

From exposure to innovation: Role model effects, AI exposure and digital entrepreneurial intentions among university students in an emerging economy

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Abstract

Purpose: Growing graduate unemployment in the emerging world has sparked new attention on digital entrepreneurship as an alternative means through which to innovate and engage in the economy. Meanwhile, AI technologies are transforming entrepreneurial learning, creativity, and opportunity recognition of university students. This research investigated the impact of role model effects and AI exposure on digital entrepreneurial intention of Nigerian university students.

Methodology: A quantitative cross-sectional survey was employed. 400 students were sampled from the University of Lagos, the University of Ibadan, Delta State University and Dennis Osadebay University. Data analyses were performed using partial least squares structural equation modeling (PLS-SEM).

Findings: AI exposure had a strong impact on digital entrepreneurial intention ($\beta = 0.397$, $p < 0.001$) and entrepreneurial self-efficacy ($\beta = 0.429$, $p < 0.001$) and role model effect also positively predict digital entrepreneurial intention ($\beta = 0.281$, $p < 0.001$). Entrepreneurial self-efficacy also served as a mediator between the independent variables and the digital entrepreneurial intention, and institutional innovation support amplified entrepreneurial intention. The model accounted for 64.1% of the variance in digital entrepreneurial intention.

Practical Implications/Originality: The study highlights the relevance of AI-literacy, entrepreneurial ecosystem and innovation-focused university support in the context of developing countries for sustainable youth entrepreneurship development.

Keywords: Artificial Intelligence Exposure; Digital Entrepreneurial Intention; Entrepreneurial Self-Efficacy; Role Model Effects; Institutional Innovation Support; University Students; Nigeria

1. Introduction

Artificial intelligence (AI) technologies are reshaping the entrepreneurial landscape especially in the context of digitally-driven economies where innovation relies more and more on automation, intelligent systems, and technological flexibility. Advances in generative AI, machine learning, predictive analytics and intelligent automation are changing the way entrepreneurial opportunities are sensed and commercialized. According to Dwivedi et al. (2023), AI technologies are transforming entrepreneurial behaviour with enhanced creativity, opportunity discovery as well as strategic decision-making. Similarly, Bell and Bell (2023) observed that generative AI reshaped entrepreneurship

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education and digital venture creation through intelligent tool-supported idea generation, market analysis, and experimentation. Gofman and Jin (2024) also highlighted that AI is more and more serving as an entrepreneurial resource with which entrepreneurs can enhance innovation and the growth potential of ventures. Thus, digital entrepreneurship is blurring out traditional e-business activity in favour of AI-facilitated entrepreneurial ecosystems.

This change is especially crucial in developing countries like Nigeria, where unemployment and underemployment among graduates is still a big socio-economic problem. While higher education participation is growing all over Africa, labour market prospects are still constrained, driving a lot of graduates to take other routes in the form of entrepreneurship and innovation. According to Shahriar et al. (2024), entrepreneurship is increasingly viewed as a tool to decrease unemployment and to diversify the economic in developing economies. In several African nations, digital platforms, fintech ecosystems, e-commerce systems, and mobile technologies have created new opportunities for digitally enabled entrepreneurship. Yet, imperfect systems of innovation, poor infrastructure, and weak institutional support still hamper the development of entrepreneurs. The challenges make AI exposure and digital capability development of university students more salient.

In this context, digital entrepreneurship in university students has become an increasing subject of research interest, as young people more frequently employ AI-driven tools to develop business ideas. Generative AI applications like ChatGPT, intelligent content generators, and analytics systems with AI assistance have increased the opportunities for students to think entrepreneurially and recognize opportunities. Duong (2025) showed that AI literacy has a positive effect on e-entrepreneurial intention via entrepreneurial self-efficacy, and Xie and Wang (2025) indicated that AI-enabled entrepreneurship education promotes entrepreneurial self-efficacy and entrepreneurial intention. In the same way, Mwaanga et al. (2026) found that interaction with ChatGPT has a positive impact on the entrepreneur cognition of university students in Zambia.

Besides technological exposure, entrepreneurial role models are still significant other social factors influencing students' entrepreneurial intention. Based on Social Learning Theory, an entrepreneurial behaviour is shaped in interaction with concrete successful entrepreneurs. Existing studies show that entrepreneurial role models shape entrepreneurial intention through their credibility, accessibility, inspirational influence and perceived similarity (Sitaridis & Kitsios, 2024). However, there are only few studies that have combined the effect of role models, AI exposure, entrepreneurial self-efficacy, digital entrepreneurial intention in a single model in the context of emerging economies. Hence, the present research investigates the role model effect and exposure to AI in influencing an intention towards digital entrepreneurship of university students in Nigeria by testing the mediation effect of entrepreneurial self-efficacy and the moderation of institutional supports for innovation. The study offers practical implications for universities, innovation hubs and policy-makers in emerging economies.

2. Literature Review and Hypotheses Development

2.1. Digital Entrepreneurial Intention

Digital entrepreneurial intention (DEI) is defined as an individual's intention to pursue entrepreneurship in the digital domain, such as through the use of AI systems, social media, e-commerce, and data-driven applications (Nambisan, 2017). The expansion of digital economies has increased the opportunities for entrepreneurship among university students by lowering such traditional entry barriers and allowing flexible processes of innovation (Kraus et al., 2019). In the context of developing nations, digital entrepreneurship is gradually emerging as a means of employment and economic inclusion for youth marred by uncertain labour market.

The development of artificial intelligence technologies, and in particular the emergence of generative AI systems such as ChatGPT and AI-driven business applications, has reshaped what it means for students to learn, be creative and recognize opportunities as an entrepreneur. Systems enabled by AI technology raise the quality of ideas, analysis of market and capacity to innovate, which increases intelligence of entrepreneurs and digital venture orientation (Dwivedi et al., 2023). There is also empirical evidence that shows AI literacy has a positive impact on e-entrepreneurial intention and entrepreneurial self-efficacy among university students (Duong, 2025; Xie & Wang, 2025). These events imply that access to AI tools could have a profound effect on in students' digital entrepreneurial intentions.

- H₁: AI exposure significantly influences digital entrepreneurial intentions.
- H₂: AI exposure significantly influences entrepreneurial self-efficacy.

2.2. Role Model Effects

Role model effects are understood as the effect of visible entrepreneurial actors on individuals' entrepreneurial attitudes, motivations, and intentions to engage in entrepreneurial behaviour. Based on social learning theory, entrepreneurial behaviour is shaped in part by watching successful role models in the entrepreneurship domain (Bandura, 1977). In entrepreneurship settings, role models serve as sources of social inspiration, behaviour guidance, and psychological support that positively influence entrepreneurial self-confidence and entrepreneurial aspirations of students.

The established literature defines credibility, accessibility, relatability and inspirational influence as the main dimensions of entrepreneurial role models. Reliable and relatable role models enhance the belief in entrepreneurship as students view entrepreneurial success as a realistic and achievable path (Bosma et al., 2012). In the same vein, an accessible entrepreneur actor enables mentorship, interaction and entrepreneurial learning, especially in vertically connected layers of experiences as these are increasingly being viewed through social media and innovation ecosystems.

Research suggests entrepreneurial role models increase both the intention to start a business and the belief that one has the necessary skills to do so by enhancing students' confidence in innovation and their perception of their own entrepreneur competence (Fellnhöfer, 2017). As a result, students who are influenced by strong entrepreneurial role models may feel more confident in digitally enabled entrepreneurship.

- H₃: Role model effects significantly influence digital entrepreneurial intentions.
- H₄: Role model effects significantly influence entrepreneurial self-efficacy.

2.3. Entrepreneurial Self-Efficacy and Digital Entrepreneurial Intention

Entrepreneurial self-efficacy concerns individuals' perception of their own competence to successfully complete entrepreneurial-related activities and attain related outcomes. Theory of planned behaviour is the widely reported model to explain the intention with effecting control on behaviour including entrepreneurial intention (Ajzen, 1991). In the context of digital entrepreneurship, entrepreneurial self-efficacy indicates the extent to which students demonstrate their confidence in the use of digital technologies, AI systems and innovation tools as a means of entrepreneurial venture development.

Past studies consistently reveal that the positive effect of entrepreneurial self-efficacy on entrepreneurial intention is because people who have a higher level of confidence in entrepreneurship are more likely to take up new or innovative business activities (Newman et al., 2019). Exposure to AI and entrepreneurial role models thus may also enhance digital entrepreneurial intentions indirectly via entrepreneurial self-efficacy.

- H₅: Entrepreneurial self-efficacy significantly influences digital entrepreneurial intentions.
- H₆: Entrepreneurial self-efficacy mediates the relationship between role model effects and digital entrepreneurial intentions.
- H₇: Entrepreneurial self-efficacy mediates the relationship between AI exposure and digital entrepreneurial intentions.

2.4. Institutional Innovation Support

Institutional innovation support is the degree to which universities and innovation ecosystems offer such entrepreneurial resources as incubation systems, mentorship, technological infrastructure, and innovation-based learning environments that foster entrepreneurial development among students. Positive institutional context enhances the confidence of an entrepreneur and the probability for entrepreneurial intentions to evolve into entrepreneurial actions.

Among developing countries, the need for institutional support is more strongly felt as students are faced with limited resources, limited access to technology and feeble entrepreneurial ecosystems. Past research indicates that institutionally-based innovation oriented environments have a positive effect on university students' entrepreneurial motivation and intention (Secundo et al., 2021). Therefore, it can be expected that the effect of entrepreneurial self-efficacy on digital entrepreneurial intention may be enhanced by institutional innovation support.

H₈: Institutional innovation support significantly moderates the relationship between entrepreneurial self-efficacy and digital entrepreneurial intentions.

2.5. Theoretical Foundation

This study is anchored on Social Learning Theory (SLT) and the Theory of Planned Behaviour (TPB). Social Learning Theory, as characterized by Albert Bandura, posits that people learn through observation and engagement with influential actors in their social surroundings, and that this process includes observing behaviours, attitudes, and emotional reactions of others (Bandura, 1977). In the context of entrepreneurship, the theory holds that students' exposure to legitimate, available, relatable, and inspiring entrepreneurial role models can influence their entrepreneurial self-efficacy and entrepreneurial aspirations. In digitally connected contexts, entrepreneurial role models may also shape students' perceptions of AI technologies, innovation opportunities, and digital venture creation.

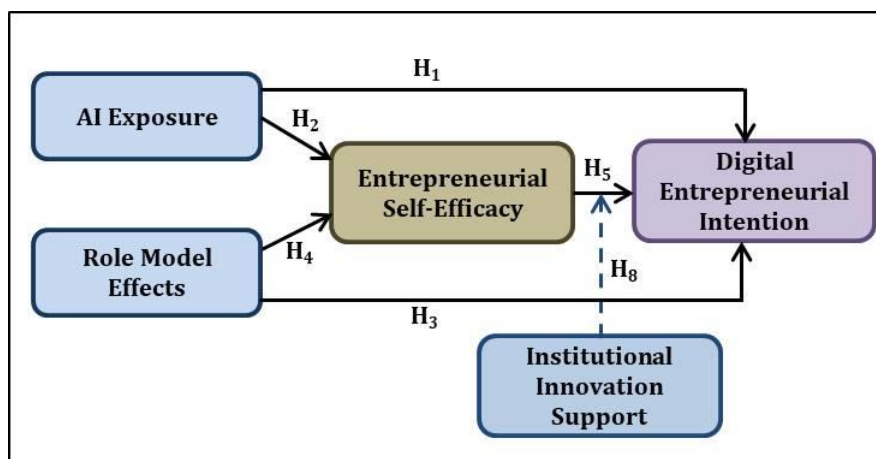
The Theory of Planned Behaviour, a model developed by Icek Ajzen, predicts that behavioural intention will be determined by three factors: attitude, subjective norms, and perceived behavioural control (Ajzen, 1991). A perceived behavioural control is also utilized throughout the study, which is very similar to entrepreneurial self-efficacy. Students that have greater confidence in their competence to use AI technologies, digital tools, and entrepreneurial resources are likely to have the highest digital entrepreneurial intentions. The theory further supports the positive effect of institutional innovation support on entrepreneurial motivation and entrepreneurial feasibility.

The combination of SLT and TPB offers a full understanding for the current research model since the two theories together elucidate how social influence, technology exposure, entrepreneurial self-efficacy, and institutional support have an effect on digital entrepreneurial intentions within the context of university students from developing countries.

2.6. Conceptual Model

The conceptual framework underpinning this study (Fig. 1) explains how AI exposure and role model effects influence digital entrepreneurial intention among university students within an emerging economy context. The model proposes that exposure to AI-powered technologies such as ChatGPT and related intelligent systems enhances entrepreneurial creativity, innovation capability, and entrepreneurial confidence, thereby strengthening digital entrepreneurial intention. Similarly, entrepreneurial role models reinforce entrepreneurial motivation and confidence through observational learning and social influence.

The framework further identifies entrepreneurial self-efficacy as a key psychological mechanism linking AI exposure and role model effects to digital entrepreneurial intention. Students exposed to AI technologies and entrepreneurial role models are more likely to develop confidence in opportunity identification, innovation development, and digital venture creation. In addition, institutional innovation support moderates the relationship between entrepreneurial self-efficacy and digital entrepreneurial intention through mentorship, entrepreneurship training, incubation support, and digital infrastructure. Figure 1 presents the conceptual framework and proposed relationships among the study variables. The framework reflects the proposed SEM model.



Note: Entrepreneurial self-efficacy functions as a mediating mechanism through which AI exposure and role model effects influence digital entrepreneurial intention.

Figure 1 Integrated Model of AI Exposure, Role Model Effects, Entrepreneurial Self-Efficacy, Institutional Innovation Support, and Digital Entrepreneurial Intention

3. Material and Methods

3.1. Research Design

This research uses a cross-sectional survey approach within a positivist research paradigm to investigate the influence of role model effects, AI exposure, entrepreneurial self-efficacy, and institutional innovation support on the digital entrepreneurial intention of university students in Nigeria. The cross-sectional design is suitable as it allows for gathering information at one point in time on students' attitudes, perceptions, and intentions to behave as digital entrepreneurs. It is also commonly used in entrepreneurship and technology research as it facilitates the analysis of predictive relationships among different latent variables (Hair et al., 2022). Moreover, the proposed model contains direct, mediating and moderating analyses among the considered constructs, which lead the research to also take on a predictive and an explanatory approach.

3.2. Population and Sampling

The target population is university students from a number of Nigerian universities. In a bid to capture geographical spread and minimize response bias at the institutional level this research is centred on four universities situated in Southwestern Nigeria and the Niger Delta region: University of Lagos, University of Ibadan, Delta State University, and Dennis Osadebay University. The sample of this study comprises 400 respondents that were equally selected from the four institutes, that is, 100 from each institute. Stratified convenience sampling technique was employed for this study because it is concerned with students of different levels of familiarity with entrepreneurship and AI-enabled learning environment.

3.3. Instrumentation and Measurement of Variables

The data were collected using a structured questionnaire based on validated studies in the areas of entrepreneurship and digital innovation. The tool was structured into demographics followed by role model effects, AI exposure, entrepreneurial self-efficacy, institutional innovation support, and digital entrepreneurial intention. All items were measured using a five-point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree.

Exposure to AI was gauged using dimensions such as AI familiarity, frequency of AI usage, AI-assisted creativity, and AI-supported opportunity recognition. Role model effects were assessed through credibility, accessibility, relatability, and inspirational influence. Entrepreneurial self-efficacy captured students' confidence in identifying opportunities, developing business ideas, and overcoming entrepreneurial challenges. Institutional innovation support involved mentorship systems, incubation support, innovation-oriented learning environments, and digital infrastructure. Digital entrepreneurial intention measured students' willingness to create new AI-enabled and digital-oriented ventures.

3.4. Method of Data Analysis

The data were analysed through Partial Least Squares Structural Equation Modelling (PLS-SEM) among SmartPLS software. PLS-SEM is suitable when the model is prediction-oriented with complexity in terms of multiple latent variables, mediation and moderation (Hair et al., 2022). The analysis was performed in two steps: measurement model evaluation and structural model evaluation. Cronbach's alpha, Composite Reliability (CR), Average Variance Extracted (AVE), factor loadings, and Heterotrait-Monotrait (HTMT) Ratio were used to evaluate reliability and validity. The examination of the structural model included path analysis, determination coefficients (R^2), effect sizes (f^2), predictive relevance (Q^2), and bootstrapping procedures for testing *a priori* hypotheses.

4. Results

4.1. Data Screening and Preliminary Analysis

Before the primary analysis, the data was examined for its accuracy, completeness and appropriateness for PLS-SEM. The following screening procedures were saluted for missing data, outliers, response patterns, normality, and common method bias (Hair et al., 2022). A sample of 400 valid responses from students in four Nigerian universities was employed. On first inspection, there were no large proportions of missing values, so no imputation or case deletion was necessary. Evaluation of outliers through standardized responses and boxplot inspection revealed no extreme response patterns that would potentially distort the estimation of the structural model. The result of further assessment of normality also found skewness and kurtosis was in an acceptable range of ± 2 , indicating there is no severe non-normality issue. Results of the Harman single-factor test indicated that the first factor explained less than 50% of the total variance, suggesting that common method bias was not a significant concern in this study (Podsakoff et al., 2003).

4.2. Demographic Characteristics of Respondents

In this section we discuss the demographic profile of the respondents that participated in this study. The sociodemographic characteristics of the variables were gender, age, level of study, institution type, field of study, previous business experience, and frequency of AI tool usage. The results offer essential contextual information about the students who took part in the study and their involvement with business and AI environments.

Table 1 Demographic Characteristics of Respondents (N = 400)

Variable	Category	Frequency	Percentage
Gender	Male	214	53.5
	Female	186	46.5
Age	16–20 years	118	29.5
	21–25 years	207	51.8
	26–30 years	59	14.8
	Above 30 years	16	4.0
Level of Study	100 Level	64	16.0
	200 Level	88	22.0
	300 Level	104	26.0
	400 Level	96	24.0
	500 Level	48	12.0
Institution	University of Lagos	100	25.0
	University of Ibadan	100	25.0
	Delta State University	100	25.0
	Dennis Osadebay University	100	25.0
Field of Study	Business/Management	102	25.5
	Social Sciences	94	23.5
	Engineering/Technology	86	21.5
	Sciences	71	17.8
	Arts/Education	47	11.8
Previous Business Experience	Yes	238	59.5
	No	162	40.5
AI Tool Usage Frequency	Never	18	4.5
	Rarely	52	13.0
	Sometimes	131	32.8
	Often	137	34.3
	Very Often	62	15.5

The demographic results suggest a relatively even gender distribution, with a slight dominance of male students. Most participants were between the ages of 21 and 25 years, indicating a high number of digitally active young people. The even split between the four universities enhanced the geographical and institutional diversity of the data. Respondents were predominantly from the Business/Management, Social Sciences, and Engineering/Technology fields, which suggests high applicability for discussions on entrepreneurship and technology. Also, a lot of the respondents have had

a business and they use AI tools a lot, ChatGPT, Gemini, Copilot etc, Nigerians university students are I believe getting more acquainted with AI based technologies.

4.3. Descriptive Statistics of Study Variables

The following is the descriptive statistic for role model effects, AI exposure, entrepreneurial self-efficacy, institutional innovation support and digital entrepreneurial intention, which are the main constructs of this study. Descriptive statistics are mean and standard deviation values and provide a glimpse into the respondents' perceptions and the spread of responses for the variables under the study.

Table 2 Descriptive Statistics of Study Variables

Construct	Items	Mean	Standard Deviation
Role Model Effects	RME1–RME5	3.89	0.71
AI Exposure	AIE1–AIE5	4.02	0.68
Entrepreneurial Self-Efficacy	ESE1–ESE5	3.94	0.66
Institutional Innovation Support	IIS1–IIS5	3.61	0.79
Digital Entrepreneurial Intention	DEI1–DEI5	4.08	0.64

The descriptive statistics indicated that all studied constructs were above the mid-point 3.00, which suggested that the respondents had positive views towards were exposed to AI, had entrepreneurial confidence, had institutional support, and digital entrepreneurial intention. Digital entrepreneurial intention scored the highest rating (Mean = 4.08, SD = 0.64), implying that students were most interested in digitally enabled ventures and AI-driven entrepreneurship. AI exposure also reached a high value (Mean = 4.02, SD = 0.68) as consumers became more acquainted with products that utilize ChatGPT, Gemini, Copilot, and other AI technologies. Entrepreneurial self-efficacy also exhibited a relatively high mean (Mean = 3.94, SD = 0.66), indicating that a number of the respondents were confident in their own entrepreneurial skills. Role model effects also had a positive impact on entrepreneurial dreams (Mean = 3.89, SD = 0.71). Despite that the mean of the institutional innovation support was the minimal value among all variables (Mean = 3.61, SD = 0.79), the finding still indicated generally positive views on institutional support systems.

4.4. Measurement Model Evaluation

This part followed by the assessment of measurement model using Partial Least Squares Structural Equation Model (PLS-SEM). The evaluation mainly relates to the indicator reliability, the internal consistency reliability, the convergent validity, and the discriminant validity of the constructs-of-the-study. In line with the recommendations of Hair et al. (2022), factor loadings, Cronbach's α , Composite Reliability (CR), Average Variance Extracted (AVE), and Heterotrait-Monotrait Ratio (HTMT) was used to evaluate the measurement model.

4.4.1. Indicator Reliability and Convergent Validity

Indicator reliability was evaluated by the outer factor loadings. Findings revealed that all measurement items were loaded above the suggested value of 0.70, demonstrating the fulfillment of acceptable indicator reliability. Internal consistency reliability was examined by Cronbach alpha and composite reliability, convergent validity was examined by average variance extracted (AVE).

Table 3 Indicator Reliability, Internal Consistency Reliability, and Convergent Validity

Construct	Items	Loadings	Cronbach's Alpha	CR	AVE
Role Model Effects	RME1	0.811	0.892	0.920	0.698
	RME2	0.846			
	RME3	0.857			
	RME4	0.831			
	RME5	0.822			

AI Exposure	AIE1	0.842	0.907	0.931	0.729
	AIE2	0.861			
	AIE3	0.875			
	AIE4	0.847			
	AIE5	0.836			
Entrepreneurial Self-Efficacy	ESE1	0.804	0.896	0.923	0.706
	ESE2	0.845			
	ESE3	0.869			
	ESE4	0.832			
	ESE5	0.841			
Institutional Innovation Support	IIS1	0.788	0.881	0.913	0.679
	IIS2	0.826			
	IIS3	0.848			
	IIS4	0.817			
	IIS5	0.823			
Digital Entrepreneurial Intention	DEI1	0.861	0.914	0.936	0.746
	DEI2	0.879			
	DEI3	0.852			
	DEI4	0.873			
	DEI5	0.858			

The factor loadings above the recommended minimum level of 0.70 in Table 3 suggest a good indicator reliability. Similarly, Cronbach's alpha was between 0.881 to 0.914, and CR were between 0.913 to 0.936, which were also greater than recommended threshold value of 0.70. This indicates that all study constructs exhibited sound internal consistency reliability.

In addition, all AVE values were above 0.5 and ranged from 0.679 to 0.746. This suggests acceptable convergent validity since each latent variable accounted for over half of the variance of its measured items.

4.4.2. Discriminant Validity

The HTMT criterion was applied to evaluate discriminant validity. HTMT values < 0.85 were considered to indicate adequate discriminant validity between latent constructs (Hair et al., 2022).

Table 4 Heterotrait-Monotrait Ratio (HTMT)

Constructs	RME	AIE	ESE	IIS	DEI
Role Model Effects (RME)	-				
AI Exposure (AIE)	0.641	-			
Entrepreneurial Self-Efficacy (ESE)	0.702	0.736	-		
Institutional Innovation Support (IIS)	0.588	0.612	0.671	-	
Digital Entrepreneurial Intention (DEI)	0.744	0.781	0.759	0.628	-

In Table 4, the HTMT is below the threshold of 0.85 indicating the constructs have adequate discriminant validity. This suggests that the constructs are empirically different and capture distinct conceptual dimensions in the proposed model.

In sum, the evaluation of the measurement model indicated that the constructs have adequate reliability and validity, which implies that they are appropriate for further analysis in the structural model and for testing the hypotheses.

4.5. Structural Model Evaluation and Hypotheses Testing

The Evaluation of Structural Model and Hypotheses testing through PLS-SEM is discussed in this section. The evaluation of the structural model was conducted to evaluate the significance of path coefficients, coefficient of determination (R^2), effect size, and predictive significance among study constructs. The hypothesis testing was performed by applying the bootstrapping procedure with 5,000 resamples as suggested by Hair et al. (2022).

4.5.1. Direct Effects and Hypotheses Testing

The direct effects of role model effects, AI exposure, and entrepreneurial self-efficacy on the digital entrepreneurial intention were examined by the use of standardized path coefficients (β), t-values, and p-values.

Table 5 Structural Path Results

Hypothesis	Path Relationship	β	t-value	p-value	Decision
H ₁	Role Model Effects → Digital Entrepreneurial Intention	0.281	4.962	0.000	Supported
H ₂	AI Exposure → Digital Entrepreneurial Intention	0.397	6.843	0.000	Supported
H ₃	Role Model Effects → Entrepreneurial Self-Efficacy	0.344	5.711	0.000	Supported
H ₄	AI Exposure → Entrepreneurial Self-Efficacy	0.429	7.308	0.000	Supported
H ₅	Entrepreneurial Self-Efficacy → Digital Entrepreneurial Intention	0.318	5.226	0.000	Supported

The results show that role model effect had a positive impact on digital entrepreneurial intention ($\beta = 0.281$, $t = 4.962$, $p < 0.001$), indicating that students who had access to believable and inspirational entrepreneurial actors would have stronger digital entrepreneurial intentions. Moreover, digital entrepreneurial intention was influenced by AI exposure ($\beta = 0.397$, $t = 6.843$, $p < 0.001$), signifying that students who have experiences with AI-based applications, e.g. ChatGPT, is more likely to engage in digitally driven entrepreneurship. In addition, role model effects was also positively related with impact on entrepreneurial self-efficacy ($\beta = 0.344$, $t = 5.711$, $p < 0.001$) and exposure to AI was positively associated with entrepreneurial self-efficacy ($\beta = 0.429$, $t = 7.308$, $p < 0.001$). The result also showed that entrepreneurial self-efficacy had a positive impact on digital entrepreneurial intention ($\beta = 0.318$, $t = 5.226$, $p < 0.001$). Consequently, H₁, H₂, H₃, H₄, and H₅ were supported.

4.5.2. Coefficient of Determination (R^2)

The structural model's predictive accuracy was evaluated by the R^2 value.

Table 6 Coefficient of Determination (R^2)

Endogenous Construct	R^2
Entrepreneurial Self-Efficacy	0.486
Digital Entrepreneurial Intention	0.641

As for content, role model effects and AI exposure together accounted for 48.6% of the variance in entrepreneurial self-efficacy. In addition, the joint influence of role model effects, AI exposure, and entrepreneurial self-efficacy accounted for 64.1% of the variance of digital entrepreneurial intention. Hair et al. (2022) deemed that the R^2 values reflected a strong predictive relevance of the structural model.

4.5.3. Effect Size (f^2)

The analysis of the size of the effect was performed to determine the unique variance explained by each predictor construct to the endogenous variables.

Table 7 Effect Size (f^2)

Path Relationship	f^2	Effect Size
Role Model Effects → DEI	0.118	Small
AI Exposure → DEI	0.243	Medium
Role Model Effects → ESE	0.154	Medium
AI Exposure → ESE	0.276	Medium
ESE → DEI	0.182	Medium

The findings indicate that AI exposure had the most significant impact on both entrepreneur self-efficacy and digital entrepreneurial intention, indicating that technology exposure was considered as a major factor in influencing entrepreneurial confidence and digitally focused entrepreneurial intention of university students.

The results of the structural model indicated that the hypothesized positive relationships among key study variables were significant and the theoretical model was supported by data.

4.6. Mediation and Moderation Analysis

This section provides results for the mediating and moderating analyses of this study. Entrepreneurial self-efficacy (entrepreneurship confidence) was tested as a mediator to examine if it accounts for the relationships between role model effects, AI exposure and digital entrepreneurial intention. Furthermore, the potential moderating effect of institutional innovation support on the relationship between entrepreneurial self-efficacy and digital entrepreneurial intention was tested. The analyses were performed using the bootstrapping procedure (5,000 resamples) in SmartPLS.

4.6.1. Mediation Analysis

The mediation analysis tested if entrepreneurial self-efficacy substantially mediated the associations between role model effects, AI exposure, and digital entrepreneurial intention.

Table 8 Mediation Analysis Results

Hypothesis	Indirect Relationship	β	t-value	p-value	Decision
H ₆	Role Model Effects → Entrepreneurial Self-Efficacy → Digital Entrepreneurial Intention	0.109	3.584	0.000	Supported
H ₇	AI Exposure → Entrepreneurial Self-Efficacy → Digital Entrepreneurial Intention	0.136	4.297	0.000	Supported

The results in Table 8 show that entrepreneurial self-efficacy was a significant mediator between the role model effects and digital entrepreneurial intention ($\beta = 0.109$, $t = 3.584$, $p < 0.001$). This implies that entrepreneurial role models increase students' digital entrepreneurial intention at least in part through increasing entrepreneurial self-belief and entrepreneurial perceived capability. Therefore H₆ was supported.

Also, entrepreneurial self-efficacy positively and significantly mediated the effect of AI exposure on digital entrepreneurial intention ($\beta = 0.136$, $t = 4.297$, $p < 0.001$). This indicates that students who were exposed to AI-based technologies have enhanced entrepreneurial efficacy, which in turn increased their intentions to engage in digitally enabled entrepreneurship. Consequently, H₇ was supported as well.

The mediation findings emphasize the crucial psychological function of entrepreneurial self-efficacy in converting both social exposure and technological exposure into university students' entrepreneurial intentions.

4.6.2. Moderation Analysis

We tested the moderation of institutional innovation support to see whether institutional support environments would enhance the effect of entrepreneurial self-efficacy on digital entrepreneurial intention.

Table 9 Moderation Analysis Results

Hypothesis	Interaction Relationship	β	t-value	p-value	Decision
H ₈	Institutional Innovation Support × Entrepreneurial Self-Efficacy → Digital Entrepreneurial Intention	0.174	2.948	0.003	Supported

The findings showed that institutional innovation support had a positive moderating effect on the association between entrepreneurial self-efficacy and digital entrepreneurial intention ($\beta = 0.174$, $t = 2.948$, $p = 0.003$). Supportive university contexts that provide students with mentorship, entrepreneurship training, access to innovation programmes and digital infrastructure promote the ability to turn entrepreneurial confidence into digital entrepreneurial intention. As a result, students who possessed higher entrepreneurial self-efficacy had stronger entrepreneurial intentions under the condition of supportive institutional system. Hence, hypothesis H₈ is supported. In summary, these results further corroborate that the interplay between AI exposure, social influence, entrepreneurial confidence, and institutional innovation support predicts digital entrepreneurial intention among Nigerian university students.

5. Discussion of Findings

5.1. Theme 1: AI Exposure and Entrepreneurial Thinking

This study indicated that AI exposure had a positive effect on digital entrepreneurial intention and entrepreneurial self-efficacy in a sample of university students. This implies that students with high usage of AI-based tools such as ChatGPT, Gemini, and Copilot are more prone to develop entrepreneurial self-efficacy and stronger inclinations towards digital entrepreneurship. The result is in line with Dwivedi et al. (2023), Duong (2025), and Xie and Wang (2025) who stated that AI technologies empower students to be more creative, capable of innovation, and better at identifying entrepreneurial opportunities.

In the Nigerian setting, the finding is in line with Babalola and Shittu (2025) who observed a positive effect of digital technological exposure on the digital entrepreneurial intention of University of Lagos students. Such was the case, as University of Benin researchers reported that AI exposure enhances entrepreneurial opportunity identification as well as digital innovation capability. However, the result somewhat disagree with Okowa-Nwaebi et al. (2025), who highlighted poor entrepreneurial application in the face of increasing digital exposure among Nigerian students.

5.2. Theme 2: Role Models as Entrepreneurial Catalysts

The results also indicated that role models had a significant effect on digital entrepreneurial intention and entrepreneurial self-efficacy. That is, students' confidence in undertaking entrepreneurship and their digital entrepreneurial intention are enhanced after they have been exposed to authentic, easy-to-access, easy-to-relate-to and inspiring entrepreneurial agents. This finding supports Social Learning Theory introduced by Albert Bandura, which states behavioural tendencies are acquired as a result of observing and modelling others (Bandura, 1977).

The result is consistent with Bosma et al. (2012) who concluded that entrepreneurial role models have a positive influence on entrepreneurial intentions as they contribute to making entrepreneurial success seem achievable and realistic. In similar vein Fellnhofer (2017) found positive effects of entrepreneurial role models on entrepreneurial aspirations and entrepreneurial motivation of students. The current result thus indicates that students' perceptions of digital entrepreneurship and AI-enabled ventures are increasingly influenced by exposed entrepreneurial players in digital ecosystems, social media platforms, innovation centers and university circles.

5.3. Theme 3: Digital Entrepreneurship in Emerging Economies

Results showed that the effect of entrepreneurial self-efficacy on digital entrepreneurial intention was significant and this effect was mediating the influence of role model effects and AI exposure on entrepreneurial intention. This implies that entrepreneurial confidence is a key psychological mechanism through which social and technological exposure influence entrepreneurial aspirations. This finding is in support of the Theory of Planned Behaviour (TPB) proposed

by Icek Ajzen, special the component of perceived behaviour control, which states that people are more likely to form entrepreneurial intentions if they believe that they have the required entrepreneurial capability (Ajzen, 1991). This finding is consistent with Newman et al. (2019) who found that entrepreneurial self-efficacy was the strongest determinant of entrepreneurial intention. In developing countries like Nigeria, greater availability of AI technologies could overcome conventional barriers to entrepreneurship as students find ways to recognize opportunities and provide digital business solutions.

5.4. Theme 4: Implications for Higher Education

The result is that entrepreneurial self-efficacy had a stronger effect on digital entrepreneurial intention, in the group of institutional innovation support. This indicates that university students in supportive university environments were better at turning entrepreneurial confidence into entrepreneurial intentions. The result is consistent with that of Secundo et al. (2021) highlighted the relevance of innovation-oriented institutional ecosystems for the development of entrepreneurship. The result implies that the universities need to transcend traditional entrepreneurship education and establish institutional mechanisms involving AI literacy, digital innovation education, mentorship systems, incubation schemes, and technology-based learning environments. Also, universities in emerging markets are encouraged to solidify collaboration with digital innovation hubs and startup ecosystems to provide better entrepreneurs exposure as well as innovation capability for the students. To sum up, the research indicates that AI exposure, entrepreneurial role models, and institutional support jointly predict digital entrepreneurial intention among university students.

6. Theoretical Contributions

This research adds to the emerging literature on digital entrepreneurship and AI-based innovation in emerging markets. First, by going beyond hitherto the underexplored context of AI-enabled entrepreneurship and entrepreneurship role models, the study findings show that entrepreneurial role models continue to be relevant in digitally enabled entrepreneurial contexts. Second, the study highlights AI exposure as a novel entrepreneurial cue with an impact on entrepreneurial self-efficacy and digital entrepreneurial intention among university students. Rather than previous research that concentrates on the impact of entrepreneurship education or digital literacy, this research reveals that interaction with AI-based products and platforms like ChatGPT substantially enhances entrepreneurial self-confidence and digitally predominant entrepreneurial ambitions.

The article adds to the empirical literature from Nigeria and stretches the conceptualization of AI-based entrepreneurship Enablers in African scenarios where proof is scant. The present study combines technological exposure, entrepreneurial cognition and institutional innovation support into one integrated model predicting the digital entrepreneurial intention of university students in developing countries.

7. Practical Implications

The results have significant implications for universities, entrepreneurship centres, policy makers and digital innovation ecosystems in the context of emerging economies. By incorporating AI literacy, digital innovation, and technology-based entrepreneurship education in their curricula within a single programme, universities could enhance their students' entrepreneurial creativity and ability to identify opportunities. Centres for entrepreneurship and digital incubators may also want to develop AI-centric innovation initiatives, mentorship programs, start-up incubation programs, and digital venture laboratories that promote testing business concepts driven by AI.

The results also imply that policy makers need to enhance the digital innovation ecosystem with better technological infrastructure, seed funding for startups, innovation grants, and entrepreneurship support schemes that can foster AI-driven entrepreneurship of youths. Moreover, universities and innovation agencies should develop mentorship programs, startup accelerators, entrepreneurship competitions, and digital labs that build entrepreneurial confidence and tangible entrepreneur capability. On the whole, increasing AI exposure, entrepreneurial role models, and institution innovation systems may dramatically increase digital entrepreneurship amongst university students.

8. Conclusion

The study investigated the role model effect and AI exposure on digital entrepreneurial intention among university students in Nigeria. Results showed that exposure to AI, entrepreneurial role models, and entrepreneurial self-efficacy were significant predictors of digital entrepreneurial intention, and institutional innovation support positively moderated the relationship between entrepreneurial self-confidence and entrepreneurial intention.

In sum, it is suggested that digital entrepreneurial intention of university students is becoming to be influenced by the interplay of technological exposure, social learning processes, entrepreneurial cognition, and a friendly institutional environment. In the face of AI technologies reshaping the global entrepreneurial landscape, universities and policymakers in developing economies need to focus on AI-based innovation, the development of digital entrepreneurship, and the formulation of technology-driven entrepreneurship-support mechanisms that can equip students for engagement in fast moving digital economies.

Compliance with ethical standards

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Disclosure of Conflict of Interest

The authors declare no conflict of interest regarding this study.

Statement of Ethical Approval

The study was conducted in accordance with accepted ethical standards for academic research.

Statement of Informed Consent

Informed consent was obtained from all participants prior to data collection.

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