



ENTREPRENEURSHIP EDUCATION, DIGITAL PLATFORM UTILISATION AND MICRO-ENTERPRISE FORMATION AMONG UNIVERSITY UNDERGRADUATES IN NIGERIA

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Abstract

This study examined the effects of entrepreneurship education and digital platform utilisation on actual micro-enterprise formation among undergraduates of the University of Abuja, and tested whether the first relationship is conditional upon the second. Underpinned by human capital theory, the study adopted a descriptive survey design. Taro Yamane's formula was applied to an undergraduate population of 20,856 to determine a sample of 400, allocated across the thirteen faculties by Bowley's proportional allocation formula, yielding 358 usable responses. Data were analysed by descriptive statistics and hierarchical moderated multiple regression. A total of 62.6 per cent of respondents were found to be operating an income-generating venture, these ventures being predominantly solo-operated (83.0%), informal (92.0% unregistered) and concentrated in platform-mediated sectors. Entrepreneurship education exerted a significant but modest effect on micro-enterprise formation ($\beta = .168, p < .01$), while digital platform utilisation exerted an effect approximately two and a half times larger ($\beta = .412, p < .001$). The interaction term produced a significant increment in explained variance ($\Delta R^2 = .042, p < .001$), the full model explaining 39.6 per cent of variance, and simple slopes analysis showed the education–formation relationship to be steep among students high in digital platform utilisation and effectively flat among those low in it. The study concludes that entrepreneurship education is conditionally rather than intrinsically effective, its return depending upon possession of the digital means through which student enterprise is in practice conducted. It is recommended that the National Universities Commission incorporate digital commercial competence as an assessed element of the entrepreneurship curriculum; that universities establish resourced entrepreneurship support facilities including seed funding; that instruction be reconstituted around experiential delivery with assessment attaching to demonstrated commercial activity; that practising entrepreneurs be engaged in curriculum delivery; and that policy attention be directed toward the survival, and not merely the formation, of student ventures.

Keywords: Entrepreneurship education; digital platform utilisation; micro-enterprise formation; intention–action gap; undergraduates; Nigeria.



Introduction

Entrepreneurship education has occupied a privileged position in national development discourse, promoted as the instrument by which a university system long accused of producing job seekers might instead be made to produce job creators. That conviction has been given regulatory force. Entrepreneurship study was made a compulsory component of undergraduate education across Nigerian universities, and it has since been consolidated within the Core Curriculum and Minimum Academic Standards, which allocates dedicated space to venture creation and innovation courses and which took effect across the system from the 2023/2024 academic session (National Universities Commission, 2022). Every undergraduate now passing through a Nigerian university is, in principle, a recipient of entrepreneurship instruction.

The economic rationale for this commitment is not difficult to locate. Micro, small and medium enterprises dominate the Nigerian economic landscape to an extent unusual even among developing economies. The most recent national enumeration conducted jointly by the Small and Medium Enterprises Development Agency of Nigeria and the National Bureau of Statistics placed the total number of such enterprises at approximately 39.7 million, a contraction from the 41.5 million recorded four years earlier (SMEDAN & NBS, 2017, 2021). What is striking in the composition of that population is its overwhelming concentration at the smallest scale: micro enterprises, defined as establishments employing fewer than ten persons, constituted some 99.8 per cent of all enterprises enumerated. Nigerian entrepreneurship is, in the aggregate, micro-entrepreneurship. Any serious account of enterprise formation in the country must therefore begin at that scale rather than at the level of the growth-oriented small or medium firm which occupies so much of the policy imagination.

Against this policy commitment stands a substantial and largely affirmative research literature. Studies conducted across Nigerian universities have with considerable consistency reported positive and statistically significant associations between exposure to entrepreneurship education and students' entrepreneurial intentions (Ekeh et al., 2022; Popoola, 2025). The apparent unanimity of this finding has, however, obscured a difficulty of some importance. Intention is not enterprise. The dominant instrument of the field, derived from the theory of planned behaviour (Ajzen, 1991), measures a stated disposition to pursue self-employment at some unspecified future point, typically after graduation. It does not measure whether any venture exists. A student may record the highest possible score on an entrepreneurial intention scale while having never sold anything to anyone.

This distinction has acquired fresh significance because of a development which the curriculum neither anticipated nor produced. Over the past several years, a visible expansion of commercial activity has occurred among Nigerian undergraduates, conducted almost entirely through digital channels. Students transact through social messaging and social networking applications, receive payment by instant bank transfer and mobile money, extend their market reach through third-party dispatch and logistics services, and earn income through freelance and gig platforms. These are enterprises in every economic sense, though they are frequently unregistered, operated from a hostel room or a smartphone, and invisible to any official enumeration. Their emergence has been driven not by pedagogy but by infrastructure: the collapse in the cost of reaching a customer, of accepting a payment, and of delivering a good.

Evidence from the wider Nigerian enterprise literature supports the significance of this shift. Ochinanwata and Ochinanwata (2023) found digital skills and platform management competence to



be decisive conditions for the development and survival of online micro businesses in Nigeria, while Adejumo et al. (2025) reported a substantial positive effect of social media usage on the revenue performance of micro and small enterprises in Lagos State. Ononye et al. (2025) demonstrated, importantly for present purposes, that the performance benefit derived from social media use is not uniform but contingent on the digital orientation and digital literacy of the enterprise. The suggestion that digital engagement operates conditionally rather than uniformly is one that has not yet been carried into the study of student enterprise.

The present study proceeds from the proposition that these two literatures have developed in isolation from one another, and that their separation has left a question of consequence unexamined. Entrepreneurship education supplies knowledge; digital platforms supply the means of acting upon it. Whether either, and which of the two, accounts for the enterprise activity now observable among Nigerian undergraduates has never been established, because no study has measured that activity. This study examines the question directly, taking undergraduates of the University of Abuja as its empirical setting and actual micro-enterprise formation, rather than stated intention, as its dependent variable.

Nigeria has sustained a policy of compulsory entrepreneurship education in its universities for approximately two decades. Over the same period, graduate unemployment has not abated, the national stock of micro, small and medium enterprises has contracted rather than expanded, and there is little evidence that university-trained entrepreneurs constitute a meaningful proportion of new enterprise formation. The persistence of this disjunction between a substantial and sustained educational intervention and the outcomes it was designed to produce is not, however, satisfactorily explained by the research literature that has grown around the policy, because that literature is constituted so as to be incapable of detecting it. The overwhelming majority of Nigerian studies in the field terminate at entrepreneurial intention, which is treated as an adequate proxy for entrepreneurial behaviour on the strength of theoretical claims about the intention–behaviour relationship. Since intention is measured but behaviour is not, a curriculum that reliably produced willing non-entrepreneurs would generate precisely the pattern of affirmative findings the field currently reports. Where the conversion has been examined even indirectly, that affirmative consensus becomes markedly less secure: Amuda et al. (2020) found no significant difference in entrepreneurial intention between second-year and final-year students specialising in entrepreneurship, and concluded that mandating entrepreneurship education was of itself insufficient to address graduate unemployment, while Moses (2025) recorded a low grand mean for entrepreneurship education as actually delivered in a setting where formal exposure was universal.

Compounding this difficulty is the near-total absence of the digital dimension from the study of student enterprise. The substantial Nigerian literature establishing that digital platforms materially improve micro-enterprise performance has been developed exclusively among established enterprises operating from commercial premises, and has never been extended to the undergraduate venture, which is the most digitally native and least capitalised form of enterprise in the country. This omission matters because the two candidate explanations for student enterprise formation point toward entirely different policy responses. If formal instruction is the operative factor, the appropriate remedy is curricular reform, which is the course Nigerian policy has pursued for two decades. If the operative factor is instead access to and competence in the digital infrastructure through which such enterprise is actually conducted, then curricular reform will continue to yield improvements in intention without corresponding improvements in enterprise formation, and the



resources devoted to it are being misdirected. The two possibilities have never been tested against each other, for the sufficient reason that the outcome by which they would be distinguished has never been measured.

The problem this study addresses, therefore, is that the determinants of actual micro-enterprise formation among Nigerian undergraduates remain empirically undetermined. It is not known whether entrepreneurship education exerts any measurable effect on the ventures students actually operate, as distinct from the intentions they report; nor is it known whether digital platform utilisation exerts such an effect; nor, most consequentially, is it known whether the return on entrepreneurship education is itself conditional upon the digital means through which student enterprise is in practice conducted. In the absence of such evidence, policy proceeds on an assumption that has never been tested against the outcome it was designed to produce.

Research Questions

The study is guided by the following research questions:

- i. What is the effect of entrepreneurship education on micro-enterprise formation among undergraduates of the University of Abuja?
- ii. What is the effect of digital platform utilisation on micro-enterprise formation among undergraduates of the University of Abuja?
- iii. To what extent does digital platform utilisation moderate the relationship between entrepreneurship education and micro-enterprise formation among undergraduates of the University of Abuja?

Objectives of the Study

The broad objective of this study is to examine the relationship between entrepreneurship education, digital platform utilisation and micro-enterprise formation among undergraduates of the University of Abuja. The specific objectives are to:

- i. determine the effect of entrepreneurship education on micro-enterprise formation among undergraduates of the University of Abuja; and
- ii. determine the effect of digital platform utilisation on micro-enterprise formation among undergraduates of the University of Abuja; and
- iii. examine the extent to which digital platform utilisation moderates the relationship between entrepreneurship education and micro-enterprise formation among undergraduates of the University of Abuja.

Research Hypotheses

Corresponding to the research questions and objectives, the following null hypotheses are tested at the 0.05 level of significance:

- H₀₁: Entrepreneurship education has no significant effect on micro-enterprise formation among undergraduates of the University of Abuja.
- H₀₂: Digital platform utilisation has no significant effect on micro-enterprise formation among undergraduates of the University of Abuja.



H₀₃: Digital platform utilisation does not significantly moderate the relationship between entrepreneurship education and micro-enterprise formation among undergraduates of the University of Abuja.

2.0 Literature Review

2.1 Conceptual Review

2.1.1 Entrepreneurship and the Entrepreneur

Scholarship on entrepreneurship has not settled on a single definition. Schumpeter (1934) cast the entrepreneur as the agent of economic change who disrupts equilibrium through new combinations of productive means. Kirzner (1973) located entrepreneurship instead in alertness to existing but unnoticed profit opportunities, moving the market toward equilibrium. Drucker (1985) treated innovation as the specific instrument of entrepreneurship and held that entrepreneurial capacity is learnable. Shane and Venkataraman (2000) organised the field around the nexus of enterprising individuals and valuable opportunities.

Nigerian scholarship defines entrepreneurship by its social utility rather than its economic function. Nwachukwu (1990) characterised the entrepreneur as one who identifies an opportunity, mobilises resources, and bears risk; Osuala (2004) situated entrepreneurship within small business management as a route to self-reliance; Maina (2013) framed it as a mechanism of youth job creation. This orientation toward self-reliance and employment generation reflects and reinforces the policy premise examined in this study.

For present purposes, entrepreneurship is understood as the process of identifying a commercial opportunity and organising resources to exploit it under uncertainty. This formulation accommodates the small-scale, opportunity-driven activity of student enterprise without requiring the innovative novelty of a strictly Schumpeterian definition.

2.1.2 Entrepreneurship Education

Definitions of entrepreneurship education divide between cultivating enterprising dispositions and instructing in business establishment. Jones and English (2004) describe it as equipping individuals with the capacity to recognise commercial opportunities together with the insight, self-esteem, knowledge and skills required to act upon them. The significance for this study lies in its inclusion of acting upon opportunity, not merely recognising it, as a constitutive element of what the education should deliver.

Gibb (2002) argued for a broader conception concerned with enterprising behaviours, attributes and skills applicable across life, requiring a pedagogical environment different from the conventional lecture-based classroom. Fayolle, Gailly and Lassas-Clerc (2006) observed that programmes are frequently assessed against outcomes that are neither theoretically specified nor consistently measured.

In the Nigerian literature, entrepreneurship education is defined by its intended national purpose rather than pedagogical content, characterised as functional education directed at self-reliance, creativity in opportunity identification, employment generation and poverty reduction (Maina, 2013). Where a concept is defined by the outcome it is intended to produce, the question whether it produces that outcome becomes difficult to pose.



This study adopts the Jones and English (2004) definition and treats entrepreneurship education as a multidimensional construct comprising curriculum content adequacy, experiential delivery, instructor competence and industry exposure, and institutional support. The four-dimensional treatment is adopted because formal exposure is now universal among Nigerian undergraduates and therefore furnishes no analytical variation; it is variation in the quality and character of delivery that carries explanatory weight, as the low grand mean recorded by Moses (2025) in a setting of universal exposure indicates.

2.1.3 Advantages of Entrepreneurship Education

The literatures converge on the following benefits:

- (i) *Employment generation.* Reorienting graduates from scarce salaried employment toward creating enterprises capable of employing others, addressing graduate unemployment at its source (Maina, 2013).
- (ii) *Development of self-reliance.* Equipping the individual to generate income independently of institutional employment.
- (iii) *Opportunity recognition capability.* Developing the capacity to identify commercially viable opportunities, treated by Jones and English (2004) as the foundational competence.
- (iv) *Acquisition of managerial and financial competence.* Coverage of business planning, record-keeping, costing, marketing and financial management.
- (v) *Cultivation of innovation and creativity.* Encouraging novel solutions and improvement of existing products and processes (Drucker, 1985).
- (vi) *Development of risk tolerance.* Instruction in assessing and managing uncertainty to render calculated risk-taking a considered practice.
- (vii) *Enhancement of graduate employability.* Enterprising attributes are valued by employers independently of any intention to start a business (Gibb, 2002).
- (viii) *Contribution to national economic development.* A larger stock of enterprises expands the productive base, broadens the tax base and reduces dependence on public sector employment.

2.1.4 Digital Platform Utilisation

The digital platform is used in the economic rather than narrowly technological sense, denoting an infrastructure that mediates exchange between parties who would otherwise face prohibitive costs of discovery, transaction and fulfilment. Gawer (2014) characterises platforms as evolving organisations that federate and coordinate constitutive agents, create value through economies of scope, and entail modular architectures permitting variety. The defining property is that the platform supplies to its participants capabilities they do not themselves own.

Ochinanwata and Ochinanwata (2023) developed a digital platform adoption framework for Nigerian micro and small business, distinguishing transactional from social media platforms and identifying digital skills and platform management competence as conditions for successful adoption. Their finding that capability rather than access determines commercial outcome is central here.



Digital platform utilisation is conceptualised as the extent to which an individual employs digital infrastructures for commercial purposes, comprising five dimensions. Social commerce channels perform market discovery. Digital payment and agency banking perform transaction settlement. Electronic logistics services perform fulfilment. Freelance and gig platforms constitute a market for labour and services. Digital marketing competence is the fifth dimension because access to a platform confers no commercial advantage absent the capability to use it, a distinction of consequence where platform access approaches universality while commercial competence does not.

2.1.5 Micro-Enterprise Formation

Micro-enterprise formation denotes the establishment and continued operation of an income-generating venture at the smallest scale of economic organisation. The definition is anchored to the national classification employed by the Small and Medium Enterprises Development Agency of Nigeria, under which a micro enterprise employs fewer than ten persons. Ventures operated by undergraduates fall almost without exception within the micro category, frequently at its lowest boundary, being operated by a single individual without paid assistance. To describe such activity as small or medium enterprise is to misclassify it.

The construct is operationalised behaviourally rather than attitudinally, evidenced by current operation of a venture, its duration, the presence of any assistance, turnover, survival across academic semesters, registration status, and reinvestment of earnings. This operational choice constitutes the principal methodological departure of the present study from the body of Nigerian research reviewed below, in which the corresponding construct is almost invariably entrepreneurial intention.

2.2 Entrepreneurship Education in the Nigerian University System

The institutionalisation of entrepreneurship education in Nigerian universities was a response to a diagnosis rather than a demand. The proposition that Nigerian higher education produced graduates oriented exclusively toward salaried employment in a labour market incapable of absorbing them had achieved the status of settled opinion in policy circles. Through the National Universities Commission and in collaboration with the Industrial Training Fund, entrepreneurship study was made compulsory across the university system.

The Core Curriculum and Minimum Academic Standards represents the consolidation of that policy. In restructuring the general studies component, the Commission expanded the space accorded to entrepreneurship, giving specific provision to venture creation and innovation courses; entrepreneurship has additionally developed into a stand-alone degree programme (National Universities Commission, 2022). Implementation commenced with the 2023/2024 academic session.

Two features bear on this study. First, formal exposure to entrepreneurship education is now effectively universal among Nigerian undergraduates, removing exposure itself as a source of meaningful variation and directing attention toward the quality and character of delivery. Second, the policy has been sustained without rigorous evaluation against its own stated objective. The instrument was justified by reference to enterprise creation, yet the evidentiary apparatus measures intention. Two decades of policy have thus generated an extensive literature that cannot answer the question the policy was designed to address.



2.3 Digital Platforms and Micro-Enterprise Activity in Nigeria

The expansion of digital commercial infrastructure in Nigeria has proceeded largely independently of educational policy and has substantially altered the conditions under which small-scale enterprise is conducted. Three developments are relevant. First, social messaging and networking applications have become primary channels of market discovery for micro enterprises, displacing physical location as the principal determinant of customer reach. Second, instant electronic payment and agency banking have removed the requirement for physical proximity at settlement. Third, third-party dispatch and logistics services have extended the geographical range of enterprises possessing no distribution capability of their own.

The aggregate effect has been a marked reduction in the capital and infrastructural threshold for enterprise entry. An undergraduate may now identify customers, conclude transactions and effect delivery without premises, inventory financing or formal registration. Adejumo et al. (2025) established a significant positive effect of social media usage on revenue growth among micro and small enterprises in Lagos State, while Muhammad et al. (2025) found entrepreneurial orientation and innovation culture to be significant determinants of social commerce adoption among youth-owned enterprises.

Two qualifications temper this account. First, the benefit is contingent rather than automatic. Ononye et al. (2025) found the performance value of social media use to be conditional upon digital orientation and literacy. Second, the infrastructure imposes its own constraints, principally trust in an environment where verification of counterparties is difficult; Ochinanwata and Ochinanwata (2023) identified this as a leading impediment alongside the digital skills deficit. Digital platforms substitute a different set of constraints, more favourable to the resource-poor entrant but by no means absent. This is consistent with the wider Nigerian evidence on digitally mediated governance, which finds that digital infrastructure reconfigures rather than dissolves existing barriers to inclusion (Lawal et al., 2025).

2.4 Theoretical Framework: Human Capital Theory

Human capital theory was formalised by Schultz (1961) and elaborated by Becker (1964). Schultz advanced the proposition that expenditure on education, training and health should be understood as deliberate investment in the productive capacity of human beings, and that returns to such investment account for a substantial portion of economic growth otherwise unexplained. Becker treated the individual as an investor who incurs present costs in expectation of a future stream of enhanced returns, distinguishing general from specific human capital.

The theory rests on four propositions. First, human beings possess a stock of productive capacity that may be augmented through deliberate investment. Second, education and training constitute the principal means of such augmentation. Third, investment in human capital is undertaken on rational expectation of future return. Fourth, and most consequentially, the return on human capital is realised only through deployment: the stock is a latent capacity, and its value is contingent upon conditions permitting its productive application. Human capital that cannot be deployed yields nothing, however substantial the investment.

The theory's principal strength is its provision of an explicit and testable mechanism connecting education to economic behaviour, specifying not merely that education matters but why and through what channel. It accommodates analysis at both individual and aggregate levels and has proved



endurable across six decades of empirical application. Its further advantage here is that it directs attention to the conditions of deployment as well as the act of investment, furnishing the analytical vocabulary in which a failure of conversion can be described.

Three criticisms are pertinent. First, screening and signalling perspectives hold that education may raise earnings by identifying pre-existing ability rather than creating capability. Second, the theory attends principally to the supply of capability while remaining comparatively silent on the demand and opportunity conditions that determine whether capability is absorbed. Third, the theory's individualist orientation tends to attribute unemployment to deficiencies in the human capital of the excluded, directing remedial attention toward the individual and away from structural constraint. This last criticism describes with some precision the logic of the Nigerian policy under examination.

Human capital theory applies to this study at three levels. At the level of policy, it supplies the implicit rationale on which compulsory entrepreneurship education rests. The policy premise is that graduates fail to create enterprises because they lack entrepreneurial capability, that such capability may be created through instruction, and that its creation will yield a return in the form of enterprise formation. To test the policy is therefore to test the theory in a particular setting.

At the level of the first independent variable, the theory specifies what entrepreneurship education is understood to do. Instruction in opportunity recognition, business planning, resource mobilisation and enterprise management augments the student's stock of entrepreneurial human capital. The four dimensions through which entrepreneurship education is operationalised correspond to the intensity and quality of that investment. The first hypothesis follows directly from the theory's second tenet.

At the level of the second independent variable, the theory's fourth tenet becomes operative. If the return on human capital is realised only through deployment, then the means of deployment are constitutive of the analysis. For the Nigerian undergraduate, the historical means of deploying entrepreneurial capability were largely unattainable: commercial premises, inventory finance and distribution capacity lay beyond the resources of a student. Under such conditions the theory predicts precisely what the Nigerian literature reports, namely capability and disposition without enterprise, since intention is what latent human capital looks like when it cannot be deployed. Digital platforms have altered that condition materially. Digital platform utilisation is accordingly conceptualised as the deployment condition governing the realisation of entrepreneurial human capital, and the second hypothesis states the resulting expectation.

The third hypothesis concerns the form of the relationship rather than its existence. If entrepreneurial human capital yields a return only where the conditions of deployment obtain, then the effect of entrepreneurship education upon enterprise formation should vary systematically with the deployment capability available to the individual student. Among students who command the digital means of market access, transaction settlement and fulfilment, instruction has an outlet, and its effect on venture formation should be pronounced. Among students who lack those means, the same instruction produces capability that cannot be exercised, and its effect should approach nullity. Digital platform utilisation is therefore hypothesised to moderate the relationship between entrepreneurship education and micro-enterprise formation, and it is this conditional proposition that constitutes the study's principal theoretical claim.

2.5 Empirical Review



Popoola (2025), in "Innovation environment and entrepreneurial intentions among undergraduate students in Nigeria: The moderating role of entrepreneurial education," sought to determine how innovation environments affect entrepreneurial intentions and whether entrepreneurship education moderates that relationship. Working with pooled data from 3,848 undergraduates across six Nigerian universities and employing logit regression, the study found that entrepreneurship education exerted a strong positive influence on entrepreneurial intention while the innovation environment showed no significant independent effect, and that the interaction term did not attain significance. The strongest predictors were parental business engagement and the student's own existing business engagement. Its scale and explicit engagement with moderation make it the closest antecedent to the present study; its dependent variable, however, remains entrepreneurial intention, and the student business engagement that emerged as its strongest predictor is treated as a control rather than as the outcome of interest.

Amuda, Zubairu, Ibrahim and Maitala (2020), in "Assessing the impact of entrepreneurship education on the entrepreneurial intention of Nigerian entrepreneurship students," set out to determine whether progression through an entrepreneurship curriculum raised entrepreneurial intention. Employing a cross-sectional survey design, the study compared the mean intention scores of 82 final-year and 68 second-year students in the Department of Entrepreneurship and Business Studies at a Nigerian federal university of technology. No significant difference was found between the two cohorts. The authors concluded that the departmental curriculum required revision and that a policy of mandating entrepreneurship education at university level was of itself insufficient to address graduate unemployment. The finding is of particular value because it was obtained in the most favourable possible setting, among students specialising in entrepreneurship.

Ekeh, Tsetim, Dadashi and Oguche (2022), in "Entrepreneurship education and entrepreneurial intention of university undergraduate students in Benue State, Nigeria," examined the effect of entrepreneurship education on start-up intention and innovation intention. The study adopted a cross-sectional survey design across three universities in Benue State. It concluded that undergraduate intentions toward entrepreneurship can be enhanced through entrepreneurship education, and recommended a more practical and effective model of entrepreneurship education. The study is representative of the dominant strand of the Nigerian literature both in its affirmative finding and in its terminal reliance on intention as outcome.

Ilevbare, Ilevbare, Adelowo and Oshorenua (2022), in "Social support and risk-taking propensity as predictors of entrepreneurial intention among undergraduates in Nigeria," aimed to establish the determinants of entrepreneurial intention with emphasis on risk-taking propensity, social support and demographic characteristics. Data were collected from 350 undergraduates across seven faculties of Obafemi Awolowo University. The study found social support and risk-taking propensity to be significant predictors of entrepreneurial intention. Its identification of social support as consequential anticipates the argument of the present study, in that both concern the enabling conditions surrounding the individual rather than the capability residing within them; the resource examined here, however, is infrastructural rather than relational.

Ogba, Ogba, Ugwu, Emma-Echiegu, Eze, Agu and Aneke (2022), in "Moderating role of initiative on the relationship between intrinsic motivation and self-efficacy on entrepreneurial intention," investigated whether personal initiative moderates the relationships between intrinsic motivation, self-efficacy and entrepreneurial intention among Nigerian graduating students. Drawing on an



integrated framework combining the theory of planned behaviour with self-determination and humanistic perspectives, and employing a cross-sectional design with 688 graduate students, the study established significant moderating effects. Methodologically the study is instructive in demonstrating the application of moderation analysis within Nigerian entrepreneurship research, though the moderator examined is a psychological disposition rather than an external deployment condition.

Moses (2025), in "Influence of entrepreneurship education and mindset on entrepreneurial intention among business education students in public universities, Southwest, Nigeria," sought to determine the joint influence of entrepreneurship education and entrepreneurial mindset on entrepreneurial intention. Underpinned by the theory of planned behaviour together with learning-by-doing and implicit theories of intelligence, the study employed a descriptive survey design with total enumeration of a population of 952 final-year business education students, using a validated instrument reporting a reliability coefficient of 0.890, and analysed the data by descriptive statistics and multiple regression. The level of entrepreneurship education delivered was found to be low, entrepreneurial intention moderate, and entrepreneurial mindset high, with the two predictors jointly explaining a substantial proportion of variance in intention. The finding that entrepreneurship education was rated low in a setting of universal formal exposure supports the treatment of delivery quality, rather than exposure, as the analytically relevant variable.

Ochinanwata and Ochinanwata (2023), in "The impact of digital platforms on SMEs' development and performance," examined how digital platforms affect the development of online micro and small businesses in Nigeria. The study adopted a qualitative methodology employing semi-structured interviews and developed a digital platform adoption framework for the Nigerian context. Its principal findings were that digital skills and social media management competence are decisive for the development and sustenance of micro businesses adopting online platforms, and that trust constitutes a leading impediment. The authors recommended that higher education institutions and informal training providers equip individuals with the digital capabilities required for platform adoption. That recommendation identifies the connection between education and platform capability which the present study subjects to empirical test.

Adejumo, Alabi and Olaoye (2025), in "Effect of social media usage on the performance of micro and small-scale enterprises in Lagos State, Nigeria," assessed the effect of visual-centric, professional networking, real-time engagement and community-driven platforms on revenue growth. The study employed a descriptive survey design, determining a sample of 781 respondents from a population of 3,337,198 enterprise owners by means of Taro Yamane's formula. Social media was found to be a significant performance-enhancing instrument supporting revenue expansion and customer engagement. The finding establishes the commercial value of platform use among Nigerian micro enterprises generally; whether it obtains among student-operated ventures, and whether it interacts with formal entrepreneurship education, is not addressed.

Ononye, Okwechime and Ehigiator (2025), in "Social media use and SME performance in Nigeria: Do digital entrepreneurial orientation, digital literacy, and organizational ambidexterity moderate this relationship?" examined the quasi-moderating roles of digital entrepreneurial orientation, digital literacy and organisational ambidexterity. The study concluded that the utility of social media for performance improvement is contingent upon the degree to which enterprises demonstrate strong digital entrepreneurial orientation and organisational ambidexterity. This is the study most directly



supportive of the conditional logic advanced here, establishing within the Nigerian context that digital engagement operates contingently rather than uniformly, though its unit of analysis is the established enterprise rather than the student venture.

Muhammad, Adalier and Adeshola (2025), in "Digital transformation in youth owned MSMEs: A mixed method exploration on the impact of contemporary social commerce on sustainable performance," explored the adoption of social commerce among youth-owned micro, small and medium enterprises in Nigeria and its consequences for performance. The study integrated the technology–organisation–environment framework with dynamic capabilities theory and employed an exploratory sequential mixed-method design. It found that artificial intelligence integration, innovation culture and entrepreneurial orientation significantly influence social commerce adoption among enterprises owned by the youngest cohort of Nigerian entrepreneurs. Of the Nigerian studies reviewed, this is the closest in population to the present study, though its respondents are youth enterprise owners generally rather than enrolled undergraduates, and enterprise formation is presupposed rather than examined.

Lawal, Ademeso, Alabi and Idris (2025), in "Digital governance and inclusive policy implementation: Challenges and prospects in Sub-Saharan Africa," examined the conditions under which digital infrastructure supports inclusive implementation outcomes. Employing a documentary and analytical approach, the study found that digital platforms extend reach while simultaneously reproducing existing patterns of exclusion where complementary capabilities are unevenly distributed. Although concerned with governance rather than enterprise, the study articulates for the African context the general proposition on which the present study rests, namely that digital infrastructure alters rather than removes the constraints faced by resource-poor actors.

Taken together, the studies reviewed disclose a literature of substantial volume and methodological competence which is nonetheless constituted so as to be incapable of answering the question this study poses. Its dominant strand establishes that entrepreneurship education is positively associated with entrepreneurial intention among Nigerian undergraduates, but terminates at intention and therefore cannot detect whether that intention is ever converted into enterprise; where the conversion has been examined even indirectly, as by Amuda et al. (2020), the affirmative consensus becomes markedly less secure. Its second strand demonstrates that digital platform use materially improves the performance of Nigerian micro enterprises, yet locates that finding exclusively among established enterprises and has not extended it to the student population. The two strands have not been brought into contact, and neither has been tested against a behavioural outcome. No Nigerian study has taken actual micro-enterprise formation among enrolled undergraduates as its dependent variable, and none has estimated the effects of entrepreneurship education and digital platform utilisation upon such formation within a single model. It is this gap, in outcome measurement and in comparative specification, that the present study addresses.

3.0 Methodology

3.1 Research Design and Rationale

The study adopts a descriptive survey design incorporating correlational elements. The design is appropriate on three grounds. First, the study requires the systematic collection of standardised data on three constructs from a representative sample of a large and dispersed population, a task for which survey administration is the established instrument. Second, it seeks to determine relationships among variables as they occur naturally, without manipulation of the independent



variable; an experimental design is neither feasible, since entrepreneurship education is delivered as a universal curricular requirement rather than assigned, nor ethically appropriate, since it would entail withholding a mandated component of the curriculum. Third, the moderation hypothesis central to the study requires the simultaneous measurement of three variables across a sample of sufficient size to support the estimation of an interaction effect, a requirement met by survey administration and not by qualitative alternatives.

A cross-sectional rather than longitudinal approach is adopted in view of the resource and time constraints attending the study. The limitation this imposes on causal inference is acknowledged, and the findings are accordingly interpreted in associational terms.

3.3 Population of the Study

The population of the study comprises the 20,856 undergraduate students of the University of Abuja distributed across its thirteen faculties, as reported in the institution's published statistics (University of Abuja, 2026). The faculty-level distribution of this population is presented in Table 1. Undergraduates constitute the appropriate population because the study is concerned with enterprise formation during enrolment rather than after graduation, and because entrepreneurship instruction under the Core Curriculum and Minimum Academic Standards is delivered at undergraduate level.

3.4 Sample Size Determination and Sampling Technique

The sample size was determined by application of Taro Yamane's formula at a 95 per cent confidence level and a 5 per cent margin of error, expressed as:

$$n = N / [1 + N(e)^2]$$

where n denotes the sample size, N the population size, and e the margin of error. Substituting $N = 20,856$ and $e = 0.05$:

$$n = 20,856 / [1 + 20,856(0.05)^2] = 20,856 / [1 + 52.14] = 20,856 / 53.14 = 392.5$$

The computed sample size of approximately 393 was rounded upward to 400 in order to accommodate anticipated non-response and to yield equitable allocations across strata. A sample of this magnitude satisfies the requirements for hierarchical moderated regression with the number of predictors specified in the model.

A stratified proportional sampling technique was employed, with the thirteen faculties constituting the strata. Stratification by faculty is necessary because both entrepreneurship instruction and digital commercial activity may be expected to vary by discipline, and because faculty enrolments differ by more than an order of magnitude, ranging from 221 in Pharmaceutical Sciences to 4,039 in science; an unstratified sample would risk substantial under-representation of the smaller faculties. Allocation across strata followed Bowley's proportional allocation formula:

$$nh = (n \times Nh) / N$$

where nh denotes the sample allocated to a given stratum, n the total sample size, Nh the population of that stratum, and N the total population. Applying the formula with $n = 400$ and $N = 20,856$ yields the allocations presented in Table 1. Straight rounding of the computed values produced a total of 398, and the two residual places were assigned to the Faculty of Science and the Faculty of Social Sciences, whose computed allocations carried the largest fractional remainders. Within each faculty, respondents were selected by simple random sampling from among students in the second



year of study and above, on the ground that first-year students may not yet have received entrepreneurship instruction and would therefore lack exposure to the independent variable.

Table 1

Population distribution and proportional allocation of the sample across faculties

Faculty	Population (Nh)	Proportion (%)	Sample (nh)
Agriculture	1,144	5.49	22
Arts	3,033	14.54	58
Basic Medical Sciences	533	2.56	10
Education	2,550	12.23	49
Engineering	1,144	5.49	22
Environmental Sciences	858	4.11	16
Law	678	3.25	13
Management Sciences	2,455	11.77	47
Nursing and Allied Health Sciences	573	2.75	11
Pharmaceutical Sciences	221	1.06	4
Science	4,039	19.37	78
Social Sciences	3,258	15.62	63
Veterinary Medicine	370	1.77	7
Total	20,856	100	400

3.5 Instrument for Data Collection and Operationalisation of Variables

Data were collected using a structured questionnaire organised into six sections. Section A elicits background information: faculty, level of study, gender, entrepreneurship course status, family business background and access to start-up capital. Section B measures entrepreneurship education through six five-point Likert items, and Section C measures digital platform utilisation through six items on the same scale. The instrument was deliberately kept short to limit respondent fatigue and straight-line responding, a concern of particular weight where administration is partly electronic and unsupervised.

3.7 Method of Data Analysis

Data were analysed using the Statistical Package for the Social Sciences. Descriptive statistics comprising frequencies, percentages, means and standard deviations were employed to profile the respondents and to establish the prevailing levels of entrepreneurship education exposure, digital platform utilisation and micro-enterprise formation, with item and dimensional means interpreted against a criterion mean of 3.00 representing the midpoint of the five-point response scale. The profile of micro-enterprise formation is presented through frequency distributions of the factual items, disaggregated by sector, duration of operation, employment, turnover band and registration status.

4.0 Results

4.1 Response Rate and Respondent Characteristics

Of the 400 questionnaires administered across the thirteen faculties of the University of Abuja in accordance with the proportional allocation set out in Table 1, 372 copies were retrieved. Data cleaning to eliminate returns exhibiting substantial missing values or unengaged responding, the latter identified through straight-line response patterns across the Likert batteries, removed a further



14 cases, leaving 358 usable questionnaires. This yields an effective response rate of 89.5 per cent, which exceeds the threshold conventionally regarded as adequate for survey research and provides a case-to-predictor ratio well in excess of that required for moderated regression with the number of terms specified in the model.

The realised sample is broadly balanced by gender, comprising 192 male respondents (53.6%) and 166 female respondents (46.4%). By level of study, the distribution is concentrated in the middle years of the undergraduate programme, with 300-level students constituting the largest group (34.1%), followed by 400-level (29.6%) and 200-level (28.2%) students, and 500-level students and above accounting for the remaining 8.1 per cent. This concentration is a consequence of the sampling frame, which excluded first-year students on the ground that they may not yet have received entrepreneurship instruction, and of the fact that only a minority of the University's programmes extend beyond four years. A total of 41.3 per cent of respondents reported prior family business exposure, the remaining 58.7 per cent reporting none.

4.2 Descriptive Analysis of Entrepreneurship Education

Although the objectives of this study concern the effects of the two predictors upon micro-enterprise formation, the descriptive profile of each construct is presented first, both as a necessary preliminary to the multivariate analysis and because the internal pattern of responses is itself substantively informative. Item means were interpreted against a criterion mean of 3.00, representing the midpoint of the five-point response scale, such that items attaining or exceeding that value were adjudged high and those falling below it low. For the interpretation of grand means, values between 2.60 and 3.39 were characterised as moderate and values of 3.40 and above as high. Results are presented in Table 3.

Table 3

Descriptive statistics for entrepreneurship education (n = 358)

S/N	Statement	Mean	SD	Decision
B1	The entrepreneurship course taught me how to identify a viable business opportunity.	3.82	1	High
B2	The entrepreneurship course taught me how to prepare a business plan and assess its feasibility.	3.65	1	High
B3	The entrepreneurship course required me to carry out practical business tasks rather than written work alone.	2.45	1	Low
B4	The entrepreneurship course was taught by lecturers who have practical business experience.	2.88	1	Low
B5	The University provides facilities, funding or advisory support that students can use to start a business.	2.1	1	Low
B6	The entrepreneurship course equipped me with skills that I can apply in operating a business.	3.42	1	High
Grand Mean		3.05	1	Moderate

Note. Criterion mean = 3.00. SA = 5, A = 4, U = 3, D = 2, SD = 1.

The grand mean of 3.05 places entrepreneurship education marginally above the criterion, indicating a moderate overall level of exposure. That aggregate figure, however, conceals a divide of considerable analytical importance, which becomes apparent only when the items are examined individually.



The two items addressing the transmission of entrepreneurial knowledge returned the highest scores in the construct: opportunity identification ($M = 3.82$, $SD = 0.85$) and business plan preparation ($M = 3.65$, $SD = 0.91$). By contrast, the items addressing the conditions under which that knowledge might be applied returned the lowest: experiential delivery through practical business tasks ($M = 2.45$, $SD = 1.12$) and institutional provision of facilities, funding or advisory support ($M = 2.10$, $SD = 1.18$). The latter is the lowest-scoring item in the entire instrument. Instructor practical experience ($M = 2.88$, $SD = 1.05$) also fell below the criterion, indicating that the transmission of knowledge is affected largely by staff without direct business experience of their own. The global item on skills acquired ($M = 3.42$, $SD = 0.98$) sits between these two groupings, which is consistent with respondents crediting the course with conveying knowledge while withholding assent from the proposition that it prepared them to operate a business.

The dispersion statistics reinforce this reading. The two highest-scoring items carry the smallest standard deviations in the construct, indicating substantial consensus that curriculum content is delivered, whereas the two lowest-scoring items carry the largest, indicating that the deficiency in practical and institutional provision is experienced unevenly across the student body. Since sampling was stratified by faculty, this dispersion is consistent with variation in provision between faculties, a possibility that the present design cannot resolve but which warrants attention in subsequent research.

The substantive point is that the pattern corresponds closely to what human capital theory would anticipate of an investment that creates productive capacity without supplying the conditions of its deployment. The University transmits entrepreneurial knowledge at a level respondents recognise, and withholds, or is unable to supply, the practical exposure and institutional resources through which that knowledge might be converted into enterprise.

4.3 Descriptive Analysis of Digital Platform Utilisation

Descriptive statistics for digital platform utilisation, computed on the same basis, are presented in Table 4.

Table 4

Descriptive statistics for digital platform utilisation (n = 358)

S/N	Statement	Mean	SD	Decision
C1	I use social media platforms to advertise goods or services for sale.	4.15	1	High
C2	I have completed sales with customers whom I first met through a social media platform.	3.92	1	High
C3	I receive payment for goods or services through bank transfer, mobile money or POS.	4.65	1	High
C4	I use dispatch riders or delivery companies to send goods to customers.	3.78	1	High
C5	I am able to produce promotional content such as product photographs, captions or short videos.	3.85	1	High
C6	I earn income through freelance or gig platforms.	2.95	1	Low
Grand Mean		3.88	1	High

Note. Criterion mean = 3.00. SA = 5, A = 4, U = 3, D = 2, SD = 1.



Digital platform utilisation returned a grand mean of 3.88, placing it in the high band and exceeding the corresponding figure for entrepreneurship education by 0.83 of a scale point. Five of the six items attained the criterion, and with the single exception noted below every item in this construct returned a higher mean than every item in the entrepreneurship education construct save one. Descriptively, therefore, the undergraduates sampled are considerably better provided with the means of commercial deployment than with formal entrepreneurial capability.

Digital payment settlement returned the highest mean in the instrument ($M = 4.65$) together with its lowest standard deviation ($SD = 0.52$), a combination indicating near-universal adoption and correspondingly little variance. Social commerce advertising ($M = 4.15$, $SD = 0.76$) and completed sales to customers first encountered on a platform ($M = 3.92$, $SD = 0.88$) follow. The latter item is of particular interest because it records a commercial outcome rather than a behavioural disposition: on the evidence of this item, transactions concluded with counterparties met through digital channels are the norm rather than the exception among the students sampled. Logistics use ($M = 3.78$, $SD = 1.01$) and content production competence ($M = 3.85$, $SD = 0.94$) likewise exceeded the criterion, indicating that the fulfilment and marketing functions are similarly well provided.

The exception is instructive. Income earned through freelance or gig platforms returned the only sub-criterion mean in the construct ($M = 2.95$) together with the highest standard deviation ($SD = 1.25$). The distinction this draws is between two categories of platform activity that the aggregate figure would otherwise conflate. Platform-mediated participation in local commodity markets, in which the student sells goods to customers within reach of a dispatch rider, is close to universal; platform-mediated participation in the international market for services, which requires portfolio construction, competitive bidding and, in most cases, foreign-currency payment infrastructure, is not. The barrier in the second case is capability rather than access, which is consistent with the finding of Ochinanwata and Ochinanwata (2023) that digital skills rather than platform availability condition commercial outcomes in the Nigerian setting.

4.4 Profile of Micro-Enterprise Formation

Of the 358 respondents, 224 reported currently operating an income-generating venture, a proportion of 62.6 per cent. This figure is the single most consequential descriptive finding of the study, and it warrants emphasis at the outset. The Nigerian literature reviewed in Section 2.5 measures, almost without exception, the proportion of students who state an intention to establish an enterprise at some point after graduation. The present figure measures the proportion who are operating one now. That nearly two-thirds of the sampled undergraduates fall into the latter category establishes that student enterprise in this setting is not a prospective disposition but a present economic fact. The operational characteristics of these 224 ventures are presented in Table 5.

Table 5

Profile of student-operated micro-enterprises ($n = 224$)

Characteristic	Frequency	Percentage (%)
<i>Sector of operation</i>		
Retail / e-commerce	108	48.2
Digital services / technology	42	18.8
Services / consulting	38	17
Artisanal / crafts / food preparation	26	11.6
Agriculture / agro-processing	10	4.4



<i>Duration of operation</i>		
Less than 6 months	65	29
6 to 12 months	82	36.6
1 to 2 years	55	24.6
More than 2 years	22	9.8
<i>Presence of assistance (employment)</i>		
None (solo operator)	186	83
1 to 3 persons	38	17
4 persons or more	0	0
<i>Estimated monthly turnover</i>		
Less than ₦50,000	95	42.4
₦50,000 – ₦100,000	78	34.8
₦100,001 – ₦250,000	36	16.1
₦250,001 and above	15	6.7
<i>Registration status (CAC)</i>		
Registered	18	8
Unregistered	206	92

Note. Response categories for sector, duration, employment and turnover were collapsed from the original questionnaire bands for reporting. Percentages are computed on the 224 respondents operating a venture.

Five features of the profile bear directly on the study's argument. The first concerns scale. A total of 83.0 per cent of the ventures are operated by a single individual without assistance of any kind, 17.0 per cent engage between one and three persons, and none engages four or more. The ventures are thus situated not merely within the micro category of the national enterprise classification but at its floor. This vindicates the terminological decision taken in Section 2.1.5 to describe the phenomenon as micro-enterprise formation rather than as small or medium enterprise activity; a study framed around the latter would have been measuring something that does not exist in this population.

The second concerns maturity. Nearly two-thirds of the ventures, 65.6 per cent, have been in operation for twelve months or less, and only 9.8 per cent have survived beyond two years. Read alongside the fact that the sample is drawn from students in their second year of study and above, this distribution indicates a population of young ventures with, by implication, considerable turnover. Entry into student enterprise is evidently easy; persistence in it is evidently not. The cross-sectional design cannot establish survival rates directly, and the point is accordingly advanced as an inference from the age distribution rather than as a finding.

The third concerns income. A total of 77.2 per cent of the ventures return an estimated monthly turnover below ₦100,000, with 42.4 per cent below ₦50,000. These are subsistence and supplementary income levels rather than the returns of an enterprise capable of absorbing labour, which is consistent with the employment distribution already noted and with the general characterisation of the Nigerian micro-enterprise sector reported by SMEDAN and NBS (2021).

The fourth concerns formality. Only 8.0 per cent of the ventures are registered with the Corporate Affairs Commission, the remaining 92.0 per cent operating wholly within the informal economy. This is a finding of some theoretical significance rather than a mere descriptive detail. The enterprises documented here were formed without recourse to any formal institutional apparatus, whether of registration, finance or university provision, which is precisely what would be expected



of human capital deployed through channels that the formal institutional structure neither created nor recognises. The near-absence of registration is thus continuous with the low institutional support score recorded in Table 3: the University does not supply the means of enterprise, and the enterprises that nonetheless arise owe nothing to formal structures.

The fifth concerns sector. Retail and e-commerce alone account for 48.2 per cent of the ventures, with digital services and technology accounting for a further 18.8 per cent, so that two-thirds of all student ventures fall within the two sectors most fully mediated by digital infrastructure. The concentration is consistent with the pattern of platform utilisation reported in Table 4, in that resale of goods is the enterprise form most readily constituted by social commerce advertising, digital payment settlement and third-party logistics, requiring neither premises nor specialised capability. This is the first indication in the data of the relationship the regression analysis is designed to test.

4.5 Test of Hypotheses

The three hypotheses were tested by means of hierarchical moderated multiple regression conducted in three steps, as specified in Section 3.7. Control variables were entered at the first step, the two predictors at the second, and the mean-centred interaction term at the third. Results are presented in Table 7.

Table 7

Hierarchical moderated regression analysis predicting micro-enterprise formation (n = 358)

Predictors	Step 1 β	Step 2 β	Step 3 β
<i>Control variables</i>			
Level of study	0.085	0.042	0.038
Gender	0.021	0.015	0.012
Faculty (dummy)	0.044	0.031	0.028
Family business exposure	.186**	.112*	.105*
Access to start-up capital	.224**	.145**	.132**
<i>Independent variables</i>			
Entrepreneurship education (EE)		.168**	.145**
Digital platform utilisation (DPU)		.412***	.385***
<i>Interaction term</i>			
EE $\times$ DPU (mean-centred)			.215***
<i>Model diagnostics</i>			
R ²	0.125	0.354	0.396
Adjusted R ²	0.112	0.341	0.382
ΔR^2	0.125	0.229	0.042
F-change	10.05***	62.84***	24.62***

Note. Standardised beta coefficients are reported. * $p < .05$, ** $p < .01$, *** $p < .001$.

The control variables entered at Step 1 account for 12.5 per cent of the variance in micro-enterprise formation ($R^2 = .125$, F-change = 10.05, $p < .001$). Two of the five are significant, namely access to start-up capital ($\beta = .224$, $p < .01$) and prior family business exposure ($\beta = .186$, $p < .01$), while level of study, gender and faculty are not. The non-significance of level of study is worth recording at the outset: additional years of exposure to the university curriculum, and therefore to its entrepreneurship provision, do not of themselves increase the probability of operating a venture.

Test of H_{01} . The addition of the two predictors at Step 2 raises the explained variance to 35.4 per cent, an increment of 22.9 percentage points that is significant at the highest conventional level



($\Delta R^2 = .229$, $F\text{-change} = 62.84$, $p < .001$). Within that step, entrepreneurship education exerts a positive and significant effect on micro-enterprise formation ($\beta = .168$, $p < .01$). The first null hypothesis is accordingly rejected. Entrepreneurship education does influence the formation of student ventures, although the magnitude of that influence is modest, exceedingly only that of the control variables and falling below the effect of access to start-up capital recorded at Step 1.

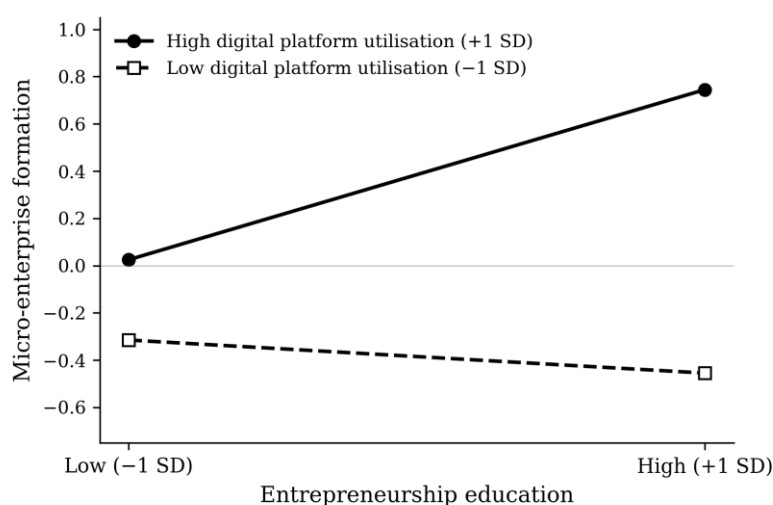
Test of H_{02} . Digital platform utilisation exerts a positive effect on micro-enterprise formation of substantially greater magnitude ($\beta = .412$, $p < .001$), and the second null hypothesis is likewise rejected. The standardised coefficient for digital platform utilisation is approximately 2.45 times that for entrepreneurship education, indicating that within this sample the means of commercial deployment carries considerably more explanatory weight than formal entrepreneurial instruction. Both predictors retain significance in the presence of the other and of the full control set, so neither effect is an artefact of their intercorrelation.

Test of H_{03} . The mean-centred interaction term entered at Step 3 produces a further significant increment in explained variance ($\Delta R^2 = .042$, $F\text{-change} = 24.62$, $p < .001$), raising the total to 39.6 per cent, and the interaction coefficient is itself positive and significant ($\beta = .215$, $p < .001$). The third null hypothesis is therefore rejected: digital platform utilisation significantly moderates the relationship between entrepreneurship education and micro-enterprise formation. The positive sign indicates that the effect of entrepreneurship education upon venture formation strengthens as digital platform utilisation increases. It is notable that the interaction term returns a larger standardised coefficient than entrepreneurship education itself does at the same step ($\beta = .145$), which is to say that the conditional component of the education effect exceeds its unconditional component.

4.7 Interaction Effect and Simple Slopes Analysis

To interpret the form of the interaction established at Step 3, the relationship between entrepreneurship education and micro-enterprise formation was computed at one standard deviation above and one standard deviation below the mean of digital platform utilisation and plotted in Figure 2.

Figure 2: *Simple slopes of entrepreneurship education on micro-enterprise formation at high and low levels of digital platform utilisation*



Note. Values are expressed in standardised units. Slopes computed from the Step 3 coefficients reported in Table 7.



The plot discloses two relationships of markedly different character. Among students situated one standard deviation above the mean on digital platform utilisation, the slope relating entrepreneurship education to micro-enterprise formation is steep and positive, movement from low to high entrepreneurship education being associated with a pronounced increase in venture formation. Among students situated one standard deviation below that mean, the corresponding slope is effectively flat, entrepreneurship education producing no appreciable change in the dependent variable across its range.

The substantive interpretation is that entrepreneurship education is not ineffective but conditionally effective. Its capacity to generate enterprise depends upon whether the recipient possesses the digital means through which student enterprise is in practice conducted. Where those means are present, instruction converts into activity; where they are absent, the same instruction produces capability that is not exercised. The vertical separation between the two lines across the whole range of the horizontal axis further indicates that digital platform utilisation exerts its direct effect in addition to this conditioning function, students high in platform utilisation exceeding those low in it at every level of entrepreneurship education.

5.0 Discussion of Findings

5.1 Entrepreneurship Education and Micro-Enterprise Formation

The rejection of the first null hypothesis establishes that entrepreneurship education exerts a genuine effect upon the ventures Nigerian undergraduates actually operate. That finding should not be understated: it constitutes the first direct evidence, within the Nigerian literature reviewed, that the compulsory entrepreneurship curriculum produces a measurable behavioural return rather than merely an attitudinal one. The policy premise identified in Section 2.2 is, to this extent, vindicated.

The magnitude of the effect, however, is where the finding becomes analytically interesting. A standardised coefficient of .168 places entrepreneurship education as the weakest of the three substantive terms in the model, below both digital platform utilisation and the interaction term, and at Step 1 the control variable measuring access to start-up capital ($\beta = .224$) exceeded it. This stands in marked contrast to the pattern reported throughout the Nigerian intention literature. Ekeh et al. (2022) concluded that undergraduate entrepreneurial intentions can be enhanced through entrepreneurship education, and Popoola (2025), working with pooled data from 3,848 undergraduates across six universities, found entrepreneurship education to be a strong positive predictor of intention while the innovation environment exerted no significant independent effect. Where intention is the outcome, entrepreneurship education dominates; where enterprise is the outcome, it does not.

The divergence is precisely the intention–action gap identified in Section 1.2, and the present study renders it visible for the first time in this literature by holding the predictor constant and changing the outcome. The finding aligns closely with that of Amuda et al. (2020), who compared final-year and second-year students in a Nigerian entrepreneurship department, found no significant difference in intention between them, and concluded that mandating entrepreneurship education was of itself insufficient to address graduate unemployment. The present study extends that conclusion from intention to behaviour and supplies the mechanism the earlier study could only infer. The non-significance of level of study in Table 7 corroborates it directly: more years of curricular exposure do not produce more ventures.



The descriptive evidence in Table 3 indicates why the effect is modest rather than absent. Entrepreneurship education as delivered in the study setting is heavily weighted toward the transmission of knowledge, with opportunity identification and business planning both scoring high, and markedly deficient in the conditions under which that knowledge might be exercised, with experiential delivery at 2.45 and institutional support at 2.10, the lowest score recorded anywhere in the instrument. Moses (2025) similarly recorded a low grand mean for entrepreneurship education as actually delivered in a setting of universal formal exposure. What the curriculum supplies, in the terms of human capital theory, is the investment; what it withholds is any part of the deployment condition. A modest behavioural return is exactly what such an investment should be expected to yield.

5.2 Digital Platform Utilisation and Micro-Enterprise Formation

The rejection of the second null hypothesis establishes digital platform utilisation as the dominant single predictor of micro-enterprise formation in this sample, its standardised coefficient of .412 being approximately two and a half times that of entrepreneurship education and its bivariate correlation with the dependent variable ($r = .548$) accounting for some thirty per cent of variance before any control is applied. On the evidence of this model, what most distinguishes the Nigerian undergraduate who operates a venture from the one who does not is not what the university has taught but what commercial infrastructure the student commands.

This finding extends to a new population a relationship already established among Nigerian enterprises generally. Adejumo et al. (2025), sampling 781 micro and small enterprise owners in Lagos State, found social media usage to be a significant instrument of revenue growth, while Muhammad et al. (2025) found social commerce adoption among youth-owned enterprises to be associated with improved sustainable performance. Both studies, however, examined enterprises that already existed, and both therefore addressed platform utilisation as a determinant of performance. The present study addresses it as a determinant of formation, and finds it operative at that prior stage. The distinction matters, because it locates digital infrastructure not merely among the instruments by which a Nigerian micro enterprise is improved but among the conditions under which one comes into being at all.

The descriptive evidence supports this reading at two points. Table 4 records near-universal adoption of digital payment settlement ($M = 4.65$) and high levels of social commerce advertising, logistics use and content production competence, indicating that the market access, transaction and fulfilment functions are all well provided within this population. Table 5 records that two-thirds of the ventures formed fall within retail, e-commerce and digital services, the sectors most fully constituted by that infrastructure, and that 92.0 per cent operate without registration. Taken together these establish that the enterprises documented here are platform enterprises in the strong sense: they exist because the platform supplies capabilities their operators do not own, and they exist outside the formal apparatus entirely.

The single sub-criterion item in the construct qualifies the finding usefully. Freelance and gig platform income returned a mean of 2.95 with the highest dispersion in the instrument, distinguishing platform-mediated participation in local commodity markets, which is close to universal, from platform-mediated participation in international service markets, which is not. Ochinanwata and Ochinanwata (2023) identified digital skills and platform management competence as decisive for Nigerian micro businesses operating online, and Ononye et al. (2025)



found the performance value of social media use to be contingent upon digital orientation and literacy. The present pattern is consistent with both: where platform use requires only the capabilities the local ecosystem already supplies, adoption is near-total; where it requires portfolio construction, competitive bidding and foreign-currency infrastructure, it is not.

5.3 The Moderating Effect of Digital Platform Utilisation

The rejection of the third null hypothesis is the central finding of this study. The interaction term produced a significant increment in explained variance ($\Delta R^2 = .042$, $F\text{-change} = 24.62$, $p < .001$) and a coefficient ($\beta = .215$) larger than that of entrepreneurship education itself at the same step, establishing that the relationship between entrepreneurship education and micro-enterprise formation is not uniform but conditional. The simple slopes analysis in Figure 2 gives the finding its interpretive force: among students high in digital platform utilisation the education–formation slope is steep and positive, while among students low in it the slope is effectively flat.

The proposition this supports is that entrepreneurship education is conditionally rather than intrinsically effective. The Nigerian policy debate has been conducted almost entirely as a dispute between those who hold the curriculum to work and those who hold it to have failed. The present finding indicates that both positions are partially correct and that the disagreement is misspecified, because the curriculum works for one part of the student population and not for another, and which part a given student falls into is determined by a variable that no curricular reform addresses. Two decades of policy have supplied the investment while leaving the deployment condition to be acquired privately, with the consequence that the return on public expenditure has accrued disproportionately to those students who happened to command digital commercial capability already.

The finding stands in an instructive relation to Popoola (2025), the closest antecedent in the literature. That study also tested a moderation hypothesis in a Nigerian undergraduate sample, and found the interaction term suggestive but non-significant. The present study, with a far smaller sample, finds a highly significant interaction. The most plausible explanation lies in the dependent variable. Popoola modelled entrepreneurial intention, and intention does not require deployment: a student may intend to establish an enterprise irrespective of whether the means of doing so are available, so the conditioning effect of a deployment resource is invisible at that level of measurement. Moderation of this kind can only appear when the outcome is behaviour, because only behaviour requires the resource whose absence does the conditioning. This is a methodological point of some generality, and it suggests that the null and inconsistent moderation findings scattered through the intention literature may be artefacts of outcome selection rather than evidence of absent effects.

The finding also inverts a relationship established elsewhere in the Nigerian evidence. Ononye et al. (2025) treated digital capability as the moderator of a social media–performance relationship, so that digital resources conditioned the returns to digital activity. Here digital capability conditions the returns to formal education, a relationship of a different kind: the infrastructural variable moderates the human capital variable. Ogba et al. (2022) demonstrated the operation of moderation within Nigerian entrepreneurship research using personal initiative, a psychological disposition internal to the individual. The moderator identified here is external, material and, unlike a disposition, directly amenable to policy intervention. That difference is what gives the finding its practical purchase.



Theoretically, the result supplies direct empirical support for the fourth tenet of human capital theory set out in Section 2.4.2, namely that the return on human capital is realised only through deployment and that the stock is otherwise a latent capacity. The proposition is ordinarily invoked as an assumption rather than tested; here it is tested and upheld. The corollary advanced in Section 2.4.4, that entrepreneurial intention is what latent human capital looks like when it cannot be deployed, is consistent with the whole pattern of results, though the present design cannot test it directly for want of an intention measure.

6.0 Conclusion

This study set out to determine the effects of entrepreneurship education and digital platform utilisation upon micro-enterprise formation among undergraduates of the University of Abuja, and to establish whether the first of those relationships is conditional upon the second. Departing from a Nigerian literature that has measured entrepreneurial intention almost to the exclusion of entrepreneurial behaviour, it took the ventures students actually operate as its dependent variable and found that 62.6 per cent of the sampled undergraduates operate one.

All three null hypotheses were rejected. Entrepreneurship education exerts a significant but modest effect upon micro-enterprise formation; digital platform utilisation exerts an effect approximately two and a half times larger; and digital platform utilisation significantly moderates the education–formation relationship, which is steep among students commanding digital commercial capability and effectively flat among those who do not. The study concludes that entrepreneurship education in the Nigerian university system is conditionally rather than intrinsically effective, and that the condition governing its effectiveness is the possession of the digital means through which student enterprise is in practice conducted. The ventures it documents are overwhelmingly solo, young, informal and platform-mediated, which is to say that they have been formed through channels the formal institutional apparatus neither created nor recognises.

7.0 Recommendations

The following recommendations follow from the findings.

- i. The National Universities Commission should require that the entrepreneurship component of the Core Curriculum and Minimum Academic Standards incorporate digital commercial competence as an assessed element rather than as an optional topic. The evidence of this study is that the deployment capability so acquired carries greater weight in enterprise formation than the entrepreneurial knowledge presently transmitted, and that the return on the existing curriculum is contingent upon it.
- ii. University management should establish and resource entrepreneurship support facilities accessible to undergraduates, addressing the institutional provision deficit recorded as the lowest-scoring item in this study. Provision should extend beyond physical incubation space to include seed funding, given that access to start-up capital remained a significant predictor of venture formation throughout the analysis.
- iii. Entrepreneurship instruction should be reconstituted around experiential rather than expository delivery, with assessment attaching to demonstrated commercial activity. The item recording practical business tasks returned a mean of 2.45 against 3.82 for opportunity identification, indicating that the curriculum transmits knowledge effectively and practice scarcely at all.



- iv. Universities should engage practising entrepreneurs in the delivery of the entrepreneurship curriculum, whether as adjunct instructors or through structured industry exposure, in response to the finding that instruction is presently delivered largely by staff without direct business experience.
- v. Policy attention should be directed toward the survival rather than merely the formation of student ventures, given that only 9.8 per cent of those documented had persisted beyond two years. Advisory support, record-keeping instruction and structured routes to formalisation would address the near-total informality recorded here.
- vi. Undergraduates already operating ventures should be encouraged to develop capability in the platform functions that remain unevenly distributed, particularly digital marketing competence and freelance platform participation, the latter representing the principal unexploited channel identified in this study.

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Authors' contributions

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The authors declare that they have no competing interests.

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