ICT-Enabled Hybrid Entrepreneurship and Youth Employability in Nigeria: A Qualitative Archival-Documentary Case Study of uLesson's Digital Tutoring Ecosystem

Abstract

Purpose: This paper examines how ICT-enabled digital tutoring platforms may contribute to youth employability and human-capital development in Nigeria, using uLesson as a qualitative archival-documentary case of hybrid entrepreneurship in African EdTech.

Design/Methodology/Approach: The study analyses publicly available documents published between 2019 and 2025, including company announcements, founder interviews, investor communications, media reports, policy documents, and sector reports. The analysis uses thematic coding guided by entrepreneurial ecosystem, digital inclusion, frugal innovation, and hybrid entrepreneurship perspectives, while distinguishing documented evidence from analytical inference.

Findings: Five themes show how uLesson relates to Nigeria's youth-employment challenge through employability pathways rather than measurable unemployment reduction: response to educational institutional voids; frugal design for affordability and access; hybrid commercial-developmental logic; platform-related work and digital-skill pathways; and ecosystem partnerships with investors, telecommunications actors, and education stakeholders. Public archival evidence supports claims about platform activities, design choices, and partnerships, but not causal claims about job creation, wages, user labour outcomes, or national unemployment effects.

Originality/Value: The paper integrates entrepreneurial ecosystem, digital inclusion/frugal innovation, hybrid entrepreneurship, and youth employability perspectives into a single framework for analysing African EdTech platforms under institutional constraints.

Practical and Policy Implications: The findings emphasise affordable access, impact measurement, and partnerships linking digital learning to employability.

Keywords: Digital tutoring; ICT innovation; hybrid entrepreneurship; digital inclusion; frugal innovation; youth employability; archival case study; Nigeria; uLesson.

1. Introduction

Africa is undergoing rapid digitalisation driven by expanding mobile connectivity, a youthful population, and growing adoption of technology-based learning platforms. With over 70% of Africans under 30, education systems are under pressure to equip young people with capabilities that match changing labour-market requirements (African Development Bank, 2023). Although mobile broadband penetration reached 28% in 2023 and is projected to exceed 35% by 2025 (GSMA, 2024), bandwidth limitations, high data costs, uneven digital skills, and weak institutional readiness continue to restrict equitable access to learning and economic opportunity.

Digital tutoring platforms respond to these disruptions by offering curriculum-aligned content through mobile-first, low-bandwidth, and offline-capable delivery models (Dahir, 2021; Rodriguez-Segura, 2022). The COVID-19 pandemic further exposed weaknesses in classroom-centred education and accelerated digital learning experimentation across Africa (World Bank, 2020). Because youth employability reflects skills mismatches and weak school-to-work transitions, not job scarcity alone (African Development Bank, 2023; Patel et al., 2020), EdTech should not be treated as directly reducing national unemployment. Instead, it may support employability through learning access, digital capability, self-directed study, and platform-related work.

Although scholars have examined digital entrepreneurship and EdTech innovation in developed markets (George et al., 2012), limited research explores how African digital tutoring enterprises combine commercial and developmental logics within institutional voids. Existing studies focus either on scaling challenges facing African tech ventures (Friederici et al., 2020) or on social enterprises' developmental missions (Mair & Martí, 2009), but rarely on hybrid organisations that blend both. Similarly, digital inclusion research highlights access barriers (Zinnbauer, 2007), yet less is known about how platform design, ecosystem partnerships, and frugal ICT innovation create employability-related pathways alongside educational access.

This study addresses these gaps through a qualitative archival-documentary single-case analysis of uLesson, a prominent Nigerian digital tutoring platform founded in 2019. uLesson is analytically relevant because public records document its curriculum-aligned content, venture

financing, mobile-first design, and partnerships (Bright, 2019; Dahir, 2021; Kene-Okafor, 2021; uLesson, 2021a, 2021b). Operating amid Nigeria's infrastructure deficits, regulatory complexity, and socio-economic inequality (Webb et al., 2009), uLesson is examined not as evidence of unemployment reduction, but as an illustrative case of how African digital platforms may convert educational access into human-capital and employability pathways.

The study is guided by three research questions:

1. How do ICT-enabled innovations enable digital tutoring platforms to address institutional voids and access constraints in African education systems?
2. What hybrid entrepreneurial mechanisms allow digital tutoring enterprises to balance commercial sustainability with developmental value?
3. Through what documented and inferable pathways do digital tutoring ecosystems contribute to youth employability and human-capital development in resource-constrained contexts?

By integrating entrepreneurial ecosystem theory (Spigel, 2017; Stam & Van de Ven, 2021), digital inclusion frameworks (Zinnbauer, 2007), hybrid entrepreneurship perspectives (Battilana & Lee, 2014; Doherty et al., 2014), and frugal innovation scholarship (Bhatti & Ventresca, 2013; Radjou & Prabhu, 2015), the study develops a framework for understanding how African digital enterprises navigate educational, labour-market, and infrastructural disruptions while responding to digitalisation, platformisation, and inclusive innovation.

2. Literature Review

2.1 Entrepreneurial Ecosystems in African Contexts

Entrepreneurial ecosystems consist of interdependent actors, institutions, resources, and processes that support new venture creation and growth (Spigel, 2017; Stam & Van de Ven, 2021). They include human and financial capital, market access, institutional support, infrastructure, and cultural norms, but are also relational systems formed through interactions among entrepreneurs, investors, regulators, customers, and support organisations.

In African contexts, entrepreneurial ecosystems are frequently shaped by institutional voids: gaps in regulatory systems, finance, infrastructure, market information, and human-capital development (Mair & Martí, 2009; Webb et al., 2009). These voids constrain entrepreneurial activity by increasing uncertainty and transaction costs, yet they may also create opportunities for ventures that provide institutional substitutes or develop context-sensitive workarounds. African technology ventures often compensate for weak formal institutions by building relationships with incubators, investors, telecommunications providers, policymakers, and development actors (Friederici et al., 2020; Ndemo & Weiss, 2017).

Digital education ventures face distinctive ecosystem conditions. Unlike many consumer-technology platforms, EdTech ventures operate in a sector where legitimacy depends not only on market adoption but also on curriculum alignment, parental trust, public-sector recognition, affordability, and educational relevance. Education is widely treated as a public good, which means that EdTech platforms must balance market growth with social expectations around access and learning quality (Rodriguez-Segura, 2022). Yet sector-specific research on how African digital tutoring ventures navigate these ecosystem conditions remains limited.

2.2 Digital Inclusion and Frugal Innovation

Digital inclusion refers to equitable access to, and meaningful use of, information and communication technologies for social and economic participation (Zinnbauer, 2007). It includes not only connectivity but also affordability, digital capability, relevant content, device access, and the capacity to use technology productively (GSMA, 2024). In many African settings, digital inclusion is constrained by uneven broadband coverage, high data costs, limited household purchasing power, low digital literacy, and insufficient locally relevant educational content (African Development Bank, 2023).

Frugal innovation provides an important lens for understanding how digital ventures respond to such constraints. It refers to the development of affordable, functional, and resource-efficient solutions under conditions of scarcity (Bhatti & Ventresca, 2013; Radjou & Prabhu, 2015). Frugal innovation is not simply cost reduction; it involves redesigning products, services, and delivery systems around essential user needs and infrastructural realities. In African EdTech, frugal design may include mobile-first interfaces, low-bandwidth delivery, compressed video, offline access, modular lessons, localised content, and pricing models adapted to lower-income households (Dahir, 2021; uLesson, 2021a).

Digital tutoring platforms are therefore relevant to digital inclusion because they can translate connectivity into usable educational access. However, access alone does not guarantee learning, employability, or socio-economic mobility. The literature still provides limited explanation of how frugal EdTech design connects to broader human-capital development, particularly in contexts where digital learning is expected to address both educational inequality and youth labour-market challenges.

2.3 Hybrid Entrepreneurship and Dual Logics

Hybrid organisations pursue dual objectives, combining commercial activity with social or developmental goals (Battilana & Lee, 2014; Doherty et al., 2014). They challenge conventional distinctions between profit-seeking firms and mission-driven social enterprises by integrating revenue generation with impact-oriented commitments (Pache & Santos, 2013). In African contexts, hybrid entrepreneurship often emerges where purely commercial models struggle

because of low purchasing power, while purely philanthropic models struggle because of donor dependence and scalability constraints (Zahra et al., 2009).

Hybrid ventures must manage tensions between commercial and social logics. Commercial logic emphasises efficiency, growth, profitability, and investor returns, while social logic emphasises access, equity, inclusion, and service to underserved populations (Pache & Santos, 2013). These tensions are especially visible in EdTech, where ventures must attract paying users and investors while addressing educational exclusion and affordability. Mechanisms such as tiered pricing, cross-subsidisation, freemium models, impact investment, public-sector partnerships, and development-sector collaborations may help ventures manage these competing demands (Battilana & Lee, 2014; Doherty et al., 2014).

Digital tutoring platforms in Africa can therefore be interpreted as hybrid organisations when they combine subscription-based revenue, technology-enabled scaling, and developmental claims around educational access. However, the literature has not sufficiently examined how such hybridity operates in practice within African EdTech ecosystems. In particular, limited research explains how commercial sustainability, frugal design, digital inclusion, and youth employability are connected within the same organisational model.

2.4 Youth Employability and Human-Capital Development Through Digital Platforms

Youth unemployment and underemployment in Africa are shaped by skills mismatches, limited formal-sector absorption, unequal educational quality, weak school-to-work transitions, and uneven digital capabilities (African Development Bank, 2023). Patel et al. (2020) show that non-economic indicators, including resilience, self-efficacy, and future orientation, can mark progress in youth employability programmes. Digital tutoring platforms should therefore not be expected to solve macroeconomic unemployment directly; their relevance lies in strengthening foundational capabilities through learning access, digital literacy, self-directed study, and platform-mediated work.

Digital platforms may influence youth employability through three broad pathways. The first is direct organisational or platform-related work, including roles in curriculum development, multimedia production, software engineering, data analysis, customer support, tutoring,

community outreach, and digital marketing. The second is indirect capability development, where users gain subject knowledge, digital confidence, study skills, and familiarity with technology-mediated learning. The third is ecosystem participation, where platform growth stimulates demand for complementary actors such as telecommunications providers, content creators, educators, sales agents, and technology support services.

At the same time, debates on platform work remain important. Critics argue that platform-mediated work can be precarious, insecure, and weakly regulated, with limited progression opportunities (Woodcock & Graham, 2020). Others argue that digital platforms may provide flexible income, entry-level experience, and skills acquisition in labour markets where formal employment opportunities are limited (Graham & Anwar, 2019). For African EdTech, the key empirical issue is therefore not whether platforms automatically create "good jobs," but whether they generate transferable capabilities, sustainable work pathways, and credible routes into wider labour-market participation. Consequently, this study uses youth employability rather than direct unemployment reduction as its analytical outcome.

2.5 Integrating Perspectives: Towards an ICT-Enabled Hybrid Employability Framework

The reviewed literature suggests that African digital tutoring platforms are best understood through an integrated framework rather than through any single theoretical lens. Entrepreneurial ecosystem theory explains how ventures mobilise resources, legitimacy, partnerships, and institutional support. Digital inclusion explains why access, affordability, capability, and local relevance matter. Frugal innovation explains how ventures design for infrastructural and economic constraints. Hybrid entrepreneurship explains how commercial and developmental logics are combined and managed.

Table 1. Integrated Analytical Framework for ICT-Enabled Hybrid Digital Tutoring Platforms

Perspective	Analytical role in this study	Expected pathway in digital tutoring ecosystems
Entrepreneurial ecosystem theory	Explains resource mobilisation and legitimacy	Investors, telcos, regulators, schools, incubators, and development partners enable scaling
Digital inclusion	Explains access and participation barriers	Affordability, connectivity, device access, digital skills, and local content shape meaningful use
Frugal innovation	Explains technology design under constraint	Mobile-first, low-bandwidth, offline-capable, and locally adapted tools reduce access barriers
Hybrid entrepreneurship	Explains commercial-developmental tension	Subscription revenue, impact capital, partnerships, and social mission are combined
Youth employability outcome	Explains labour-market relevance	Digital skills, tutoring, content production, technology roles, and learner capability pathways

Together, these perspectives form a mechanism-based framework: institutional voids create educational need and entrepreneurial opportunity; frugal ICT design reduces access barriers; digital inclusion enables participation; hybrid entrepreneurship sustains the platform through commercial and developmental resources; and ecosystem relationships provide legitimacy, capital, infrastructure, and reach. Youth employability is therefore treated not as a measured unemployment outcome, but as documented and inferable pathways through which platform activity may support human-capital development. Applying this framework to uLesson enables analytical, rather than statistical, insight into ICT-enabled hybrid entrepreneurship in a resource-constrained African context.

3. Methodology

3.1 Research Design and Case Selection

This study adopts a qualitative archival-documentary single-case design (Yin, 2018; Bowen, 2009). The term archival documentary refers to the systematic analysis of pre-existing public records rather than primary interviews, surveys, or internal organisational data. This design is appropriate for exploratory “how” questions where the aim is to develop contextual and theory-building insight rather than statistical generalisation (Eisenhardt & Graebner, 2007; Gioia et al., 2013).

uLesson was selected as a theoretically relevant case because it is a prominent Nigerian EdTech platform that combines digital tutoring, venture financing, mobile-first technology, curriculum alignment, and developmental claims around educational access. The case is suitable for examining ICT-enabled hybrid entrepreneurship because it operates within an institutionally constrained environment marked by infrastructure gaps, affordability challenges, educational inequality, and youth employability concerns. The study therefore seeks analytical generalisation: it uses the uLesson case to develop mechanism-based understanding of how African digital tutoring platforms may connect digital inclusion, frugal innovation, hybrid entrepreneurship, ecosystem partnerships, and youth employability.

The study follows an interpretivist orientation because it examines meanings, strategic narratives, institutional context, and publicly documented organisational practices rather than testing causal relationships. Published founder interviews and investor statements are treated as archival narratives that reveal strategic sense-making, not as primary interview data collected by the researcher.

3.2 Data Sources and Corpus Construction

The archival corpus covers publicly available documents published between 2019 and 2025, corresponding to uLesson's founding and early scaling period. Documents were identified through structured searches using uLesson, Nigerian EdTech, digital tutoring Africa, uLesson funding, uLesson partnerships, and digital learning Nigeria as key terms. Sources were screened for relevance, credibility, proximity to the case, and usefulness for triangulation.

To address the limitations of secondary data, the study distinguishes between two categories of evidence. First, contextual secondary sources, including institutional reports, policy documents, and sector analyses, were used to frame Nigeria's digital inclusion, education, and youth-employability environment. These sources inform the background and literature review rather than serving as direct evidence of uLesson's organisational outcomes. Second, case-specific archival sources, including company announcements, investor communications, published founder interviews, media reports, partnership announcements, and ecosystem reports, were used

as the empirical basis for analysing uLesson's platform model, partnerships, technological design, and employability pathways.

3.3 Evidence Status: Data and No Data

Because the study relies on publicly available archival evidence, claims were classified according to evidentiary status. This protocol clarifies what the study can and cannot conclude.

Table 2. Evidence-status protocol for archival data

Evidence status	Examples	Permitted claim
Documented public data	Company announcements, investor releases, partnership reports, product descriptions, media coverage	Platform activities, product features, funding events, public partnerships, and stated organisational strategy
Reported actor claims	Published founder interviews, investor statements, media quotations	Strategic intent, founder sense-making, and stakeholder interpretations, treated cautiously as reported narratives
Analytical inference	Theoretical interpretation of platform activities through ecosystem, inclusion, frugal innovation, and hybrid entrepreneurship lenses	Plausible mechanisms linking digital tutoring platforms to youth employability and human-capital development
No data in this study	Internal HR records, wages, employee interviews, tutor contracts, user learning outcomes, graduate employment outcomes	No claims are made about net job creation, wage quality, staff experience, career mobility, user labour-market outcomes, or causal effects on Nigeria's youth unemployment rate

The paper does not claim that uLesson directly reduces youth unemployment. Instead, it analyses documented and inferable pathways through which uLesson may contribute to youth employability, digital capability, and platform-related work.

3.4 Data Analysis

Data analysis followed an abductive thematic coding process, combining inductive attention to the documents with sensitising concepts from entrepreneurial ecosystem theory, digital inclusion, frugal innovation, hybrid entrepreneurship, and youth employability (Braun & Clarke, 2006;

Gioia et al., 2013). First, documents were read and organised chronologically to trace the evolution of the case from founding to early scaling. Source type, publication date, author or organisation, and relevance to the research questions were recorded in a coding matrix.

Second, open coding identified first-order concepts visible in the documents, including mobile-first design, offline or low-bandwidth delivery, curriculum alignment, subscription logic, investor backing, partnership formation, platform-related work, and digital capability development. Third, these codes were grouped into broader categories linked to the integrated analytical framework: institutional voids, frugal digital inclusion, hybrid business model, youth employability pathways, and ecosystem embeddedness. Finally, pattern matching was used to compare emerging themes with the research questions and theoretical lenses (Yin, 2018).

The analysis generated five themes: ICT-enabled emergence within institutional voids; frugal technological innovation supporting digital inclusion; hybrid business models combining commercial and developmental logics; youth employability pathways and human-capital development; and ecosystem resilience through partnerships. During interpretation, claims were checked against the evidence-status protocol to avoid presenting analytical inference as measured organisational impact.

3.5 Trustworthiness and Limitations

Trustworthiness was strengthened through transparency, triangulation, systematic coding, and reflexivity (Lincoln & Guba, 1985). Source types, inclusion criteria, and coding procedures were documented; company, investor, media, policy, and sector sources were compared to reduce single-source bias; and claims were checked against the evidence-status protocol. Reflexivity was maintained by recognising that public documents may contain promotional narratives.

The study has four limitations. First, without primary interviews or internal access, it cannot examine internal decision-making, staff experience, wages, job quality, or career trajectories. Second, it cannot measure user learning outcomes, labour-market outcomes, or causal effects on youth unemployment. Third, the single-case design supports analytical rather than statistical generalisation. Fourth, the 2019–2025 timeframe captures early scaling, not long-term sustainability or mission drift. Future journal-level research should add interviews with

organisational members, tutors, employees, users, investors, telecommunications partners, and policy actors.

4. Findings

The analysis generated five themes explaining how uLesson operates as an ICT-enabled hybrid digital tutoring platform within Nigeria's resource-constrained educational and entrepreneurial ecosystem. In line with the evidence-status protocol, the findings distinguish documented public evidence, reported organisational claims, and analytical inference.

4.1 Theme 1: ICT-Enabled Emergence Within Institutional Voids

uLesson's emergence in 2019 can be understood as an entrepreneurial response to institutional voids in Nigeria's education system. These voids include unequal access to quality schooling, high demand for supplementary learning, uneven teacher availability, weak digital-learning provision, affordability pressures, and infrastructure constraints. uLesson's own public communications frame Africa's education system as severely challenged, citing high pupil-to-trained-teacher ratios, poorly equipped classrooms, and uncertain learning outcomes (uLesson, 2021b). These conditions created both a developmental problem and a market opportunity for technology-enabled supplementary learning.

The company's early design responded to these gaps through curriculum-relevant digital content delivered through mobile and PC devices. uLesson's Series A announcement reported that the platform had reached one million app downloads after launching in March 2020 and had produced more than 5,000 animated video lessons and 30,000 quizzes and tests across junior and senior classes (uLesson, 2021a). This evidence supports the interpretation that uLesson was not simply a generic mobile application, but a structured digital tutoring ecosystem built around curriculum alignment, content production, and exam-oriented learning support.

The COVID-19 period intensified the relevance of this model. School closures and disruption to classroom-based learning increased demand for remote and supplementary education. By the time of its Series B announcement, uLesson reported that daily average users had increased by 430% in 2021, live lesson demand had grown by 222%, the app had reached two million

downloads, 12.3 million videos had been watched, and 25.6 million questions had been answered (uLesson, 2021b). These figures demonstrate platform traction and learning activity, although they should not be interpreted as evidence of learning outcomes without independent assessment.

This theme supports the entrepreneurial ecosystem perspective by showing that institutional voids can stimulate platform-based ecosystem-building. uLesson's growth relied not only on technology but also on venture financing, curriculum relevance, content-production capacity, field-market development, and telecom-related access solutions. The platform therefore represents an organisational response to local disruption in Nigerian education while also engaging wider global shifts towards EdTech, mobile learning, and platform-based service delivery.

4.2 Theme 2: Frugal Technological Innovation Supporting Digital Inclusion

The second theme concerns uLesson's use of frugal technological design to address affordability, connectivity, and device-access constraints. GSMA data show that mobile internet penetration in sub-Saharan Africa reached 27% by the end of 2023, while the usage gap remained significant at 60%; affordability, smartphone cost, and limited digital skills continue to restrict mobile internet adoption (GSMA, 2024). In this context, digital inclusion depends not only on connectivity but also on whether platforms are designed for users facing high data costs, intermittent connectivity, and device limitations.

uLesson's early distribution model illustrates this frugal-inclusion logic. The company's Series A announcement stated that students could access lessons through streaming and SD cards, enabling content to be downloaded and stored while reducing limitations linked to internet access and cost (uLesson, 2021a). This is a stronger and more verifiable claim than unsupported technical claims about exact compression percentages. The important finding is that uLesson adapted digital tutoring to African connectivity constraints rather than assuming continuous high-speed access.

Later device-based initiatives reinforced this model. In 2024, MTN Nigeria donated 4,600 tablet devices pre-loaded with the uLesson app to the Federal Government for distribution to secondary schools across Nigeria's six geopolitical zones (uLesson, 2024b). The NDDC-uLesson initiative

similarly involved the deployment of 45,000 education tablets across the Niger Delta, with uLesson describing the devices as combining academic content, technology, self-paced learning, and offline access features (uLesson, 2024c). These examples show how digital inclusion can be supported through software, content, devices, and institutional partnerships.

The platform's content design also supports inclusion. uLesson's FAQ describes curriculum-relevant video tutorials, live lessons, homework help, practice tests, quizzes, mock exams, learning analytics, parent reports, and preparation for major Nigerian and West African examinations, including WASSCE, JAMB, NECO, and GCE (uLesson, n.d.).

This theme strengthens the link between digital inclusion and frugal innovation. uLesson's case shows that ICT becomes inclusive only when adapted to users' economic, infrastructural, and educational realities. Its use of SD-card access, mobile-first delivery, locally relevant content, exam-oriented design, and device partnerships illustrates how African EdTech platforms may lower participation barriers while still depending on broader connectivity and affordability conditions.

4.3 Theme 3: Hybrid Business Model Combining Commercial and Developmental Logics

uLesson's business model reflects organisational hybridity because it combines commercial revenue, venture financing, and developmental claims around educational access. The commercial logic is visible in its subscription model, product expansion, school-channel strategy, and investor-backed growth. uLesson's public FAQ indicates that access to the full content library requires subscription after free registration, while TechCrunch reported that uLesson had developed a diversified charging model involving parents, schools, and device-plan bundles (Kene-Okafor, 2021; uLesson, n.d.). This confirms that uLesson is not a purely philanthropic intervention; it is a venture-backed digital education business.

The venture-finance logic is strongly documented. uLesson raised a US$3.1 million seed round led by TLcom Capital in 2019 (Bright, 2019), followed by a US$7.5 million Series A led by Owl Ventures with participation from TLcom Capital, Founder Collective, and LocalGlobe (uLesson,

2021a). In December 2021, it announced a US$15 million Series B from Nielsen Ventures and Tencent, alongside existing investors Owl Ventures, TLcom Capital, and Founder Collective (uLesson, 2021b). Across these disclosed rounds, uLesson raised more than US$25 million in seed-to-Series B funding, providing capital for product development, content expansion, technology, operations, and market growth.

The developmental logic is visible in the platform's stated mission and partnership activities. uLesson presents itself as providing high-quality, affordable, and accessible education to African learners (uLesson, 2021b; uLesson, n.d.). During COVID-19, Airtel Nigeria partnered with uLesson to provide users on the Airtel network with free 500MB daily to continue learning via the app (BusinessDay, 2020). The MTN and NDDC tablet initiatives further demonstrate how uLesson's platform has been positioned within public and corporate efforts to improve digital learning access (uLesson, 2024b; uLesson, 2024c).

The hybrid model therefore operates through an interaction of paid subscriptions, venture capital, telecom partnerships, school-channel development, device distribution, and public-sector collaboration. This configuration enables uLesson to pursue scale while maintaining a developmental narrative around educational access. However, the archival data do not establish whether commercial and developmental goals are equally achieved in practice. They support a finding of hybrid positioning and hybrid mechanisms, not a full social-impact evaluation.

4.4 Theme 4: Youth Employability Pathways and Human-Capital Development

The fourth theme directly addresses the connection between uLesson and Nigeria's youth-employment challenge. The evidence does not support a claim that uLesson directly reduces Nigeria's youth unemployment rate. However, the case supports a more precise and defensible finding: uLesson illustrates employability pathways through which ICT-enabled EdTech platforms may contribute to human-capital development, digital work exposure, and platform-related skills.

The first pathway is direct platform-related work. uLesson's Series B announcement stated that the new capital would support increased hiring across product, technology, and operations (uLesson, 2021b). TechCrunch also reported that the company used 180 field sales agents to

onboard schools and individual users across Nigeria, Uganda, Kenya, and Ghana (Kene-Okafor, 2021). These figures are important because they show that platform scaling can create demand for product, technology, operations, sales, and market-development roles. They do not, however, measure job quality, wages, contractual security, or long-term career progression.

The second pathway is digital education-content production. The production of more than 5,000 animated video lessons and 30,000 quizzes/tests by the Series A stage implies substantial organisational activity in curriculum development, subject expertise, instructional design, animation, assessment design, and multimedia production (uLesson, 2021a). These activities are relevant to youth employability because they require capabilities in digital content creation, educational media, pedagogy, project coordination, and technology-mediated communication. Where source documents report precise numbers for curriculum developers, designers, tutors, engineers, or ambassadors, such figures should be treated as reported organisational indicators rather than independently verified employment outcomes unless supported by accessible organisational records.

The third pathway is tutoring, support, and educator participation. uLesson's product features include live lessons, homework help, instant homework assistance, learning advisors, and expert-tutor-delivered video lessons (uLesson, n.d.). These features imply demand for pedagogical, subject-support, and learner-engagement capabilities. In addition, uLesson's Teacher Ambassadors' Community was reported to have grown to more than 300 members by 2024, creating a professional community for educators to exchange ideas, discuss teaching strategies, and strengthen digital-literacy capabilities (uLesson, 2024a). This evidence supports the argument that EdTech platforms can create educator-development and ecosystem-participation opportunities, but it should not be treated as formal employment evidence without data on contracts, pay, hours, and work conditions.

The fourth pathway is learner human-capital development. uLesson's videos, quizzes, mock exams, homework support, and learning analytics may support subject mastery, exam preparation, digital familiarity, and self-directed learning. The Series B indicators of 12.3 million videos watched, and 25.6 million questions answered show significant platform-based learning activity (uLesson, 2021b). However, these indicators do not prove learning gains, examination

improvement, or later labour-market outcomes. They are best treated as human-capital activity indicators that justify further primary and longitudinal research.

Thus, uLesson is best understood as an employability-pathway case rather than direct evidence of unemployment reduction. It may support youth employability by generating demand for digital education roles, platform-based work, educator communities, and curriculum-aligned learning access.

4.5 Theme 5: Ecosystem Resilience and Institutional Legitimacy Through Partnerships

The fifth theme concerns ecosystem embeddedness: uLesson's public trajectory shows that African EdTech platforms require partnerships that provide connectivity, devices, capital, legitimacy, curriculum relevance, and access to learners.

Telecommunications partnerships are especially significant. During COVID-19, Airtel Nigeria partnered with uLesson to provide subscribers on its network with free 500MB daily for learning through the uLesson app (BusinessDay, 2020). In 2024, MTN Nigeria donated 4,600 tablets pre-loaded with the uLesson app to the Federal Government of Nigeria for distribution to secondary schools across the six geopolitical zones (uLesson, 2024b). These partnerships show how telecom actors can help reduce access barriers through data support, device provision, and distribution infrastructure.

Public-sector and development-oriented partnerships further strengthen legitimacy. The NDDC-uLesson initiative to deploy 45,000 learning tablets across the Niger Delta illustrates how public agencies can function as intermediaries between private EdTech platforms and underserved learners (uLesson, 2024c). The same initiative emphasised digital learning, self-paced study, teacher support, and efforts to bridge the digital divide. This shows that ecosystem design involves more than distributing devices; it requires content, training, support, and institutional coordination.

Investor relationships also contribute to resilience. Funding from TLcom Capital, Owl Ventures, Founder Collective, LocalGlobe, Tencent, Nielsen Ventures, and other investors positioned

uLesson within a wider African and global EdTech investment ecosystem (Bright, 2019; uLesson, 2021a; uLesson, 2021b). This capital provided resources for content development, product improvement, market expansion, and hiring. It also conferred legitimacy in a sector where parental trust, school adoption, and investor confidence are important for scaling.

Together, these partnerships create a multi-stakeholder support structure. Telecom providers support access: investors support scaling; public agencies support distribution and legitimacy; teachers support adoption; and learners provide platform engagement. This ecosystem embeddedness connects directly to the AABD conference theme because uLesson responds to local disruptions in education, infrastructure, and youth employability while engaging global disruptions in digital learning, platform entrepreneurship, and venture-backed EdTech.

Overall, uLesson illustrates how ICT-enabled hybrid entrepreneurship can create employability-related mechanisms under institutional constraints. Verified evidence supports analysis of funding, platform activity, product design, partnerships, and role categories; stronger claims about job quality, wages, learning outcomes, career mobility, and causal labour-market effects require primary and longitudinal research.

5. Discussion

5.1 Theoretical Contributions

This study contributes to African technological entrepreneurship scholarship by explaining how an ICT-enabled EdTech platform may connect digital inclusion, hybrid entrepreneurship, ecosystem building, and youth employability in a resource-constrained context. The contribution is not an impact evaluation of uLesson's labour-market effects; rather, it is an analytically generalisable explanation of how a digital tutoring platform can operate as a hybrid entrepreneurial ecosystem.

First, the study extends entrepreneurial ecosystem theory by showing how platform ventures in institutionally constrained environments may actively assemble rather than merely enter ecosystems (Spigel, 2017; Stam & Van de Ven, 2021). In the uLesson case, ecosystem formation is visible through the combination of venture financing, telecommunications partnerships,

device-based access initiatives, curriculum-oriented content, educator communities, and public-sector distribution channels. This suggests that entrepreneurial ecosystems in African EdTech should not be understood only as pre-existing environments that enable or constrain venture growth. They may also be constructed through entrepreneurial agency, partnership formation, and legitimacy-building under conditions of institutional voids.

This finding adds sector-specific insight to entrepreneurial ecosystem research. EdTech ventures differ from many other technology ventures because they operate in a domain where education is treated as both a market opportunity and a public good. Legitimacy therefore depends not only on user growth or investor confidence, but also on affordability, curriculum relevance, parental trust, teacher engagement, and alignment with educational needs. The study shows that African EdTech ecosystems require attention to these educational, institutional, and social logics.

Second, the study enriches hybrid entrepreneurship scholarship by demonstrating that hybridity in African digital education is not limited to balancing commercial and social missions (Battilana & Lee, 2014; Doherty et al., 2014). In this case, hybridity operates through an integrated configuration of subscription-based revenue, venture capital, frugal technological design, telecommunications partnerships, device-distribution initiatives, and developmental narratives around access. These mechanisms allow the platform to pursue scale while maintaining a social-value proposition around educational inclusion and human-capital development.

The findings therefore suggest that hybrid entrepreneurship in African EdTech is enacted through organisational design and ecosystem positioning, not only through mission statements. However, the archival evidence does not allow the study to determine whether commercial and developmental goals are equally achieved in practice. The contribution is therefore to explain the mechanisms through which hybridity is publicly organised and represented, while recognising that deeper assessment of mission fulfilment requires primary organisational and user-level data.

Third, the study advances digital inclusion and frugal innovation scholarship by showing that meaningful inclusion requires more than connectivity (Zinnbauer, 2007). uLesson's case illustrates how digital inclusion may depend on mobile-first access, offline or device-based learning, curriculum relevance, affordable subscription structures, telecom partnerships, and

locally appropriate content. Frugal innovation is therefore not merely a cost-reduction strategy; it is a design logic that adapts digital learning to users' infrastructural and economic realities.

This contribution is important because digital inclusion is often measured through access indicators such as connectivity, downloads, or device availability. The findings show that such indicators are necessary but insufficient. Access becomes meaningful only when users can engage with relevant, affordable, and usable content. At the same time, the study cautions that platform-use indicators do not automatically prove learning outcomes, employment outcomes, or socio-economic mobility.

Fourth, the study contributes to debates on digital platforms and youth labour-market participation by reframing the employment question as one of youth employability pathways. Existing platform-work scholarship highlights both the opportunities and risks of platform-mediated work (Graham & Anwar, 2019; Woodcock & Graham, 2020). This study adds nuance by showing that African EdTech platforms may support employability through four mechanisms: direct platform-related roles, digital education-content production, tutoring and educator participation, and learner human-capital development. These pathways inform youth-employment debates without claiming verified job creation or unemployment reduction.

The revised framework therefore positions uLesson as an illustrative case of how ICT-enabled hybrid entrepreneurship may generate employability-related mechanisms under institutional constraints. This contribution is strongest when understood as theory-building from archival evidence rather than as a causal claim about labour-market impact.

5.2 Practical and Policy Implications

For policymakers, the findings highlight the need for partnerships between EdTech platforms, telecommunications providers, public agencies, and education stakeholders. Subsidised educational data, device-access programmes, curriculum-aligned content, and teacher-support initiatives can reduce barriers to digital learning but should be linked to stronger outcome measurement.

For telecommunications providers and EdTech entrepreneurs, the study emphasises that technology alone is insufficient. Affordable access, low-bandwidth design, offline functionality, curriculum relevance, user trust, and evidence systems are central to inclusive scaling.

For investors and development partners, the findings suggest the value of patient capital that supports both financial viability and developmental objectives. Funding should encourage local content, teacher support, role quality, learning quality, and employability-related capability development rather than relying only on scale metrics such as downloads or questions answered.

5.3 Limitations and Future Research Directions

This study has limitations that define the boundaries of its contribution. First, it relies on publicly available archival and documentary evidence. As a result, it cannot examine internal organisational decision-making, staff experiences, tutor contracts, wages, job quality, career progression, or user learning outcomes. Published company announcements and media reports provide useful evidence of platform activities and public strategy, but they cannot substitute for primary organisational access.

Second, the study does not measure uLesson's causal impact on youth unemployment in Nigeria. The findings identify employability-related pathways, but they do not establish net job creation, employment quality, or labour-market transitions among users, tutors, employees, or platform participants. Future research should therefore collect primary data from organisational members, tutors, content developers, field agents, users, schools, telecommunications partners, investors, and policy actors.

Third, the single-case design limits statistical generalisation. uLesson is theoretically relevant because of its visibility, funding trajectory, product design, and partnership activity, but its experience may not represent all African EdTech ventures. Comparative research across platforms in Nigeria, Kenya, Ghana, South Africa, and other African markets would help distinguish case-specific mechanisms from broader sectoral patterns.

Fourth, the study focuses on the 2019–2025 period, which captures uLesson's founding and early scaling phase. Longitudinal research is needed to assess the sustainability of its hybrid model,

possible mission drift, changes in affordability, ecosystem evolution, and the long-term relationship between digital learning and employability.

Future studies could examine the quality of platform-based educational work, the gendered dimensions of digital tutoring participation, the effectiveness of offline and low-bandwidth EdTech design, and the long-term learning and labour-market outcomes of users. Mixed-method and longitudinal designs would be especially valuable for moving beyond archival evidence towards stronger causal and experiential insight.

6. Conclusion

This study examined uLesson as a qualitative archival-documentary case of ICT-enabled hybrid entrepreneurship in Nigeria's digital tutoring ecosystem. The analysis shows that uLesson's significance lies not in proving direct unemployment reduction, but in illustrating how an African EdTech platform may create youth employability pathways through digital learning, platform-related work, content production, educator participation, and ecosystem partnerships.

The study identified five interrelated mechanisms: ICT-enabled emergence within institutional voids; frugal technological innovation supporting digital inclusion; a hybrid business model combining commercial and developmental logics; youth employability pathways and human-capital development; and ecosystem resilience through partnerships. Together, these mechanisms show how digital tutoring platforms may respond to local disruptions in education, infrastructure, affordability, and skills development while also engaging global disruptions associated with platformisation, venture-backed EdTech, and digital transformation.

The paper contributes to African business and entrepreneurship scholarship by integrating entrepreneurial ecosystem theory, digital inclusion, frugal innovation, hybrid entrepreneurship, and youth employability into a single analytical framework. This framework explains how African digital ventures may navigate institutional constraints while pursuing both commercial scale and developmental relevance.

At the same time, the study deliberately limits its claims. Public archival evidence supports analysis of uLesson's platform activities, funding trajectory, product features, partnerships, and employability-related mechanisms. It does not support claims about net job creation, wage quality, employee experiences, learning outcomes, career progression, or causal effects on Nigeria's youth unemployment rate. These issues require primary interviews, organisational data, user-level evidence, and longitudinal analysis.

Overall, the uLesson case suggests that Africa's digital future depends not only on connectivity, but also on hybrid entrepreneurial ecosystems that make digital learning affordable, relevant, locally embedded, and connected to capability development.

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