy for Policy and Innovation (API) is a not-for-profit organization registered as a company limited by guarantee in accordance with the Companies and Allied Matters Act of Nigeria. API is established to serve as a vital soft infrastructure for the development of a robust innovation ecosystem. API provides real-time resourced information on policy/bill formulation and development to aid stakeholders in effective tracking, meaningful engagement, and substantial mitigation of policy and regulatory risks.

As stakeholders in Africa's digital economy and as a policy intelligence platform, API recognizes the unique opportunities for the Nigerian innovation ecosystem and is keen to ensure that policies, bills, and regulatory frameworks are reflective of the aspirations of the entrepreneurs, innovators, and society.

API's critical objective is to facilitate the development of market-driven policies to support the emergence of a viable entrepreneurship ecosystem in Nigeria. In that role, API seeks to disintermediate the opacity of regulatory information in Nigeria and provide optimal, up-to-date information on regulatory processes and the implication of laws and policies on the climate for smart businesses or investors. API is currently monitoring several potentially critical laws and policies being conceptualized and contemplated. Our goal is to track, analyze, consult and communicate the implications of these instruments with a view to ensuring participation and input from relevant stakeholders.



1.0 Executive Summary

Edtech in Africa has continued to grow after the COVID-19 Pandemic. Though EdTech funding is significantly lower than Fintech or Agritech in Africa, the modest growth of apps and startups foraging into the education space is impressive and promises to disrupt education in Africa. The learnings and insights from the COVID-19 period in delivering education are reshaping how education is supplied and consumed on the continent. However, the challenges of having insuffcient budgets and limited access to technology and tools to provide EdTech in Africa still need to be solved.

This whitepaper contextualises the challenge of prioritising and understanding investments in early learning in Africa by identifying the gaps and articulating approaches to funding EdTech as a component of early learning policies that can yield results. The paper compares global trends in early learning literacy in OECD countries and Africa and proposes a contextual approach to prioritising EdTech funding in Kenya and Nigeria.

Low net income of households and relatively poor governments are the bane to quality education in Africa. The paucity of public budgets and low spending for early learning has hampered the use of accelerated, augmented, and distance education in Africa. However, the need to accelerate access to education for young children underscores the need for Nigeria and Kenya to prioritise investment in technology for education. A rethink of how education is delivered can improve the effciency of budgets, close gaps such as low levels of quality teachers, access to teaching aids, enrolment of students, or even enhance the quality of teachers.

Our preliminary research also identifies the institutional levers that can be harnessed to reallocate and optimise existing budget heads in Kenya and Nigeria. Therefore, our proposal identifies the drivers of education expenditure in these countries and articulates a high-level process and approach to leveraging these drivers and prioritising EdTech as a component of national education spending.

The document proposes approaches that harness strategic stakeholder engagement to build evidence-backed consensus for developing national strategies that can dovetail into national programs and feed into budget cycles to create sustainable funding. Our initial objective is not to establish new education policies for these governments but to plug EdTech strategies as early learning tools that can be grafted into the current national policies of the governments of Kenya and Nigeria. Ultimately, our approach can create the necessary groundswell for prioritizing sustainable EdTech funding in Kenya and Nigeria, first by incorporating EdTech into current policy implementation and subsequently redesigning holistic national policies to situate education as a core component of national development.

Low net income of households and relatively poor governments are the bane to quality education in Africa.

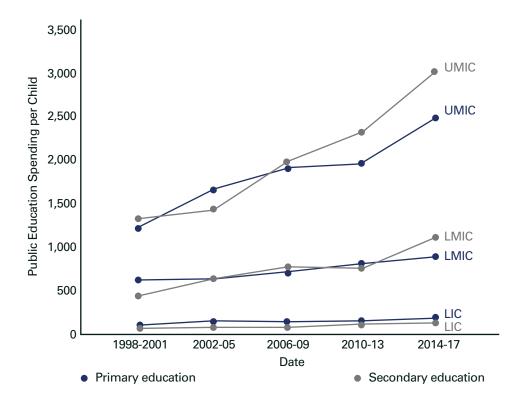
2.0 Background

Early learning literacy has been identified as a bedrock for developing life-long skills in future adult citizens, setting off a series of benefits, including cognitive readiness in later life, long-term development and well-being, and culminating in socio-economic growth and productivity.1 Quality early learning literacy establishes the foundation that subsequent education builds upon and strengthens countries' future human capital base. Some studies even suggest that there is a link between early childhood education and increased earnings in adulthood.2 Research shows that brain development is cumulativethe most critical window being below age 3, when 85% of the brain is formed. This implies that the quality of learning during a student's early years, especially from 0 to 8, influences economic well-being in adulthood. However, in many countries, there is an almost inverse relationship between public spending in early learning/education and student brain development with age.3 Consequently, these countries cannot harness the long-term developmental and economic benefits of educating a future workforce at their most receptive learning stage.

Globally, education spending has relatively increased since the early 2000s, boosting education access levels.4 This has also been instrumental in inching countries towards achieving SDG goals on education, especially SDG4:2.5 However, for low and middle-income countries where government expenditure on education is mostly below 2.5% of GDP (compared to the world average of over 4% (World Bank, 2020)); progress pales in comparison to outcomes. To match global standards, education spending in terms of GDP percentage needs to not only double. Overall, government budget allocation for education needs to climb up to 20% of the yearly budget, as outlined by the Dakar Framework for Action: Education for All, adopted by 164 countries with a 15-year target (2000-2015). Today, most countries in West and Central Africa (WCA) fall short of this target.

The challenge of optimal funding for education in Africa certainly trickles down to digital infrastructure⁶ and, by extension, EdTech. This is especially true as education evolves and the world is increasingly digitised. Today, the need to incorporate varied learning styles and remodify connected learning has necessitated EdTech integration and the adoption of E-learning to support developmental objectives. However, e-learning requires digital tools and investment in digital infrastructure, which needs improvement. Also, other situational concerns exist, such as low Internet access compared to North America or Europe⁷





Public education spending (\$ per child) between Low-Income Countries (LIC), Middle-Income Countries (LMIC) and Upper Middle-Income Countries (UMIC) between 1998 and 2017

Source: Al-Samarrai, S., fi Benveniste, L. (2022

Even so, increasing spending is only part of the issue. Resource allocation to education sub-sectors is critical in advancing early learning literacy outcomes. As in most OECD countries, early childhood education in Africa must be more funded and focused on as a policy issue. The current state of the education sector leaves gaps filled mainly by private sector providers, international partners and donors. From a sustainability perspective, the current funding patterns need to be more effcient in achieving outcomes at scale. Governments must prioritise early learning literacy as a policy agenda for sustainability, continuity and cohesion in aligning education targets across all educational levels.

3.0 Global Trends in Early Learning Literacy

3.1 Context Case Study: OECD vs Africa

Comparative case studies for early learning provide a base case for understanding the scale of the challenge for Africa. Comparing OECD and Africa highlights the problems and encourages policymakers to explore radical (disruptive) approaches. The case study also demonstrates the need for outside-the-box thinking in the age of digital technologies⁸ that can improve productivity generally and accelerate education specifically.⁹

3.1.1 OECD Countries

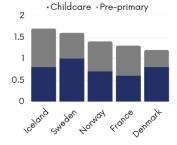
Organisation for Economic Co-operation and Development (OECD) countries globally operate the best educational sectors regarding overall best practices, especially in early childhood education.

High Public Spending Per Child

While variations exist by country, the region spends an average GDP of 0.8% on early childhood education and care alone, with France and Nordic countries spending above 1% (the top 2 are Iceland with 1.7% and Sweden 1.6%). This accounts for an average of \$5,800 per child between 0-5 years of age, with Denmark, Iceland, Norway and Sweden spending up to \$11,000. Luxembourg tops the other countries with about \$17,000 spent per child.¹⁰



Average enrolment in Early Childhood Education and primary education (age 4)



Public Spending on Early Childhood Education and care (% GDP) for top 5 OECD countries



Average total early childhood public spending Presented Per Child (PPP) (0-5 years)

Early childhood education in OECD countries (2020)

Source: Education at a Glance 2022: OECD Indicators

High Enrolment in Early Childhood Education

In OECD countries, regional variations affect enrolment rates, mainly as the age for primary school entry differs by region. Again, some countries do not require compulsory participation in formalised early childhood education except for a one-year pre-primary school programme to ease the transition from pre-primary to primary school at the required age. However, on average, enrolment in early childhood and primary education is at 89.9%.¹¹

Early Focus on STEM

A study of the curriculum frameworks of 26 OECD countries found that most had provisions for literacy/oral language and subject-based learning in Mathematics, Sciences, and Arts as compulsory parts of their pre-primary programmes. Worthy of note is the Swedish system, which insists on STEM education from age 6, when compulsory education begins, until the upper secondary school level. This position is based on the need to sustain the country's STEM-backed economy and prepare a STEM-skilled workforce for the future.

EdTech

As the world becomes more digitised, OECD countries increasingly integrate digital tools and intelligent and adaptive learning technologies into their learning practices. ¹² Investments in EdTech have contributed to the uptake of classroom analytics and interactive tools, as well as new forms of assessment involving gamification. These have improved education delivery and impact measurement.

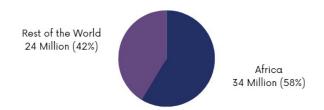
3.1.2 Africa

Africa Has the Highest Number of Out-of-School Children

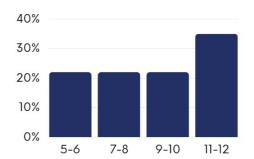
Africa, especially Sub-saharan Africa, has the highest number of out-of-school children of primary and secondary school age,¹³ even though over 50% of countries have policies/legal frameworks providing free and compulsory education for at least nine years of schooling.

High Learning Poverty Rate

The 'learning poverty' concept was introduced by the World Bank in 2019 to describe the 'inability to read or understand a simple text by the age of 10.'14 Research by the World Bank, UNESCO and other organisations suggests that 70% of children worldwide and 89% in Sub-Saharan Africa are 'learning poor.'15 In terms of minimum proficiency levels for Mathematics and Reading for primary school, disparities exist between countries, with Burundi achieving the highest levels (99% in Mathematics and 79% in Reading). However, the average minimum proficiency level in Mathematics and Reading by the end of primary education is 22% and 35%, respectively.¹⁶



Out-of-school children of primary school age in Africa and rest of the world



Number of years of free primary and secondary education guaranteed in legal frameworks in Africa

37%



Primary children in early grades who achieve minimum proficiency level in Mathematics 47%



Primary children in early grades who achieve minimum proficiency level in Reading

Early childhood education in African countries (2019)

Source: Transforming Education in Africa: A Report by UNICEF and the African Union Commission (2022)

All is not bleak

Some countries have recorded significant progress despite the challenges. Seychelles, for example, has the best educational system in Africa and has fully accomplished UNESCO's education for all objectives.¹⁷ Increasingly, African countries like Nigeria and Kenya are also leveraging earmarked taxes of statutory funds that are fully committed to identified stages of the education cycle.

The disparities identified, such as the challenges of out-of-school children and 'learning poverty,' paint a dire picture of Africa. The gap identified between the OECD and Africa suggests that adverse effects may be imminent, negatively impacting the future of African children if action is not taken to close these gaps. The availability of affordable, innovative technology that can be incorporated into policy development and execution allows Africa to redesign early learning policies to accelerate the learning and development of the continent's children.



4.0 Current State of Funding Early Learning Literacy: Understanding the Drivers for Sustainable Funding

4.1 Nigeria

Limited data on Early Learning Literacy

In Nigeria, there is limited data available on early learning literacy, negatively impacting the implementation of result-based funding and interventions. However, based on data from UNICEF:

- 75% of Nigerian children (7 to 14 years) cannot read a simple sentence¹⁸
- Nigeria currently has one of the highest rates of out-of-school children worldwide. 'One in every five of the world's out-of-school children is in Nigeria,'19 accounting for 18 million children aged between 5 and 14, despite free primary education.
- This current state disproportionately affects the Northern part of the country where economic, socio-cultural and religious-related barriers negatively impact formal education and school attendance.20

Free Primary Education

In Nigeria, the compulsory and free Universal Basic Education (UBE) scheme is backed by the Compulsory, Free Universal Basic Education and Other Related Matters Act (2004). The UBE Act provides free primary education through the UBE Commission. It covers early childhood education, pre-primary education, and nine years of schooling (six years of primary and three years of junior secondary school education).

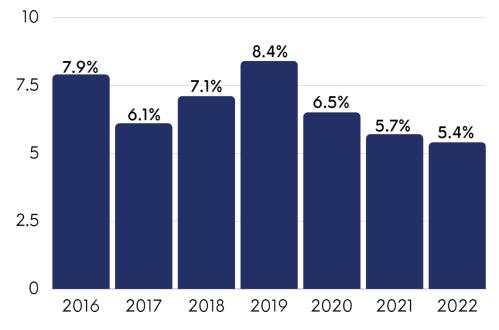
Weak Stakeholder Engagement and Low Political Commitment

The ineffciency of UBE in terms of education access rates can be linked to several factors, including discontinuity and implementation challenges as a result of varied government commitment to the education agenda and limited stakeholder engagement.²¹

Education Funding vs Allocation

Over the last decade, Nigeria's education budget has consistently been below the UNICEF recommended range of 15 to 20% of the total budget.22 Although the Federal Government proposed an 8.8% budgetary allocation for education in 2023, which is higher than the previous year, the budget remains insufficient considering the country's population and challenges in the sector.

Again, the impact of education funding on early learning may be negligible. Based on data from Budgit,23 education funding trends show that recurring expenditures followed closely by funding to tertiary institutions (primarily via the Tertiary Education Trust Fund (TETFUND) account for a chunk of the budgetary allocation. This leaves UBEC with a budget that must be shared across State Universal Basic Education Boards (SUBEBs) and allocated to pre-primary, primary and secondary education. Again, based on the UBE Act, state and local governments must fund UBE by providing 50% of funding to access government contributions (matching grants) to UBE education. However, many state governments fail to present counterpart funding, further shrinking funding access. Unaccessed matching grants from 2005-2021 for all state governments were over N41 billion, according to UBEC.²⁴



Nigeria's education budget (2016-2022) Source: Dataphyte

Comparatively Less Focus on Early Learning

Due to budgetary allocation, limited educational resources are often concentrated in secondary and tertiary education.

Preponderance of Private Sector Providers

Limited funding (mainly from states and local governments that cannot meet government matching grant access requirements), means that an increasing number of private sector providers are involved in early learning/education. This is evidenced by the rising number of private schools in the country.²⁵

Multiple Alternative Funding Sources

With inadequate public funding, early childhood education is characterised by several funders, most of whom are households that pay private providers. Other funders include NGOs, donors and development partners.

4.2 Kenya

Significant Improvements in Education Access

- Kenya currently has one of the best education systems in Sub-Saharan Africa, ranking at number 7 on the list of countries with the best education system on the continent (2022).²⁶
- Elementary education (6 years of schooling from grades 1-6, for students ages 6-11) is free and compulsory. As such, the country has one of the highest primary school enrollment rates in Sub-Saharan Africa, from 65.4% in 2000 to 84.9 in 2012²⁷, and then 93.7% just before COVID-19 (UNICEF, 2021). According to Kenya's Ministry of Education, an estimated 10.4 million children are enrolled in nationwide public and primary schools.²⁸
- Although specific results vary by county, with lower outcomes mainly concentrated in the northern counties, the Kenyan system has steadily improved elementary education. Between 2016 and 2021, grade 2 students who met minimum Mathematics proficiency rose from 79% to 81% (Global Partnership for Education, 2021).²⁹ In the 2022 Kenya Certificate of Primary Education (KCPE) examination, which marks the end of primary schooling, 76% of the students scored above 200 marks (which is the base score for an easy transition to secondary school in the 500-point exam).³⁰ Despite these, all participants have the opportunity to move on to secondary school as the government encourages 100% transition.³¹ The all-time highest KCPE scores were also recorded in 2022, although performances in Mathematics and Science dropped by about 20% compared to 2021.³²

Comparatively Higher Priority Placed on Curriculum Development and STEM

In 2017, the government, through the Kenya Institute of Curriculum Development (KICD), developed the Competency-Based Curriculum (CBC), which is based on building competency in relevant 21st-century skills, including Science, Technology, Engineering and Maths (STEM). This drove plans for a national transition from the previously operated 8-4-4 system to a 2-6-3-3-3 system.³³ This system emphasises essential skills in the formative years of life, including literacy, numeracy (Mathematics), and language (English and Kiswahili) for two years of pre-primary and six years of primary education.

Funding Education is a Government Priority

In the 2020-2021 national budget, the Kenyan government allocated 26.7% (\$4.4 billion) to education, of which 2.5% (\$109.6 million) was budgeted for free primary education alone.³⁴ The government also works with developmental partners and organisations to fund the sector.

Data-backed Interventions

With support from the Global Partnership for Education (GPE), Kenya adopted an online-based data collection approach that tracks attendance, enrollment, and educational material distribution numbers. According to GPE, this has boosted accurate data submission rates, which have risen from 60% in 2015 to 90% in 2021.³⁵ Data collection helps the government to track the impact of funds allocated and boosts accountability. Similarly, the new CB Curriculum uses a 'summative grading approach'³⁶ that categorises scores into percentage groups, which enables the government to map out interventions based on grade trends.

Ed-Tech Integration

In 2016, the Ministry of Education implemented a Digital Literacy Programme (DLP) aimed at equipping Kenyan teachers with skills to integrate ICT principles in all levels of learning, based on the UNESCO ICT Competency Framework for Teachers.³⁷ Due to budgetary restrictions, limited teacher buy-in, and poor infrastructure, amongst other challenges, DLP stalled. In the following years, most private schools intentionally integrated tech into teaching and learning methods.³⁸ However, in 2022, the government, through the Ministry of Education, announced a plan to support and engage in partnerships to enable educational technologies in Kenya.

4.3 The Relevance of EdTech as a Key Tool for Early Learning

EdTech (Educational Technology) refers to the use of IT tools and IT-enabled educational practices to facilitate and enhance learning.39 EdTech can support learning innovation and modernise traditional early learning systems to improve cognitive abilities, boost literacy skills and support knowledge for a highly competitive future.40 This is especially relevant because socio-economic functions are increasingly becoming digitised globally. As such, using technology tools to enhance education and support learning is crucial to advance key disciplines, such as STEM, which require a solid foundation facilitated by early learning. The resultant knock-on effect contributes to a future citizen base that can advance socio-economic goals and national objectives.

The current state and drivers of early learning funding demonstrate that while funding sources are meagre in Nigeria and Kenya, a combined net spend of \$7.4 billion on education within 2022/2023 suggests that Nigeria and Kenya can repurpose some expenditure to implement EdTech strategies. Implementing policies such as UBE in Nigeria and DLP in Kenya provides policy windows to engage in EdTech and develop national programs prioritising EdTech as an enabler for accelerated quality education.



5.0 Stakeholder Analysis for Funding EdTech as Part of Early Literacy Program in Kenya and Nigeria

To advance early learning literacy agendas in both countries, a policy initiative process may be pursued by aligning the EdTech funding strategy to National programs and engaging critical stakeholders. Nigeria and Kenya have existing policies and frameworks on early education which can accommodate new perspectives on EdTech as tools for accelerated learning.

Nigeria	Kenya
 Universal Basic Education Act (2004) National Policy on Education (2013) National Policy for Integrated Early Childhood Development in Nigeria (NPIECD, 2017) 	 The Kenyan Constitution (2010) provides the right to quality education for all Basic Education Act (2013) Kenya Basic Education Curriculum Framework (2017) Early Childhood Development Policy (2016) National Education Sector Strategic Plan 2018 – 2022

These existing policies and frameworks have achieved success rates and enjoy varying commitment levels, depending on the country involved. Against this background, it is crucial to:

- Identify already existing gaps within these policies/frameworks.
- Identify opportunities for advancing EdTech based on what exists.
- Identify, categorise, and work with stakeholders at different levels of influence to push for adoption simultaneously.

This will:

- Provide an existing basis for supporting the specific agendas, which may facilitate early adoption.
- Enable collaboration with the relevant stakeholders, some of whom share the same sentiments on EdTech as a crucial early learning tool, thereby shortening the early stages of agenda initiation.

Key stakeholder groups are crucial for prioritising early learning literacy as a policy agenda to drive the above objectives further. Given their varying levels of influence as regulators/influencers, overseers, or end users, they must be engaged based on their pivotal roles in existing policies and their relevance to implementing edtech as a key early education learning tool.

In Nigeria:

Regulators/Influencers	Overseers	End Users
Federal Ministry of Education (FMoE): Basic and Secondary Department: which implements the NPE for Basic and Secondary Education Technology and Science Education Department: which oversees Science education offered in primary and secondary schools Education Planning and Research Department: which evaluates and updates curriculum for different levels of education National Educational Research and Development Council (NERDC) Selected States Ministries of Education Universal Basic Education Commission (UBEC) Selected States Universal Education Boards	 Selected State Universal Education Boards Selected Host communities of Basic Education Institutions Identified Teacher Associations NGOs, IGOs and Developmental partners concerned with early learning Literacy 	 Students in states or zones that are selected Parents in states or zones that are selected

Important Early Learning Education Stakeholders in Nigeria

Source: The Compulsory, Free Universal Basic Education Act 2004 and the Reality of Out-of-School Children in Nigeria

In Kenya:

Regulators/Influencers	Overseers	
 Ministry of Education: The State Department for Early Learning and Basic Education (one of the four departments in the Ministry which implements the Basic Education Policy) Selected County Governments Kenya Institute of Curriculum Development (KICD) Kenya Institute of Education Information Communication and Technology (ICT) Authority 	 Teachers Service Commission Selected County Directors of Education NGOs, IGOs and Developmental partners concerned with early Learning Literacy 	 Students in Selected Counties Parents in Selected Counties

Critical Early Learning Education Stakeholders in Kenya

Source: Kenya Ministry of Education: National Education Sector Strategic Plan for the Period 2018-2022

6.0 Our Perspective on Crafting Strategies for Sustainable EdTech Funding as Part of Early Literacy Programs in Nigeria and Kenya

Given our general understanding of policy direction, budgetary approaches and constraints in funding early literacy education in Kenya and Nigeria, we propose that the approach should not be the development of holistic policies for EdTech as part of early literacy programs in both countries. We alternatively propose grafting ideas into existing policies and programs to prioritise early funding for EdTech as an effcient (cost-saving) and effective strategy for accelerating early literacy.

6.1 Nigeria-Institutional Drivers for Funding EdTech-Enabled Learning in Nigeria

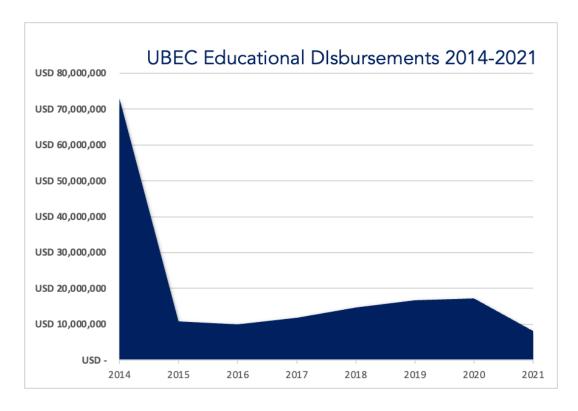
We have identified three critical institutional drivers for sustainable funding for EdTech-enabled early literacy in Nigeria:

- 1. Universal Basic Education Commission (UBEC) counterpart funding
- 2. State Government counterpart funding for UBEC and annual budgets
- 3. Private Donor Agencies

6.1.1Universal Basic Education Commission (UBEC)

The Nigerian government funds education via budget allocations to several departments in the sector. However, the Compulsory, Free Universal Basic Education Act 2004 provides that every government in Nigeria will provide free, compulsory and universal basic education for children of primary and junior secondary school age. The Act establishes UBEC for formulation and execution of policies to implement Universal Basic Education in Nigeria and to prescribe minimum standards for quality education in Nigeria. The Commission is also responsible for ensuring that "necessary instruction materials are in use in Nigeria's early childhood care and development centres, primary and junior secondary schools". The Act also creates a statutory fund for allocating not less than 2% of the Federal Government's Consolidated Revenue fund.

UBEC allocated approximately \$1.4 billion between 2015 and 2021 for primary education in Nigeria⁴¹ and is a critical stakeholder in determining funding sources for Edtech for early literacy in Nigeria. Beyond being a source of capital, it also warehouses research experience and information to support the conceptualisation of an essential strategy for sustained government procurement and partnership to aid the development of educational tools.



UBEC Educational Disbursements (2014-2021) Source https://ubec.gov.ng/disbursements/

6.1.2 States in Nigeria

Although UBEC allocates funding for primary education, state governments, as part of the federating units in Nigeria, have a responsibility to match UBEC funding for education by 50% to deliver on primary education and early literacy programs. As such, state governments also cumulatively expend huge budgets on primary education. For example, the 2023 budgetary allocation for education was approximately N157 billion for Lagos State, 42 N65 billion for Kaduna State, 43 N37 billion for Rivers State44 and N45 billion for Cross River State; 45 representing 8.9%, 22%, 6.7%, 13.6% of the entire state budget respectively. However, some states cannot provide the required matching grant to access UBEC funding, which leaves a portion of the UBEC allocation unclaimed. In 2021, UBEC's total un-accessed funds amounted to \$88.9 million (N41 billion). However, we know of projects underway to prepare states to access these funds and prioritise funding for early learning in education.

6.2 Kenya-Institutional Drivers for Funding EdTech-Enabled Digital Literacy in Kenya

In Kenya, education funding is mainly driven by the government via direct funds for sub-sectors, including the Free Primary Education (FPE) grant, Free Day Secondary Funds (CDF) and the County Development Funds.47 This is supported by funding from donors and development partners. Between 2013/14 and 2017/18, the Kenyan education sector spent approximately \$5.7 billion (Kshs.767 billion) on the primary education sector.⁴⁸

6.2.1 Free Primary Education (FPE) Grant

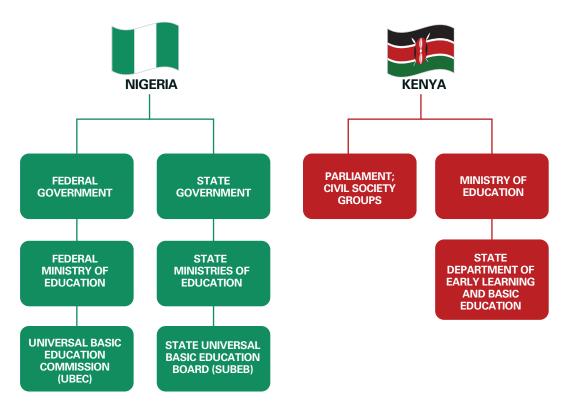
According to the Kenyan Education Sector Report (2021), about \$720 million (Kshs.95.6 billion) was budgeted for early learning and basic education in 2021 alone, higher than the budget from the previous year by 1.4% to account for an increase in the number of schools supported by the FPE grant (from 22,674 schools in 2018/19 to 22,904 in 2019/20; and 22,998 schools in 2020/21).49 About \$91 million (Kshs.12.2 billion) was budgeted to cover free primary education grants, serving 8,592,810 pupils in 2020/21. In the 2024/2025 financial year, \$79.6 million (Kshs.10.3 billion) was spent on free primary education.50 The Free Primary Education Grant administered by the Ministry of Education is pivotal in determining education allocation for all regions in Kenya. Therefore, the critical task is to align the National Government to prioritise EdTech in the budgeting cycle and ensure that expenditure prioritises EdTech tools for early literacy development and programs.

6.2.2 Development and Donor Partners

Development partners fund specific programs in collaboration with concerned departments in the Kenya Ministry of Education. These include the World Bank, which is currently implementing the Kenya Primary Education Equity in Learning Programme (KPEEL) in collaboration with the Ministry's State Department of Early Learning and Basic Education, and the Global Partnership for Education (GPE) which funded the Kenya Primary Education Development Project (aimed at boosting early grade mathematics competencies amongst other objectives).⁵¹

7.0 Policy Agenda Setting: Nigeria and Kenya

The stakeholder groups relevant to mainstreaming EdTech in early learning hold varying degrees of influence in shaping an early learning literacy agenda in both countries. Therefore, it is crucial to work with these groups based on their roles and capacities to drive policy agenda-setting. Consequently, country-specific strategies are essential to putting EdTech in early childhood learning on these countries' policy agendas.



Key stakeholder groups for early learning literacy agenda setting in Nigeria and Kenya

Based on the current state of early learning in Nigeria and Kenya and against the backdrop of global best practices, we propose the following broad goals to ensure EdTech prioritisation:

- Need to establish significance/relevance and developmental impact of EdTech before pursuing issue as a policy agenda.
- There is a push to recognise the need for enhanced early learning tools, evidenced by the
 pronouncement on the criticality of tools in policies regarding free and compulsory elementary
 education.
- Recognise that there are varying degrees of commitment and political will towards actualising
 educational targets, which may influence the reception and adoption of specific initiatives in the
 sector. Therefore, the objective is to move EdTech up the policy-maker's agenda.

In Kenya and Nigeria, the public policy process to ensure that policy ideas are prioritised summarily follows five processes with country-specific variations depending on the type of stakeholders involved at different stages.



KENYA

In Nigeria, political executives, legislators, bureaucrats, judicial functionaries, interest groups or special commissions or panels can initiate the policy process.

An issue is likely to quickly get into the policy agenda of decision makers if it has gotten the attention of the public or gained wide public attention.

This is usually influenced by media reporting, by converting the issues into policy agendas or collective actions by interest groups and other stakeholders.

International organizations also play a critical role in the policy agenda process, as they sometimes influence issues that should be prioritized on the policy agenda.



Proposal for Policy Agenda could come from the executive and its entities, political/ organized groups or individual citizens (under the principle of public participation).

Kenya operates an evidencebased policy development framework. A policy proposal must be accompanied with a policy brief with extensive research on the policy issue.

Also, Kenya's policy development is implemented at national and county governance levels. Determining who oversees specific policy agendas is important before making a proposal.

The Kenya Law Reform Commission (KLRC) and the Kenya Institute of Public Policy Research and Analysis (KIPPRA) are obligated to support citizens in policy development.

8.0 Conclusion

The quality of early learning is crucial for overall cognitive development, as it creates a base for lifelong learning abilities and lays the foundation for citizens who can meaningfully contribute to the socio-economic development of countries and foster a strengthened and future-ready human capital base. As core socio-economic functions become increasingly digitised, technology has emerged as a tool that enables education and drives transformative learning experiences. In addition to rising interest in building competency in relevant 21st-century skills, especially in STEM disciplines, this has boosted the need for driving EdTech and integrating digital tools and adaptive learning technologies into learning processes. Policymakers worldwide, especially in OECD countries, increasingly favour the implementation of EdTech to drive early learning literacy. This, however, requires substantial investment backed by political commitment.

In Nigeria and Kenya, education takes up substantial budgetary allocations, and despite context-specific challenges, mainstreaming EdTech in early learning is crucial for securing the future of a teeming young population in Nigeria and consolidating the gains of educational growth and development in Kenya. Sustainably achieving this requires buy-in from critical stakeholders who can adequately channel partner funding and sustain funding through budgetary allocations. However, this depends on the prioritisation of EdTech in early learning in these countries.

Considering the existence of policies and programs that support early learning, this whitepaper proposes that sustainably mainstreaming EdTech in early literacy requires grafting ideas into existing policies and programs to prioritise early funding for EdTech as an effcient (cost-saving) and effective strategy for accelerating early literacy. This will bring early learning literacy into focus, enable the mainstreaming of EdTech as a policy-backed initiative and support sustainable funding.

Endnotes

1. Jan Peterson Child Development Centre (2024). The Impact of Early Childhood Education on Lifelong Learning.

https://janpetersoncdc.com/blog/the-impact-of-early-childhood-education-on-lifelong-learning/

- 2. Executive Office of the President of the United States. (2014). The Economics OF Early Childhood Investments. In obama whitehouse.archives.gov. Retrieved from https://bit.ly/3LIEF2r
- 3. TED. (2020, January 16). How to expand your baby's potential with education from birth | Zahra Kassam [Video]. YouTube. https://www.youtube.com/watch?v=oXYre2T3p_k
- 4. Al-Samarrai, S., & Benveniste, L. (2022). Financing Education at the Bottom of the Pyramid. Marginalization, and Improving the Quality of Education in Low-Income Countries. Openbook Publishers. https://doi.org/10.11647/OBP.0256.07
- 5. SDG 4:2 advocates for equal access to quality pre-primary education, and pushes that "all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education."
- 6. Challenge of educational digital Infrastructure in Africa: A tale of hope and disillusionment. file:///Users/ruwansanyi/Downloads/Challenges_of_educational_digital_infrastructure_i.pdf
- 7. Miniwatts Marketing Group (2019). World internet users and 2019 population stats. Retrieved from https://www.internetworldstats.com/stats.htm
- 8. Public Policies in the Age of Digital Disruption.
- 9. Can EdTech Solve Africa's Education Gap?
- 10. OECD. (2022). Indicator B2. How do early childhood education systems differ around the world? In Education at a Glance 2022. OECD-ilibrary.org. https://bit.ly/3TLOt7R
- 11. OECD. (2022). Chapter B: Access to education, participation and progression In Education at a Glance 2022. OECD-ilibrary.org. https://bit.ly/3TLOt7R
- 12. OECD (2023). OECD Digital Education Outlook 2023. https://www.oecd.org/en/publications/2023/12/oecd-digital-education-outlook-2023_c827b81a.html
- 13. UNESCO (2023). 250 million children out-of-school: What you need to know about UNESCO's latest education data.

https://www.unesco.org/en/articles/250-million-children-out-school-what-you-need-know-about-unesco s-latest-education-data

14. UNICEF, & African Union. (2022). Transforming Education in Africa: An evidence-based overview and recommendations for long-term improvements.

https://au.int/sites/default/files/documents/40839-doc-Transforming_Education_in_Africa_Main_Report.pdf

15. Worldbank (2022). 70% of 10-Year-Olds now in Learning Poverty, Unable to Read and Understand a Simple Text.

https://www.worldbank.org/en/news/press-release/2022/06/23/70-of-10-year-olds-now-in-learning-pover ty-unable-to-read-and-understand-a-simple-text

16. African Union and UNICEF (2022). Transforming Education in Africa: An Evidence-Based Overview and Recommendations for Longterm Improvements.

https://au.int/sites/default/files/documents/40839-doc-Transforming_Education_in_Africa_Main_Report.pdf

17. African Union and UNICEF (2022). Transforming Education in Africa: An Evidence-Based Overview and Recommendations for Longterm Improvements.

https://au.int/sites/default/files/documents/40839-doc-Transforming_Education_in_Africa_Main_Report.pdf

18. Onyedinefu, G. (2023, January 24). 75 percent of Nigerian children can't read simple sentence –UNICEF. Business Day.

https://businessday.ng/news/article/75-percent-of-nigerian-children-cant-read-simple-sentence-unicef/

- 19. UNICEF. (2022). Education-Nigeria. unicef.org. https://www.unicef.org/nigeria/education
- 20. UNICEF. (2022). Education-Nigeria. unicef.org. https://www.unicef.org/nigeria/education
- 21. Centre for Public Impact. (1997, May 17). Universal Basic Education in Nigeria. https://www.centreforpublicimpact.org/case-study/universal-basic-education-nigeria
- 22. Oladipo V. (2024, July). 2024 JAMB Scores: The Impact of Budget Allocation on Education Outcomes. Veriv Africa.

https://www.verivafrica.com/insights/2024-jamb-scores-the-impact-of-budget-allocation-on-education-outcomes#:~:text=Nigeria's%20Education%20Budget%20Allocation&text=The%202024%20budget%20allocation%20provides,other%20ministries%2C%20departments%20and%20agencies.

- 23. Budgit (2023). Nigeria 2023 FG Budget Review: Pulse for a New Administration. https://budgit.org/wp-content/uploads/2023/05/2023-FG-Budget-Analysis-pdf.pdf
- 24. Universal Basic Education Commission. Unaccessed matching grant from (2005 2021). Retrieved March 16, 2023, from https://ubec.gov.ng/unaccessed/
- 25. Angwaomaodoko E.A (2024). An Analytical Study of the Proliferation of Private Schools in Nigeria
- 26. Nduka, C. (2022, September 18). Top 10 countries with the best education system in Africa. Business Insider.

https://businessday.ng/news/article/75-percent-of-nigerian-children-cant-read-simple-sentence-unicef/

27. Wolf, S., Turner, L., Jukes, M., & Dubeck, M. (2018). Changing literacy instruction in Kenyan classrooms: Assessing pathways of influence to improved early literacy outcomes in the HALI intervention. In International Journal of Educational Development.

https://www.sciencedirect.com/science/article/abs/pii/S0738059317304522

28. Ministry of Education. Basic Education Programmes.

https://www.education.go.ke/basic-education-programmes#:~:text=The%20current%20primary%20school%20population,in%202002%20and%20other%20interventions.

- 29. Global Partnership for Education. (2023, March). Kenya: Investing in Education for a Better Future. https://www.globalpartnership.org/results/stories-of-change/kenya-investing-education-better-future
- 30. Mutura, J. (2023, January). Two boys share top slot as 2022 candidates record improvement. Standard Media.

https://www.standardmedia.co.ke/education/article/2001463700/two-boys-share-top-slot-as-2022-candidates-record-improvement

- 31. Ngong Road Children's Foundation Kenya. School Marks Explained. https://bit.ly/3z9no5c
- 32. Mutua, J. (2022, December). Students with above 400 marks in KCPE fall 20pc on lower Maths, Science score. Business Daily. https://bit.ly/3z5p6EC
- 33. Oxford Business Group. Changes to Kenya's Education System Seek to Expand Access and Raise Standards
- 34. International Trade Administration (March, 2023). Kenya Education and Training Services Industry Snapshot
- 35. Global Partnership for Education. (2023, March). Kenya: Investing in Education for a Better Future. https://www.globalpartnership.org/results/stories-of-change/kenya-investing-education-better-future
- 36. Ngong Road Children's Foundation Kenya. School Marks Explained. https://bit.ly/3z9no5c
- 37. UNESCO. (2016, February 2016). ICT integration in education in Kenya: Roll-out of the Digital Literacy Programme. Unesco.org.

https://www.unesco.org/en/articles/ict-integration-education-kenya-roll-out-digital-literacy-programme

38. Wamari, E. (2022, December 06). Kenya can't afford to dither on education technology anymore. Business Insider.

https://www.businessdailyafrica.com/bd/opinion-analysis/columnists/kenya-can-t-afford-to-dither on-education-technology-anymore--4044154

- 39. Builtln. What is EdTech? https://builtin.com/edtech
- 40. Emi Chiara et al (2024). Educational Technology in Early Childhood Education: A Systematic Literature Review. The Eurasia Proceedings of Educational & Social Sciences (EPESS), 2024. Volume
- 35, Pages 38-45. http://dx.doi.org/10.55549/epess.799
- 41. UBEC Disbursements. https://ubec.gov.ng/disbursements/
- 42. Olabiyo L. (2023, Feb). Budget: Lagos reduces allocation for health, and education, as infrastructure gets lion's share. Sun News.

https://sunnewsonline.com/budget-lagos-reduces-allocation-for-health-education-as-infrastructure-gets-lions-share/

- 43. Israel B. (2022, Oct). Kaduna presents N291.9bn budget; education gets N65bn. Punch. https://punchng.com/kaduna-presents-n291-9bn-budget-education-gets-n65bn/#:~:text=Kindly%20share%20this%20story%3A,billion%202023%20propose%20draft%20budget.
- 44. Tribune Online (2022, Nov). Wike presents N550.6bn 2023 budget to Rivers Assembly

- 45. Open States (2023, March). Data Sets: Cross River State Approved 2023 Budget. Openstates.ng. https://openstates.ng/cross-river/dataset/1386/cross-river%20state%20approved%20budget%20document%20for%20the%20year%202023
- 46. Erunke J. (2021, March). 36 states, FCT's un-accessed fund in our coffers now N41bn, says UBEC.Vanguard.

https://www.vanguardngr.com/2021/03/36-states-fcts-un-accessed-fund-in-our-coffers-now-n41bn-says-ubec/

- 47. Itegi F. (2016). Financing Secondary Education in Kenya: Exploring Strategic Management Approach for Improving Quality of Education. Universal Journal of Educational Research. https://files.eric.ed.gov/fulltext/EJ1099666.pdf
- 48. The Kenya Institute for Public Policy Research and Analysis (KIPPRA).(2019). Education and Training Budget Brief. KIPPRA Policy Brief No. 64/2018-2019.

https://www.unicef.org/esa/sites/unicef.org.esa/files/2019-03/UNICEF-Kenya-2018-Education-Budget-Brief.pdf

49. Education Sector Working Group (2021). Republic of Kenya Education Sector Report-Medium Term Expenditure Framework 2022/23-2024/25.

https://www.treasury.go.ke/wp-content/uploads/2021/10/Education-Sector-Final-Report-13.10.2021.pdf

50. Education Sector Working Group (2023). Republic of Kenya Education Sector Report-FY2024/25-2026/7.

https://www.treasury.go.ke/wp-content/uploads/2023/12/EDUCATION-SECTOR-REPORT-FY-2024-25-20 26-27.pdf

51. https://www.education.go.ke/early-learning-basic-education-programmes