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Building Inclusive and Sustainable Digital Entrepreneurial Ecosystems in Emerging Economies: Institutional Readiness, Access and Curriculum Design

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Abstract— Digital entrepreneurship can create access to economic opportunities, however, just technology cannot create the pathways to inclusive entrepreneurship. This paper takes a different institutional and curriculum angle than those provided in the paper, showing how universities in developing countries can create inclusive and sustainable digital entrepreneurial ecosystems. The study is based on a qualitative narrative review of the evidence presented in the paper, as well as the current policies on digital education, AI skills and future technologies available on the market. It integrates the digital entrepreneurial ecosystem perspective, institutional dimensions theory, the Triple Bottom Line and experiential learning to propose an Inclusion Sustainability Readiness (ISR) framework. The framework identifies six institutional levers which are digital access, faculty capability, industry and mentor networks, incubation and finance, governance, and community contextualization. It argues that inclusive entrepreneurship education requires more than enrolment or online delivery; it requires measurable participation, progression and venture-impact outcomes for groups facing financial, geographic, linguistic or technological barriers. The paper also proposes a curriculum architecture linking digital venture skills with green innovation, social enterprise, ecosystem navigation and impact measurement.

Keywords— inclusive entrepreneurship; digital entrepreneurial ecosystem; sustainability; institutional capacity; emerging economies; curriculum design; social enterprise.

I. INTRODUCTION

The original manuscript establishes that entrepreneurship education is moving beyond conventional business planning toward digital, experiential, sustainable and inclusive learning. This paper separates the institutional and social-equity dimension from the technology-centred discussion and develops it as a standalone research contribution. The central proposition is that the university should be treated not merely as a classroom but as an intermediary within a wider entrepreneurial ecosystem.

Digital platforms can lower market-entry costs and connect entrepreneurs to customers, finance, mentors and infrastructure.

At the same time, unequal connectivity, skills, finance and social networks can reproduce exclusion. It follows that the same technology might increase access for some while intensifying disadvantages for others, and this tension becomes particularly relevant in the case of emerging economies characterized by strong interaction of formal and informal institutions, as well as by infrastructure limitations and local business practices.

The manuscript provides evidence from Africa, India, and international institutions such as mobile money, digital platforms, Atal Innovation Mission, EIT Climate KIC, various incubators, and global educational initiatives. It additionally claims that sustainability can be achieved only if it is encapsulated within the economic, social, and environmental effects and is not treated as an optional component.

II. RESEARCH PROBLEM AND GAP

In the literature about entrepreneurship education, the focus is usually on personal factors like entrepreneurial intention, creativity, or business start-up activities. However, little attention has been paid to questions of whether educational arrangements allow different learners to transform educational learning into entrepreneurial opportunities. This leads to identification of three gaps. First, access to education is often understood in terms of availability of platforms without considering the real participation. Second, sustainability is discussed in terms of content rather than making a part of the decisions and assessments concerning the company. Third, readiness of institutions is treated mainly in a descriptive way while it should be understood as a multi-dimensional capability subject to evaluation and improvement.

III. RESEARCH QUESTIONS

- RQ1. What institutional competencies foster inclusive digital entrepreneurship education in universities of developing economies?

- RQ2. What approaches can be used to design a curriculum bridging digital entrepreneurship competencies with content on sustainability and social impact?
- RQ3. What ecosystem partnerships enable better access to mentors, funding, markets, and experiential learning for students?
- RQ4. What metrics can help to evaluate the effectiveness of digital entrepreneurship education in ensuring equality and sustainability?

IV. THEORETICAL FRAMEWORK

The research presents four different points of view. The digital entrepreneurial ecosystem perspective explains the function of platforms and networks in addition to digital infrastructure. The theory of institutional dimensions reveals the normative, cognitive and regulative conditions impacting entrepreneurship. The Triple Bottom Line concept relies upon environmental, social and economic performance. Kolb's theory of experiential learning illustrates the importance of incubation, live projects, hackathons and community-based problem-solving in the transition of curriculum knowledge into skills.

TABLE I
THEORETICAL PERSPECTIVES AND IMPLICATIONS

Theory	Primary lens	Implication for inclusive entrepreneurship education
Digital entrepreneurial ecosystem	Platforms, networks, digital affordances	Teach ecosystem navigation, not only venture creation.
Institutional dimensions	Rules, norms, cognitive structures	Build governance and norms that support participation.
Triple Bottom Line	Economic, social, environmental value	Assess venture impact across all three dimensions.
Experiential learning	Action and reflection	Use real problems, incubation and iterative projects.

V. PROPOSED INCLUSION SUSTAINABILITY READINESS FRAMEWORK

The ISR framework places inclusive and sustainable entrepreneurial learning at the heart of six institutional levers. Additionally, this framework is aimed at institutions in emerging economies and emphasizes that the curriculum cannot keep substituting existing flaws in facilities, networks, or access to finance.

Emerging-Economy Inclusion-Sustainability Ecosystem

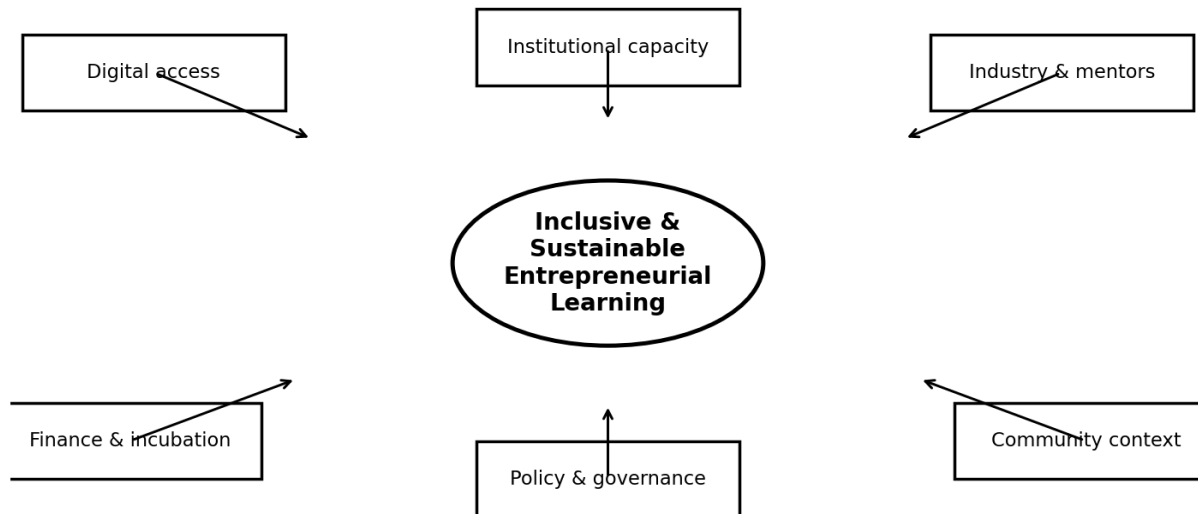


Figure 1. Inclusion–Sustainability–Readiness (ISR) framework.

TABLE II
INSTITUTIONAL LEVERS OF THE ISR FRAMEWORK

Institutional lever	Capability indicator	Illustrative evidence
Digital access	Affordable, reliable and accessible connectivity	Device access, low-bandwidth alternatives
Faculty capability	Entrepreneurship + digital + sustainability pedagogy	Faculty development, co-teaching
Industry/ment or network	Access to authentic market knowledge	Mentors, internships, live projects
Incubation/fi nance	Pathways from idea to experimentation	Incubator access, seed support, competitions
Governance	Equity, data and technology safeguards	Policies, grievance routes, access monitoring
Community context	Local relevance and stakeholder participation	Rural/community projects, local language resources

VI. INCLUSION AS A LEARNING OUTCOME

Inclusion must be considered an output of the educational process, but not just as a principle for admission. Inclusion indicators contain such measures as participation in practical experiences, completion of digital projects, availability of mentors, prototypes developed, venture validated, and entrants being directed to incubation or job opportunities. Schools need to disaggregate inclusion indicators whenever possible and ethically correct in order to identify the presence of structural exclusion.

VII. CURRICULUM ARCHITECTURE FOR INCLUSIVE DIGITAL ENTREPRENEURSHIP

An inclusion curriculum in accordance with the ISR framework must be constructed with four layers. The first layer is the foundational layer, which provides essential digital and entrepreneurial literacy. The second layer of the curriculum should teach such venture skills as opportunity recognition, customer development, digital marketing, data analysis, and the use of financial technology. The third layer integrates sustainability and social impact. The fourth layer places learners in real-world ecosystems through live projects, incubators, industry mentorship, and community challenges.

TABLE III
CURRICULUM ARCHITECTURE LAYERS

Curriculum layer	Core capabilities	Example learning activity
Foundation	Digital fluency, entrepreneurial mindset	Digital venture bootcamp
Venture practice	Customer discovery, analytics, e-commerce, fintech	Live market validation project
Impact integration	Green innovation, circularity, social value, ethics	Triple-bottom-line venture case
Ecosystem action	Networking, incubation, funding, scaling	Industry/community challenge

VIII. SUSTAINABILITY BY DESIGN

The principle of sustainability should be incorporated into entrepreneurial education at the time of selecting a business model. One could ask the students to compare different value propositions of the business model in terms of economic viability, social value, and ecological footprint. This way, the Triple Bottom Line moves from the realm of reporting to becoming a decision-making matrix. For instance, the circular economy venture could be evaluated on customer value and unit economics along with material efficiency, waste reduction, and stakeholders' impact.

The paper also links sustainability with Industry 5.0 and eco innovation, implying that the digital transformation should be person-centred and sustainable. This approach is especially relevant for developing countries where resource efficiency, informal employment, and community innovations are at the core of business entrepreneurship.

IX. ECOSYSTEM PARTNERSHIPS AS PEDAGOGICAL INFRASTRUCTURE

It is not possible for universities to create a complete entrepreneurial ecosystem on their own. Collaborations with incubators, accelerators, businesses, government, banks, alumni, and other organisations can help with the challenges that the startups face, the mentorship needed, the data required, and the resources available. The pedagogical benefits are maximal if the partners are part of the assessment process rather than being invited just for the guest lectures.

TABLE IV
ECOSYSTEM PARTNERS AND CONTRIBUTIONS

Partner	Resource contributed	Student learning outcome
Industry	Real business problem / data	Contextual problem solving
Incubator	Mentoring / prototype support	Experimentation and venture readiness
Government	Policy context / schemes	Institutional navigation
Financial institutions	Fintech / funding knowledge	Financial capability
Community organisations	Local needs and users	Inclusive problem definition
Alumni	Networks / career insight	Professional identity and opportunity recognition

X. INCLUSION STRATEGIES FOR UNDERSERVED LEARNERS

- Utilize a mix of online and offline communication so that lack of proper connectivity does not block the learning of any student.
- Enable institutions to provide access to required digital tools instead of expecting students to pay for subscriptions themselves.
- Provide targeted mentorship and peer-support programs for students with weak entrepreneurial networks.
- Apply local and multilingual cases wherever possible to avoid showing entrepreneurship only through examples of developed countries.
- Create community projects that acknowledge informal economy knowledge and local problem-solving skills.
- Monitor participation and success rather than simply focusing on enrolment.

XI. DIGITAL PLATFORMS AND EMERGING ECONOMY ENTREPRENEURSHIP

The manuscript provided identifies instances of technological interventions, such as Meesho, mobile money ecosystems in Africa, and global digital marketplaces, which have helped to alleviate market entry barriers.

This calls on educators to ensure that their students acquire knowledge and skills in platform economics, digital trust, customer acquisition, payments, reputation management, and dependency risk management. Therefore, platform literacy ought to be regarded as a fundamental business skill rather than a limited topic in e-commerce.

XII. MEASURING INSTITUTIONAL READINESS AND IMPACT

An institutional dashboard that is grounded on practical measures should link readiness with both learner outcomes and ecosystem outcomes. The readiness refers to the capability of the educational institution to provide inclusive digital entrepreneurship education. Meanwhile, outcomes refer to the extent to which the learners are benefited by that capability.

TABLE V
INSTITUTIONAL READINESS AND IMPACT INDICATORS

Dimension	Readiness indicator	Outcome indicator
Access	Connectivity, devices, accessible resources	Participation and completion
People	Faculty training and mentor pool	Quality of projects / learner confidence
Curriculum	Digital + sustainability alignment	Competence evidence
Experiential ecosystem	Incubator/industry/community partnerships	Prototypes, pilots, internships
Governance	AI/data/equity policies	Trust, integrity and safe participation
Impact	Tracking system and feedback loops	Venture, employment and community outcomes

XIII. ASSESSMENT MODEL

Assessment should evaluate both entrepreneurial competence and impact thinking. Some proposed components are analysis of the problem and situation, digital business experiment, sustainability impact canvas, ecosystem engagement record, prototype, or pilot, pitch and individual reflection. This avoids limiting sustainability and inclusion to written declarations.

TABLE VI
ASSESSMENT MODEL COMPONENTS

Assessment	Weight	Key criterion
Problem & stakeholder analysis	15%	Depth and inclusiveness of problem definition
Digital venture experiment	20%	Evidence of testing and iteration
Sustainability impact canvas	15%	Economic, social and environmental logic
Ecosystem engagement	15%	Mentor/industry/community learning
Prototype/pilot	20%	Feasibility and user value
Reflection	15%	Learning, ethics and next-step reasoning

XIV. PROPOSITIONS

- P1: Institutional capacity will positively influence the effectiveness of digital entrepreneurship education.
- P2: The relationship between digital access and entrepreneurial outcomes will be strengthened when students also have access to mentors, practical opportunities and financial benefits.
- P3: Sustainability-integrated assessment will produce stronger impact-oriented venture reasoning than standalone sustainability modules.
- P4: Community-contextualised curriculum will improve perceived relevance and participation among underserved learners.
- P5: Ecosystem partnerships will strengthen the conversion of classroom learning into entrepreneurial action.

XV. DISCUSSION

It moves questions of how education is delivered to whether learners can convert access to education into entrepreneurial capacity and opportunity. A university can 'give' millions of students access to an online course and still have an unfair education if only networked students can finalize projects, find mentors and get venture capital resources. An institution can offer a sustainability class and still not educate on environmental and social criteria if it does not directly engage learners on making them an integral part of actual business model decision making.

Furthermore, a second key theoretical intervention is classifying institutional capacity as pedagogical infrastructure: Faculty expertise, industry relationships, incubators, governance mechanisms and digital access are not merely external to teaching but rather fundamental enabling characteristics which inform whether students have a possibility to achieve certain types of learning outcomes. This relates directly to the findings provided in the manuscript that neither the tool, nor simply its availability, could assure effective and inclusive entrepreneurship education.

XVI. POLICY AND MANAGERIAL IMPLICATIONS

An integrated readiness pathway would need to be defined and implemented by university leadership: assess gaps in access and capability, invest in foundational infrastructure and faculty education, reform assessment and evaluation systems, develop formal partnerships in the ecosystem and track outcomes. Policy makers should invest in inexpensive access to connectivity, infrastructure for entrepreneurial ventures, open finance, and adaptive policies for technology administration. Industry partners will offer realistic challenges, coaching services, and pathways toward internships and incubation. Existing UNESCO recommendations uphold the requirement for the design and use of human centered, Ethical, and Inclusive Artificial Intelligence capability, with OECD's 2026 outlook emphasizing equitable infrastructure, creativity of teachers, and meaningful use of GenAI, echoing the tenets that undergird the ISR framework's insistence on capability over technological acquisition.

XVII. FUTURE RESEARCH

Future research efforts could be made to conduct institutional readiness (ISR) analyses in terms of inclusive digital entrepreneurship education across universities in India, Africa and other developing economies to recognize and identify shared aspects, differences and best practices across context. Such efforts could be a series of longitudinal studies investigating experiences of underserved learners from their classroom involvement to their outcomes, such as entrepreneurship formation, employment status, entrepreneurial career or community involvement. There is a gap in need for establishing and validating an institutional readiness instrument specific to measures that ascertain a university's responsiveness to the offer of education about inclusive digital entrepreneurship.



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Efforts can also be carried out to investigate the impact of local language AI solutions and low bandwidth technologies on students' engagement, access, self-efficacy for digital technology and entrepreneurship self-efficacy especially those of disadvantaged communities.

Research should be strengthened in linking entrepreneurial education focused on sustainability with concrete environmental and community-based outcomes including, impacts for social change, improved use of resource efficiency, sustainable enterprise practices and jobs growth, local issues of problem solving. The proposed research would provide a foundation for the construction of adaptable, low-bandwidth, context specific and sustainability focused institutional-learning in emerging countries.

XVIII. CONCLUSION

It requires an entrepreneurial ecosystem rather than just an online classroom to promote Inclusive digital entrepreneurship education. A design lens encompassing access, institutional capability, and experiential partnerships is introduced in ISR framework integrated with sustainability and governance. The key argument has to do with universities using who could participate, develop competencies, access entrepreneurs, and economic, social, and environmental outcomes created by these digital entrepreneurial programs in assessing the programs.

REFERENCES

- [1] Acs, Z., Audretsch, D., Lehmann, E., & Licht, G. (2017). National systems of entrepreneurship. *Small Business Economics*, 49(1), 1–12.
- [2] Alvarez, C., Lopez, T., & Urbano, D. (2024). Do institutional dimensions matter at different stages of the entrepreneurial process? *Small Business Economics*, 63(2), 831–853.
- [3] Atiku, S. O., Jeremiah, A., Semente, E., & Boateng, F. (Eds.). (2024). *Eco-Innovation and Sustainable Development in Industry 5.0*. IGI Global.
- [4] Autio, E., Nambisan, S., Thomas, L., & Wright, M. (2021). Digital affordances, spatial affordances, and the genesis of entrepreneurial ecosystems. *Strategic Entrepreneurship Journal*, 15(2), 311–335.
- [5] Elkington, J. (1997). *Cannibals with Forks: The Triple Bottom Line of 21st Century Business*. Capstone.
- [6] Genty, K. I., Atiku, S. O., & Abata, A. M. (2025). Nexus between business ecosystem and micro, small and medium enterprises' performance. *Educational Administration: Theory & Practice*, 31(1), 376–387.
- [7] George, G., Merrill, R., & Schillebeeckx, S. (2021). Digital sustainability and entrepreneurship. *Academy of Management Journal*, 64(4), 999–1027.
- [8] Hägg, G., & Kurczewska, A. (2022). *Entrepreneurship Education: Scholarly Progress and Future Challenges*. Routledge.
- [9] OECD. (2026). *OECD Digital Education Outlook 2026: Exploring Effective Uses of Generative AI in Education*. OECD Publishing.
- [10] Semente, E., Asa, A. R., & Nkontwana, P. (2024). Reviewing the impact of digital platforms on entrepreneurship in Africa. *International Journal of Science and Research Archive*, 11(1), 1364–1375.
- [11] UNESCO. (2024). *AI Competency Framework for Students*. UNESCO.
- [12] UNESCO. (2024). *AI Competency Framework for Teachers*. UNESCO.
- [13] Urbano, D., Alvarez, C., & Lopez, T. (2026). Institutional dimensions and social entrepreneurship: A multilevel study. *Journal of Small Business and Enterprise Development*, 33(8), 112–131.
- [14] World Bank. (2023). *Digital Entrepreneurship and Inclusive Growth*. World Bank.
- [15] World Economic Forum. (2025). *The Future of Jobs Report 2025*. World Economic Forum.
- [16] Zahra, S., & Wright, M. (2016). Understanding the social role of entrepreneurship. *Strategic Entrepreneurship Journal*, 10(1), 1–16.