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Digital Media Literacy and Students' Entrepreneurial Readiness in State Public Universities, Delta State, Nigeria.

***Okowa-Nwaebi, Loveth Chekwube; Nwanne, Ben U. (Ph.D.); Ufuophu-Biri, E. (Ph.D.)**

Department of Mass Communication, Faculty of Communication and Media Studies, Delta State University, Abraka

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ABSTRACT

The study examined the digital media literacy and students' entrepreneurship readiness in state public universities in Delta State, Nigeria. Specifically, it assessed the effects of digital communication and collaboration and innovative digital creativity on students' preparedness to initiate and manage entrepreneurial ventures. Two research questions were raised in line with stated objective leading to two hypotheses being postulated. A descriptive survey design was adopted, and a total of 376 respondents were sampled from a population of 40,989 students using Krejcie and Morgan's table. Only data received from 311 respondents were collected through a structured questionnaire and analyzed using descriptive statistics, correlation, and multiple regression. The findings revealed that both digital communication and collaboration ($\beta = 0.454$, $p < 0.001$) and innovative digital creativity ($\beta = 0.538$, $p < 0.001$) had significant positive effects on students' entrepreneurship readiness. The model explained 57.1% of the variance in entrepreneurship readiness ($R^2 = 0.571$), indicating a strong predictive relationship. The study concluded that fostering digital competencies and creativity enhances students' entrepreneurial preparedness, supporting both Human Capital Theory and Innovation Diffusion Theory. It recommends that universities integrate collaborative digital platforms, promote creative digital programmes, and establish experiential entrepreneurship environments to strengthen students' readiness for entrepreneurial activities.

Keywords: Digital media literacy, Digital communication, Innovative digital creativity, Entrepreneurship readiness

JEL Classification: I23, L26, O33

INTRODUCTION

The 21st-century economy is characterized by rapid digital transformation, which has redefined how individuals learn, communicate, collaborate, and create economic value. Digital media literacy, the ability to access, analyze, evaluate, and create digital content, has become an essential skill for both academic and entrepreneurial success. Across the world, digital competence now represents a key determinant of graduate employability and enterprise development, as universities prepare students to function in technology-driven business environments (Lopes, 2025; Wibowo, 2023). In Nigeria, the rising emphasis on entrepreneurship education in tertiary institutions underscores the need to integrate digital literacy components that foster creativity, collaboration, and innovation among students (Adebayo & Yusuf, 2023; Okowa-Nwaebi, Nwanne, & Ufuophu-Biri, 2025). This integration has become vital because digital literacy provides students with the foundation to identify opportunities, network with peers, and use technology to establish and grow new ventures.

One of the major components of digital literacy that promotes entrepreneurial development is digital communication and collaboration. This refers to students' ability to interact, share ideas, and work collectively using digital tools and platforms to solve problems and co-create innovative solutions (Obi, 2024). Effective digital communication enables the exchange of business ideas, engagement with online markets, and development of collaborative projects that build entrepreneurial confidence and readiness. As digital platforms such as social media, online communities, and virtual learning networks become integral to knowledge sharing,

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students who can communicate and collaborate effectively online are more likely to demonstrate readiness for entrepreneurship. This is because collaborative digital engagements enhance their exposure to new business models, mentorship opportunities, and social networks essential for launching start-ups (Okpa, 2025).

Another vital aspect of digital media literacy is innovative digital creativity, which represents the capacity of students to apply digital tools imaginatively to create products, services, or solutions that meet market needs. Innovative digital creativity goes beyond basic technology use to include the design of digital products, the creation of multimedia content, and the use of creative problem-solving to develop entrepreneurial ideas (William, 2024; Eruvwe et al., 2024). Research shows that students who possess digital creativity are more likely to translate ideas into viable business ventures because they can harness technology to develop prototypes, run digital marketing campaigns, and engage in e-commerce activities (Lopes, 2025; Mirhabibi, 2025). This creative digital orientation equips them with the ability to adapt quickly to emerging business trends and technological disruptions, making them better prepared for entrepreneurship.

In the context of Delta State, Nigeria, public universities have made concerted efforts to include entrepreneurship education in their curricula, yet students' readiness to engage in entrepreneurial ventures remains limited. The challenge often lies in the insufficient integration of digital media literacy skills, particularly digital communication, collaboration, and innovative creativity, into entrepreneurship programs (Bankole, 2024). Many students are familiar with digital platforms for social interaction but lack the practical digital collaboration and creative competencies necessary to transform ideas into sustainable business ventures. Consequently, assessing how digital communication and collaboration, alongside innovative digital creativity, influence students' entrepreneurship readiness becomes essential. This study, therefore, seeks to investigate the relationship between digital media literacy and students' entrepreneurship readiness among state public universities in Delta State, Nigeria.

Statement of the Problem

Despite the growing integration of technology into higher education, many university students in Delta State still exhibit low levels of entrepreneurial readiness. While most students actively use digital media for social purposes, their capacity to leverage it for entrepreneurship, through collaboration and creative innovation, remains underdeveloped (Obi, 2024; Okpa, 2025). This gap suggests that the acquisition of digital skills alone does not automatically translate into entrepreneurial preparedness. There is limited empirical evidence examining how specific aspects of digital media literacy, such as digital communication and collaboration, and innovative digital creativity, influence students' readiness to initiate and sustain entrepreneurial ventures (Eruvwe, et al., 2024). This absence of context-specific evidence hinders universities and policymakers from developing targeted strategies to enhance entrepreneurship readiness through digital literacy. Therefore, this study addresses this gap by empirically investigating the effect of digital communication and collaboration and innovative digital creativity on students' entrepreneurship readiness among state public universities in Delta State, Nigeria.

Objectives of the Study

The main objective of this study is to examine the effect of digital media literacy on students' entrepreneurship readiness among state public universities in Delta State, Nigeria while the specific objectives are to:

1. examine the effect of digital communication and collaboration on students' entrepreneurship readiness among state public universities in Delta State, Nigeria.

2. determine the effect of innovative digital creativity on students' entrepreneurship readiness among state public universities in Delta State, Nigeria.

Research Questions

1. To what extent does digital communication and collaboration affect students' entrepreneurship readiness among state public universities in Delta State, Nigeria?

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2. To what extent does innovative digital creativity affect students' entrepreneurship readiness among state public universities in Delta State, Nigeria?

Research Hypotheses

H_{01}: Digital communication and collaboration has no significant effect on students' entrepreneurship readiness among state public universities in Delta State, Nigeria.

H_{02}: Innovative digital creativity has no significant effect on students' entrepreneurship readiness among state public universities in Delta State, Nigeria.

Significance of the Study

This study offers theoretical, practical and policy contributions:

Theoretical contribution: By isolating digital communication & collaboration and innovative digital creativity as distinct proxies of digital media literacy, the study refines conceptual models linking digital competencies to entrepreneurial readiness in higher education contexts. It adds empirical evidence from a Nigerian state-university system, contributing to the growing literature on digital entrepreneurship education (Wibowo, 2023; Lopes, 2025).

Policy and institutional relevance: Findings will help university administrators and state policymakers identify which digital literacy investments (for example — collaborative platforms, project-based learning, digital creativity labs) most strongly influence entrepreneurship readiness. This can improve allocation of limited resources and inform program design in State Public Universities.

Curriculum and pedagogical utility: Educators and entrepreneurship trainers can use the results to adapt curricula, embedding specific collaborative workflows, creative digital assignments, and incubator partnerships that directly foster the behaviours linked to venture creation.

Student and community impact: By clarifying which digital skills are most valuable for starting and sustaining ventures, the study can guide student support services, entrepreneurship clubs, and local industry partnerships aimed at increasing graduate self-employment and local economic develop

Scope of the Study

The study focuses on state public universities in Delta State, Nigeria, examining the relationship between two key dimensions of digital media literacy. digital communication and collaboration, and innovative digital creativity, and the dependent variable, students' entrepreneurship readiness. The research targets undergraduate students across selected faculties who are exposed to digital tools and entrepreneurship-related courses. Geographically, the study is limited to State Public Universities located within Delta State, Nigeria. The study targets undergraduate students across faculties who are active on digital platforms; data collection will be cross-sectional and quantitative (survey-based). The temporal scope includes the academic session(s) during which data are collected (specified in the methodology), and findings will primarily reflect conditions and student experiences at that time.

REVIEW OF RELATED LITERATURE

Concept of Digital Media Literacy

Digital media literacy is widely regarded as a multifaceted competency encompassing the ability to access, analyse, evaluate, create, and communicate information through digital platforms in a responsible and critical manner. It extends beyond mere technical proficiency to include cognitive, creative, and ethical dimensions that empower individuals to actively participate in the digital society. As İnceoğlu (2025) explained, digital media literacy enables users to consciously navigate digital environments, understand how messages are constructed, and critically assess the intent and credibility of digital content. Similarly, Mrisho and Dominic (2023)

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emphasized that it involves interpreting multimedia forms, questioning embedded assumptions, and designing meaningful messages rather than consuming them passively. In higher education contexts, Smith and Storrs (2023) observed that digital media literacy equips students with the ability to manage online collaboration, understand algorithmic influences, and creatively apply digital tools in academic and entrepreneurial projects. Collectively, these perspectives highlight that digital media literacy integrates technical, informational, and creative competencies, preparing individuals to function as critical thinkers, content creators, and responsible participants in digitally mediated societies.

Digital Communication and Collaboration

Digital communication and collaboration refer to the capacity of individuals to interact, share knowledge, coordinate tasks, and co-create value through digital platforms and tools. In the higher education context, these competencies are vital for effective learning and entrepreneurial engagement. According to Al-Husban and Alkhawaldeh (2024), digital collaboration enables students to transcend physical boundaries, engage in virtual teamwork, and collectively problem-solve using cloud-based and social media platforms. It encompasses not only the technical proficiency to use tools such as Google Workspace, Microsoft Teams, or Slack but also the socio-emotional intelligence to work constructively in online environments. Similarly, Park and Kang (2023) observed that digital communication fosters interpersonal connection, knowledge sharing, and collaborative learning—key processes that support innovation and enterprise formation among students.

Moreover, digital communication and collaboration have become critical enablers of entrepreneurial readiness in the knowledge economy. Students who engage actively in digital networks and online communities develop stronger entrepreneurial mindsets by exchanging ideas, gathering feedback, and mobilizing resources through collaborative digital spaces (Okafor & Bello, 2024). Studies have shown that these digital competencies positively predict opportunity recognition, innovative problem-solving, and team-based project execution, core aspects of entrepreneurial capacity (Mensah & Adjei, 2023). Therefore, in this study, digital communication and collaboration are conceptualized as integral components of digital media literacy that empower students in Delta State public universities to interact effectively, co-develop ideas, and transform digital interactions into viable entrepreneurial activities.

Innovative Digital Creativity

Innovative digital creativity refers to the ability to generate novel and valuable ideas, products, or solutions through the use of digital tools and technologies. It is a fusion of creativity, technology proficiency, and innovation capability that enables individuals to transform digital resources into entrepreneurial opportunities. Lopes, Costa, and Santos (2025) explained that digital creativity goes beyond artistic expression to include the capacity to design, experiment, and prototype digital solutions that respond to real-world problems. Similarly, Mirhabibi (2025) argued that innovative digital creativity plays a central role in building entrepreneurial mindsets, as it stimulates critical thinking, problem-solving, and digital content creation among students. This competence is especially relevant in the digital economy, where innovation often emerges through the recombination of digital ideas and technologies.

In the university setting, innovative digital creativity equips students to integrate technological tools with entrepreneurial insight, leading to the development of digital business ideas, products, and services. Adeniyi (2024) emphasized that when students engage in project-based and technology-driven learning environments, their digital creative confidence and entrepreneurial readiness improve significantly. Likewise, Lopes et al. (2025) found that digital creativity fosters opportunity recognition and innovation readiness by encouraging experimentation, design thinking, and digital prototyping. Thus, in this study, innovative digital creativity captures students' ability to conceptualize, design, and use digital media creatively for entrepreneurial pursuits, reflecting the intersection of technological fluency, imagination, and value creation.

Entrepreneurship Readiness

Entrepreneurship readiness refers to the extent to which an individual possesses the cognitive, attitudinal, and behavioural dispositions required to initiate and sustain entrepreneurial ventures. It encompasses self-efficacy,

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opportunity recognition, risk-taking ability, and the preparedness to engage in business creation (Setiawan, 2023). According to Singh (2024), entrepreneurship readiness includes both psychological and practical readiness, students' confidence in their entrepreneurial competence as well as their exposure to business-related experiences. In the digital era, this readiness is increasingly linked to the ability to integrate digital skills and creativity into opportunity development, allowing students to adapt to the evolving demands of the digital marketplace. Empirical evidence indicates that exposure to digital entrepreneurship education enhances students' readiness by improving innovation capacity and entrepreneurial self-belief (Oyinlola, 2024).

In the Nigerian university context, entrepreneurship readiness is viewed as a vital indicator of employability and youth empowerment. It represents a student's preparedness to create value independently, particularly through technology-driven enterprises (Bankole, 2024). Setiawan (2023) emphasized that entrepreneurship readiness is not static but evolves as individuals acquire new digital competencies, collaborative experiences, and creative exposure. The concept is therefore central to understanding how digital media literacy, through communication, collaboration, and creativity, prepares undergraduates for self-employment and innovation in the 21st-century economy. In this study, entrepreneurship readiness serves as the dependent variable, reflecting how well students in Delta State's public universities can translate digital literacy competencies into actionable entrepreneurial ventures.

Conceptual Framework

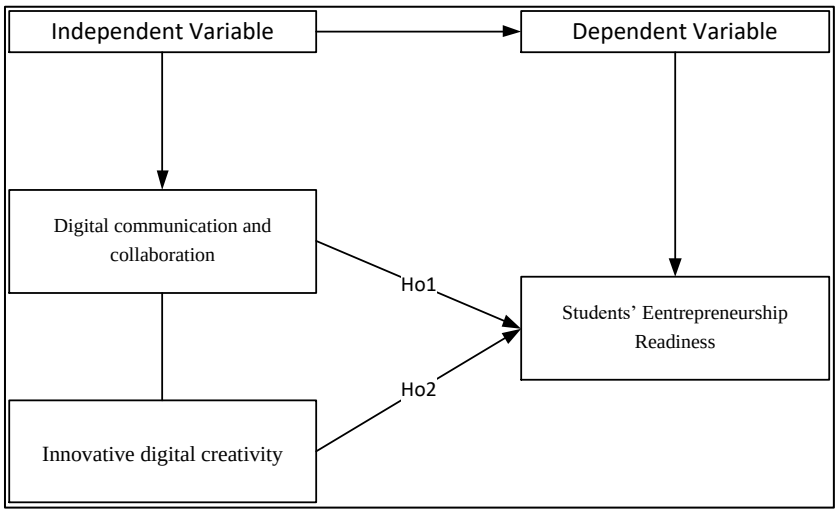

Figure 1: Conceptual framework of Digital Media Literacy and Students' Entrepreneurial Readiness (Source: Researcher's Construct, 2025)

THEORETICAL REVIEW

Human Capital Theory

Human Capital Theory, originally developed by Becker (1964) and later expanded by Schultz (1981), posits that individuals' education, training, and skills constitute a form of capital that enhances productivity and economic value. The theory emphasizes that investment in knowledge and skills leads to improved competence, innovation, and entrepreneurial potential. In the context of higher education, digital literacy and creativity represent significant components of human capital that prepare students for modern, technology-driven economies. Recent studies (Okafor & Bello, 2024; Mensah & Adjei, 2023) argue that digital communication, collaboration, and innovative creativity are not merely technical proficiencies but strategic assets that enhance employability and self-reliance. Through this theoretical lens, digital media literacy functions as an investment in students' human capital, enabling them to develop entrepreneurial readiness by transforming digital skills into productive ventures. Therefore, Human Capital Theory helps explain how knowledge-based and digital competencies contribute to economic empowerment and the creation of entrepreneurial value among university students.

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Innovation Diffusion Theory

Innovation Diffusion Theory (IDT), proposed by Rogers (2003), explains how new ideas, technologies, or practices spread through a social system over time. The theory identifies five key attributes, relative advantage, compatibility, complexity, trialability, and observability, that influence the adoption and diffusion of innovations. In educational and entrepreneurial contexts, this theory provides insight into how students adopt and integrate digital tools for communication, collaboration, and creative innovation. According to Lopes, Costa, and Santos (2025), the extent to which students perceive digital media tools as advantageous, easy to use, and relevant to their goals determines their likelihood of embracing them for learning and entrepreneurial purposes. Similarly, Mirhabibi (2025) emphasized that the spread of digital creativity practices among university students often depends on institutional support, peer influence, and perceived utility. By applying IDT, this study views digital media literacy as an innovation whose diffusion influences students' entrepreneurial readiness.

Theoretical Anchor of the Study

This study is anchored on the Innovation Diffusion Theory (Rogers, 2003) because it best explains the mechanism through which digital media literacy enhances entrepreneurship readiness among university students. The theory aligns with the study's focus on digital communication and collaboration and innovative digital creativity, both of which represent the adoption and utilization of digital innovations in academic and entrepreneurial activities. As students engage with new digital tools and creative technologies, their level of exposure, adaptability, and acceptance determines how effectively they transform digital literacy into entrepreneurial action. IDT also provides a useful framework for understanding variations in entrepreneurial readiness, why some students actively leverage digital innovations for business creation while others remain passive users. Hence, this study adopts the Innovation Diffusion Theory as its foundation because it elucidates the process through which students' adoption of digital media innovations fosters creativity, collaboration, and readiness for entrepreneurship in Delta State public universities.

Empirical Review

Wibowo (2023) conducted a study titled "Digital Entrepreneurship Education and Students' Digital Entrepreneurial Intention" in Indonesia to examine the role of digital-based entrepreneurship courses in enhancing students' digital entrepreneurial intention. The study adopted a descriptive survey research design and sampled 312 undergraduate students from three public universities using stratified random sampling. Data were collected using a structured questionnaire and analysed through partial least squares structural equation modelling (PLS-SEM). Findings revealed that digital entrepreneurship education significantly influenced students' digital entrepreneurial intention, particularly when combined with hands-on digital projects. The study concluded that integrating digital skills and entrepreneurial content enhances students' entrepreneurial orientation. However, Wibowo's study focused on intention rather than entrepreneurial readiness and did not examine specific components of digital literacy such as digital communication and collaboration or innovative digital creativity, thereby creating a gap for further exploration of these dimensions.

Similarly, Lopes, Costa, and Santos (2025) carried out a study titled "Digital Creativity and Entrepreneurial Mindset: Exploring Pathways to Innovation Readiness among Students" across five European universities. The research employed a quantitative cross-sectional design with a sample of 458 final-year students in business and technology disciplines. Using regression and mediation analysis, the study investigated the mediating role of digital creativity between personality traits and innovation readiness. Results showed that students with higher levels of innovative digital creativity demonstrated greater innovation readiness and entrepreneurial orientation. The study concluded that fostering creative digital skills within the university environment promotes entrepreneurial thinking. Nonetheless, the research was limited to European institutions with advanced digital infrastructure, making it less generalizable to developing contexts like Nigeria. Moreover, it did not consider digital communication and collaboration as distinct predictors, leaving a contextual and conceptual gap this current study seeks to address.

Singh (2024) examined "The Impact of Digital Entrepreneurship Training on Students' Entrepreneurial Readiness" in India. The study adopted an experimental design involving 240 students divided into control and

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treatment groups. The treatment group participated in a 10-week digital entrepreneurship program that emphasized digital innovation, prototyping, and business simulation. Data were collected through pre- and post-intervention surveys and analysed using paired sample t-tests. Findings revealed a significant improvement in digital competence, opportunity recognition, and overall entrepreneurial readiness among participants. Singh concluded that experiential and technology-driven pedagogies enhance entrepreneurial preparation. Despite its contribution, the study's emphasis on a single pedagogical intervention and lack of specific focus on digital media literacy dimensions such as communication/collaboration and creativity leaves a theoretical gap on how digital media competencies translate to entrepreneurial readiness in broader academic contexts.

In Nigeria, Oni, Adeyemi, and Ogunleye (2025) investigated "Social Media Entrepreneurship and Academic Engagement among University Students". The study used a survey research design with a sample size of 384 undergraduates selected from four public universities in South-West Nigeria. Data were analysed using multiple regression analysis. Findings indicated that students who engaged in digital content creation, online marketing, and social collaboration on social media platforms exhibited higher entrepreneurial engagement and business readiness. The study established that innovative digital practices significantly enhance entrepreneurial behaviour. However, Oni et al. (2025) noted institutional variations in digital support systems and the absence of structured frameworks linking digital collaboration and creative digital engagement to measurable entrepreneurial readiness outcomes. This limitation highlights the need for a focused study examining how these dimensions influence readiness in less-explored university environments, such as Delta State public universities.

Identified Gaps

A review of the above empirical studies shows that although substantial progress has been made in exploring digital entrepreneurship education and students' entrepreneurial intention, several gaps remain unaddressed. First, most studies (Wibowo, 2023; Singh, 2024) primarily focused on entrepreneurial intention rather than entrepreneurship readiness, which involves both psychological preparedness and actionable capability. Second, while studies by Lopes et al. (2025) and Oni et al. (2025) examined aspects of digital creativity and social media entrepreneurship, they did not explicitly isolate digital communication and collaboration and innovative digital creativity as independent dimensions of digital media literacy. Third, few studies have examined these relationships within the context of state public universities in Nigeria, where digital infrastructure, pedagogical approaches, and socioeconomic realities differ from those of technologically advanced settings.

Hence, this present study is designed to bridge these identified gaps by (1) focusing on entrepreneurship readiness as a holistic outcome variable, (2) investigating the individual and joint effects of digital communication and collaboration and innovative digital creativity on students' readiness for entrepreneurship, and (3) situating the analysis within the context of state public universities in Delta State, Nigeria, thereby contributing both empirical evidence and practical implications for educational policy, curriculum design, and youth empowerment initiatives.

METHODOLOGY

This study adopted a descriptive survey research design to examine the relationship between digital media literacy and students' entrepreneurship readiness among state public universities in Delta State, Nigeria. The target population consisted of 40,989 students drawn from the selected universities (Delta State University, Abraka; University of Delta, Agbor; Southern Delta University, Ozoro; Dennis Osadebey University, Asaba). The sample size was determined using the Krejcie and Morgan (1970) sample size determination table, which recommended a sample of 376 respondents for this population size. A stratified random sampling technique was employed to ensure proportional representation of students across different faculties and departments. Data were collected using a well-structured questionnaire developed based on the study variables, digital communication and collaboration, innovative digital creativity, and entrepreneurship readiness. The instrument was validated by experts in entrepreneurship and educational technology, and its reliability was tested using Cronbach's Alpha, yielding a coefficient of 0.78, indicating acceptable internal consistency. Data collected were analysed using both descriptive and inferential statistical tools, including multiple regression analysis, to test the formulated hypotheses and determine the individual and joint effects of the independent variables on students' entrepreneurship readiness.

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Model Specification

The study specifies a multiple regression model to examine the influence of digital media literacy components on students' entrepreneurship readiness. The model is expressed as:

$$SER=\beta_0+\beta_1 DCC+\beta_2 IDC+\varepsilon$$

Where:

SER = Students' Entrepreneurship Readiness (dependent variable)

DCC = Digital Communication and Collaboration

IDC = Innovative Digital Creativity

β_0 = Constant term (intercept)

β_1–β_2 = Regression coefficients of the independent variables

ε = Error term capturing other unexplained variations

RESULT

Table 1: Analysis of Questionnaire

Questionnaire	**Frequency**	**Percentage**
Valid	311	82.71%
Invalid	31	8.24%
Not returned	34	9.04%
Total Distributed	**376**	**100%**

Sources: Researcher's Fieldwork, 2025

Table 1 presents the analysis of the questionnaire administration and retrieval. Out of the 376 copies of the questionnaire distributed to respondents, 311 were duly completed and found valid for analysis, representing 82.71% of the total distributed. A total of 31 copies (8.24%) were returned but considered invalid due to incomplete or inconsistent responses, while 34 copies (9.04%) were not returned at all. This high retrieval rate of over 80% indicates strong respondent participation and enhances the reliability and representativeness of the study's findings.

Table 2: Mean rate of Respondents to Question Items

S/N	**Question Items**	**Mean**	**Std**	**Remark**
DCC	**Digital Communication and Collaboration (DCC)**			
DCC1	Digital platforms such as Zoom, Google Meet, and Microsoft Teams are effectively used for collaborative academic and project activities	3.51	0.86	Agree

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DCC2	Communication through digital channels promotes clarity, understanding, and timely feedback among team members	3.51	0.85	Agree
DCC3	Online discussion forums and group chats are utilized for exchanging ideas and academic resources	3.50	0.85	Agree
DCC4	Digital collaboration tools enhance coordination, planning, and execution of group tasks	3.48	0.85	Agree
DCC5	Collaborative engagement through digital media contributes to improved teamwork and collective problem-solving	3.49	0.85	Agree
	Mean Aggregate	**3.50**	**0.85**	**Agree**
IDC	**Innovative Digital Creativity (IDC)**			
IDC1	Digital tools such as Canva, Photoshop, and CapCut are utilized to design creative and innovative content	3.58	0.75	Agree
IDC2	Technological platforms serve as channels for generating and implementing new ideas or solutions	3.58	0.77	Agree
IDC3	Creative use of digital resources contributes to innovation in learning and entrepreneurial projects	3.61	0.79	Agree
IDC4	Digital technology is applied to develop and present unique projects and concepts	3.60	0.77	Agree
IDC5	Innovative use of digital applications supports opportunity identification and entrepreneurial development	3.54	0.79	Agree
	Mean Aggregate	**3.58**	**0.78**	**Agree**
SER	**Students' Entrepreneurship Readiness (SER)**			
SER1	Adequate knowledge and skills have been acquired to initiate and manage business ventures	3.91	0.79	Agree
SER2	Opportunities to apply entrepreneurial knowledge in practical or real-life ventures are actively explored	3.94	0.76	Agree
SER3	Readiness to assume business risks and responsibilities has been developed through learning experiences	3.91	0.76	Agree
SER4	University programs have provided essential exposure to entrepreneurship and innovation principles	3.92	0.77	Agree
SER5	High willingness exists to establish and operate a business enterprise after graduation	3.91	0.78	Agree
	Mean Aggregate	**3.92**	**0.77**	**Agree**

Sources: Researcher's computation, 2025

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The results presented in the table reveal that respondents generally agreed with all the questionnaire items across the three key variables, Digital Communication and Collaboration (DCC), Innovative Digital Creativity (IDC), and Students' Entrepreneurship Readiness (SER). For DCC, the aggregate mean score of 3.50±0.85 indicates that students actively engage in collaborative activities using digital platforms such as Zoom and Google Meet, which enhance communication, teamwork, and coordination in academic and project tasks. The IDC dimension recorded a higher aggregate mean of 3.58±0.78, showing that students effectively apply digital tools like Canva and Photoshop to generate creative ideas, develop innovative content, and identify entrepreneurial opportunities. Meanwhile, SER achieved the highest aggregate mean of 3.92±0.77, suggesting a strong readiness among students to initiate and manage business ventures, take calculated risks, and apply acquired entrepreneurial knowledge in practical contexts. Overall, the results imply that digital media literacy, especially through effective communication, collaboration, and creativity, positively contributes to enhancing students' entrepreneurial preparedness in state public universities in Delta State, Nigeria.

Table 3: Descriptive Statistics of the study variables

Variable	Mean	Std. Dev.	Median	Max	Min	Jarque-Bera	Obs.
DCC	3.499	0.771	3.600	5.000	1.000	1.531	311
IDC	3.581	0.690	3.600	5.000	1.800	2.806	311
SER	3.916	0.684	4.000	5.000	2.000	5.713	311

Sources: Researcher's computation, 2025

Table 3 presents the descriptive statistics of the study variables, Digital Communication and Collaboration (DCC), Innovative Digital Creativity (IDC), and Students' Entrepreneurship Readiness (SER). The results show that DCC has a mean of 3.499 with standard deviation of 0.771, IDC has a mean of 3.581 with standard deviation of 0.690, while SER recorded the highest mean value of 3.916 with standard deviation of 0.684. These mean values, all above the scale midpoint of 3.0, indicate that respondents generally agreed with the questionnaire items, suggesting favorable perceptions toward digital media literacy and entrepreneurship readiness. The median values (ranging from 3.6 to 4.0) further affirm the central tendency toward agreement among participants. Additionally, the minimum and maximum values (1.0–5.0) reflect adequate response variability, implying a normal data spread suitable for regression analysis. The Jarque–Bera statistics for all variables (ranging between 1.531 and 5.713) indicate approximate normality, thereby validating the reliability of the dataset for inferential statistical analysis.

Table 4: Correlation matrix of the variables

Variable	DCC	IDC	SER
DCC	1.000		
IDC	0.025	1.000	
SER	0.526	0.555	1.000

Source: EViews 9.0v Output 2025

Table 4 presents the correlation matrix showing the relationships among Digital Communication and Collaboration (DCC), Innovative Digital Creativity (IDC), and Students' Entrepreneurship Readiness (SER). The results reveal a weak and insignificant relationship between DCC and IDC (r = 0.025), suggesting that students' digital communication and collaboration practices are not strongly related to their level of digital creativity. However, DCC shows a moderate positive correlation with SER (r = 0.526), while IDC also exhibits

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a moderate positive relationship with SER (r = 0.555). These findings imply that both digital communication and collaboration, as well as innovative digital creativity, contribute meaningfully to students' entrepreneurial readiness. In essence, higher engagement in digital interaction and creativity tends to enhance students' preparedness to initiate and manage entrepreneurial ventures in state public universities in Delta State, Nigeria.

Testing of Hypotheses

The formulated hypotheses were tested using multiple regression analysis, the result are being presented in table 5 below:

H_{01}: Digital communication and collaboration has no significant effect on students' entrepreneurship readiness among state public universities in Delta State, Nigeria.

H_{02}: Innovative digital creativity has no significant effect on students' entrepreneurship readiness among state public universities in Delta State, Nigeria.

Table 5: Summary of multiple regression analysis result of hypotheses 1 and 2

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.399896	0.175619	2.277066	0.0235
DCC	0.454352	0.033090	13.73091	0.0000
IDC	0.537804	0.036981	14.54274	0.0000
R-squared	0.571082	Mean dependent var		3.915756
Adjusted R-squared	0.568297	S.D. dependent var		0.683805
S.E. of regression	0.449288	Akaike info criterion		1.247295
Sum squared resid	62.17282	Schwarz criterion		1.283370
Log likelihood	-190.9543	Hannan-Quinn criter.		1.261714
F-statistic	205.0433	Durbin-Watson stat		1.983208
Prob(F-statistic)	0.000000			

Source: EViews 9.0v Output 2025

The multiple regression results in Table 5 reveal that both Digital Communication and Collaboration (DCC) and Innovative Digital Creativity (IDC) have significant positive effects on Students' Entrepreneurship Readiness (SER) among state public universities in Delta State, Nigeria. The regression coefficients show that DCC (β = 0.454, t = 13.73, $p < 0.001$) and IDC (β = 0.538, t = 14.54, $p < 0.001$) each make a statistically significant contribution to predicting students' entrepreneurship readiness. This indicates that improvements in students' digital communication and collaborative engagement, as well as their ability to apply creativity through digital tools, substantially enhance their readiness to initiate and manage entrepreneurial ventures. The R-squared value of 0.571 suggests that approximately 57.1% of the variance in students' entrepreneurship readiness is jointly explained by the two predictors, implying a strong model fit. The F-statistic (205.04, $p < 0.001$) further confirms the overall significance of the regression model, while the Durbin-Watson statistic (1.98) indicates that residuals are uncorrelated, confirming model reliability. Consequently, the null hypotheses (H_{01} and H_{02}) are rejected,

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affirming that both digital communication and collaboration, and innovative digital creativity, significantly and positively influence students' entrepreneurship readiness in state public universities in Delta State.

Table 6: Variance Inflation Factors

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.030842	47.51752	NA
DCC	0.001095	21.65412	1.000604
IDC	0.001368	28.02523	1.000604

Source: EViews 9.0v Output 2025

Table 6 presents the Variance Inflation Factor (VIF) analysis used to test for multicollinearity among the independent variables, Digital Communication and Collaboration (DCC) and Innovative Digital Creativity (IDC). The results show that the centered VIF values for both DCC and IDC are 1.0006, which are far below the commonly accepted threshold of 5 (or the more conservative limit of 10). This indicates that there is no multicollinearity problem among the predictor variables, meaning that each independent variable contributes unique and reliable information to the regression model. The uncentered VIF values (21.65 for DCC and 28.03 for IDC) appear large because they include the constant term, but these do not affect the interpretation of collinearity in the centered model. Therefore, the results confirm that DCC and IDC are statistically independent enough to be jointly included in the regression model predicting students' entrepreneurship readiness.

DISCUSSION OF FINDINGS

Digital communication and collaboration and students' entrepreneurship readiness

The results of the regression analysis revealed that digital communication and collaboration (DCC) have a strong and significant positive effect on students' entrepreneurship readiness ($\beta = 0.454$, $t = 13.73$, $p < 0.001$). This suggests that the more effectively students engage in digital communication, teamwork, and online collaborative learning, the higher their entrepreneurial preparedness. This finding aligns with those of Singh (2024) and Okafor and Bello (2024), who found that the use of digital collaboration tools enhances entrepreneurial attitudes and self-efficacy among university students. Similarly, Ediagbonya, Omoregie, and Ogbebor (2024) reported that digital teamwork and networking foster confidence and resource coordination necessary for venture creation. However, Vu (2023) noted that in some developing contexts, digital collaboration alone does not automatically translate into entrepreneurial outcomes unless supported by institutional mentoring and experiential learning. Therefore, while DCC is an important determinant of entrepreneurial readiness in this study, its effectiveness may depend on contextual and institutional factors.

Innovative digital creativity and students' entrepreneurship readiness

The second hypothesis examined the effect of innovative digital creativity (IDC) on students' entrepreneurship readiness, and the result shows a positive and significant effect ($\beta = 0.538$, $t = 14.54$, $p < 0.001$). This indicates that students who creatively apply digital tools, such as for design, innovation, and idea generation, are more prepared to initiate and manage entrepreneurial ventures. The result corroborates the findings of Lopes, Soares, and Costa (2025), who found that innovative digital engagement significantly enhances entrepreneurial intention and creative confidence among students. Similarly, Mirhabibi (2025) and Putro (2024) emphasized that students who apply digital innovation practices demonstrate higher levels of problem-solving and entrepreneurial adaptability. Nonetheless, some studies, such as Alemu (2023), caution that without adequate institutional

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infrastructure (e.g., incubation centers and digital labs), the effect of creativity may be limited, suggesting that the translation of digital creativity into readiness requires enabling environments.

The findings of this study clearly achieve its objectives by confirming that both digital communication and collaboration and innovative digital creativity significantly predict students' entrepreneurship readiness in state public universities in Delta State, Nigeria. The model's explanatory power ($R^2 = 0.571$) indicates that 57.1% of the variance in entrepreneurship readiness is accounted for by the digital literacy components. These findings reinforce the Human Capital Theory (Becker, 1964), which posits that investment in skill development, particularly digital competence, enhances individual productivity and performance outcomes. Additionally, the results are grounded in the Innovation Diffusion Theory (Rogers, 2003), as they demonstrate that the diffusion and adoption of digital communication and creative innovations promote entrepreneurial behaviours through relative advantage, observability, and trialability. The implication is that universities should focus not only on teaching digital literacy but also on integrating creativity, collaboration, and experiential innovation programmes that help students translate digital skills into tangible entrepreneurial ventures.

CONCLUSION

In conclusion, this study has demonstrated that digital media literacy, particularly through digital communication and collaboration and innovative digital creativity, significantly enhances students' entrepreneurship readiness in state public universities in Delta State, Nigeria. The findings reveal that active engagement in collaborative digital platforms and the creative application of digital tools positively influence students' preparedness to initiate and manage entrepreneurial ventures. These results not only support the theoretical propositions of Human Capital Theory and Innovation Diffusion Theory but also underscore the practical importance of integrating digital skill development, creativity, and collaborative learning into university curricula. Overall, fostering digital competencies and innovative practices among students provides a strong foundation for entrepreneurial development, suggesting that universities should prioritize experiential and technology-driven programs to cultivate a generation of capable and ready student entrepreneurs.

RECOMMENDATIONS

Based on the findings of this study, several practical recommendations can be made to enhance students' entrepreneurship readiness through digital media literacy.

Universities should systematically incorporate digital communication and collaboration tools, such as Zoom, Google Meet, and Microsoft Teams, into teaching and project-based activities. This will enable students to develop teamwork, coordination, and communication skills that are critical for entrepreneurial success.

Higher education institutions should provide structured opportunities for students to engage in creative digital projects using tools like Canva, Photoshop, and other multimedia platforms. Workshops, hackathons, and digital content creation competitions can help students translate digital creativity into practical entrepreneurial skills.

Universities should create incubation centers, mentorship programs, and trial spaces that allow students to apply their digital skills and innovative ideas in real-world or simulated entrepreneurial settings. This hands-on approach will reinforce the adoption of digital innovations and enhance students' readiness to launch and manage business ventures.

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