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ENHANCING WORKFORCE READINESS THROUGH EMERGING DIGITAL SKILLS IN BUSINESS EDUCATION IN TERTIARY INSTITUTIONS IN CROSS RIVER STATE, NIGERIA

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Abstract

The growing digitalization of the workplace has heightened concerns about the workforce readiness of business education graduates, particularly in developing economies. This study examined the extent to which emerging digital skills are integrated into business education curricula and their influence on workforce readiness in tertiary institutions in Cross River State, Nigeria. Guided by two research questions and two null hypotheses, the study adopted a descriptive survey research design. The population comprised business education lecturers and undergraduate students in selected tertiary institutions in the state, from which a sample of 351 respondents was drawn using a multi-stage sampling technique. Data were collected using a structured questionnaire titled Emerging Digital Skills Integration and Workforce Readiness Questionnaire (EDS-IWRQ), validated by experts and tested for reliability using Cronbach's Alpha. Descriptive statistics (mean and standard deviation) were used to answer the research questions, while Pearson Product Moment Correlation and simple linear regression were employed to test the hypotheses at the 0.05 level of significance. Findings revealed that emerging digital skills are integrated into the business education curriculum to a moderate extent, with limited emphasis on practical application and digital entrepreneurship. However, the integration of emerging digital skills exerted a strong and significant positive influence on workforce readiness of graduates ($\beta = 0.72, p < 0.05$), enhancing employability, job performance, adaptability, and confidence in using workplace digital tools. The study concludes that while digital skills integration in business education has improved graduate workforce readiness, strengthening practical and entrepreneurial digital competencies is necessary to fully align graduates with the demands of a technology-driven labor market. The study recommends curriculum reforms, enhanced lecturer digital capacity development, improved ICT infrastructure, and stronger industry-institution linkages to maximize workforce readiness outcomes.

Keywords: Emerging digital skills, Business education, Workforce readiness, Curriculum integration, Graduate employability

Introduction

In today's globally competitive and rapidly digitalizing economy, tertiary education must produce graduates equipped not only with foundational academic knowledge but also with emerging digital competencies that match contemporary workforce demands. Emerging digital skills—such as digital literacy, data analytics, digital communication and collaboration, digital marketing, project management, and proficiency with productivity and digital learning platforms—are increasingly indispensable for workplace effectiveness, innovation, and employability across sectors. Empirical research suggests that embedding these competencies into business education curricula enhances graduates' readiness for digital workplaces by equipping them with practical, discipline-relevant tools for solving real business problems, leveraging technology to support decision-making, and collaborating in virtual work environments (Etoma & Adie, 2025a; Etoma & Bassey, 2024). Employers both globally and within Nigeria identify specific digital skills—such as data analysis, digital marketing, and project management—as high-priority competencies needed for effective performance in modern business roles (Uzoamaka & Okpuzor, 2025).

Unlike some general academic or vocational programs, business education has a unique obligation to align digital skills development with business contextual applications such as financial information systems, digital marketing analytics, e-commerce operations, and enterprise resource planning systems, which are directly tied to performance expectations in the business sector (Mordi, 2025; Ndubuisi et al., 2024). Studies further show that digital literacy in business education supports entrepreneurial activity, enabling students to apply technology in venture creation, digital enterprise management, and business communications—capabilities that extend beyond base digital competency to business-focused digital entrepreneurship skills. (Okonkwo et al 2025)

Tertiary institutions in Cross River State, Nigeria, were selected for this study because they represent a diverse mix of federal, state, and private colleges that collectively produce a substantial share of business education graduates for the regional labor market. These institutions serve as key talent pipelines for public and private sector organizations within the state and surrounding regions, making them an appropriate context for examining how emerging digital skills are integrated into business education curricula and how such integration supports workforce readiness (Etoma & Bassey, 2024).

Although existing studies note digital integration challenges in Nigerian tertiary education, few focus specifically on *business education curricula* or differentiate the types of digital skills that enhance employability in business versus other disciplines. For instance, research in educational contexts often highlights broad digital literacy and technical proficiency as foundations for workforce readiness without specifying which competencies are most relevant to business practice (Anderson, Ogruk-Maz & Bell, 2025; Asa, Nautwima & Johannes, 2025). This reveals a clear research gap: there is limited empirical evidence on the extent to which distinct emerging digital skills are systematically integrated into business education curricula in Cross River State, how they are taught in business-specific courses, and how such integration influences graduates' workplace readiness relative to other fields.

Business education, by design, prepares learners for careers in business administration, entrepreneurship, and industry operations. However, amid rapid digital transformation, traditional curricula in

many Nigerian tertiary institutions remain inadequately aligned with the digital skill requirements of modern business environments. Emerging digital competencies—such as data analytics, online collaboration tools, digital marketing platforms, business intelligence software, and technology-driven problem-solving tools—are necessary for graduates to engage effectively in digital communication, virtual teamwork, data-informed decision making, and enterprise digital processes (Uzoamaka & Okpuzor, 2025).

The contribution of this study lies in providing context-specific empirical evidence on how these emerging digital skills are integrated into business education curricula in tertiary institutions in Cross River State and examining their influence on workforce readiness. By addressing the identified gap, the study contributes to curriculum reform, enhances instructional practices, and supports evidence-based policy decisions aimed at aligning business education with contemporary labor market demands in Cross River State and comparable developing-economy contexts.

Conceptual Review

Emerging Digital Skills in Business Education

Emerging digital skills are competencies that enable individuals to access, evaluate, create, and apply information using modern technologies. They extend beyond basic computer literacy to include AI applications, data analytics, digital marketing, cloud computing, and online collaboration tools (Ng, 2012; Prensky, 2010; Al-Marroof et al., 2018). In business education, these skills allow students to manage digital processes, engage in e-commerce, and adapt to technology-driven workplaces (Etoma & Adie, 2025a; Etoma, Okute, & Adie, 2025).

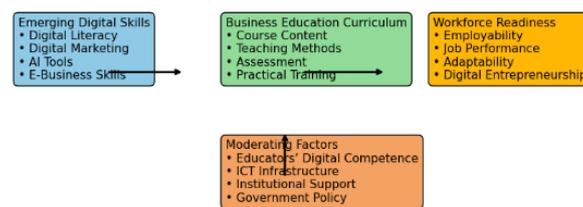
Globally, employers expect graduates to possess digital competencies for data-driven decision-making and AI-supported business operations. In Nigeria, however, studies show gaps in graduates' exposure to these skills due to limited curriculum integration and inadequate practical training (Etoma & Bassey, 2024). This highlights the need for structured curriculum-based digital skill development within business education.

Traditionally, business education emphasizes entrepreneurship, marketing, accounting, and office management education (Ndubuisi et al., 2022). While important, the rapid digital transformation requires curricula to integrate AI, data analytics, digital marketing, and other technology-driven skills to enhance workforce readiness (Etoma, Adie, Ukam, & Patrick, 2025). Embedding these skills through specialized modules and practical projects equips students with the knowledge and hands-on experience necessary for the modern business environment (Tondeur et al., 2017).

This study provides insight into how emerging digital skills can be integrated into business education to improve graduate employability and digital competence in Cross River State. There is limited empirical evidence on systematic integration of emerging digital skills in business education programs in Cross River State and its impact on workforce readiness (Etoma & Bassey, 2024).

Workforce Readiness

Workforce readiness refers to the extent to which graduates possess the skills, knowledge, and attitudes required for effective participation in the labor market. It encompasses cognitive competencies such as problem-solving and decision-making, as well as technical and digital competencies aligned with industry demands (Huang et al., 2019; Van Laar et al., 2017).



Recent studies emphasize the central role of emerging digital skills in shaping workforce readiness, particularly in business-related occupations where technology-driven processes dominate (Etoma & Adie, 2025a). Workforce readiness also involves adaptability, continuous learning, and engagement in lifelong professional development—capacities that are significantly enhanced through exposure to digital skills during tertiary education. In Nigeria, graduates often encounter difficulties adapting to digital workplaces due to limited practical training, inadequate exposure to emerging technologies, and insufficient digital literacy (Etoma, Okute, & Adie, 2025). These challenges underscore the need to empirically examine the link between digital skill integration and workforce readiness within specific institutional and regional contexts.

Educators' Digital Competence

Educators' digital competence is a critical determinant of students' acquisition of emerging digital skills. Digitally competent educators are better positioned to integrate technology into instruction, model digital problem-solving, and design learning experiences that reflect real-world business practices (Koehler & Mishra, 2009; Tondeur et al., 2017). Empirical evidence indicates that gaps in lecturers' ICT competencies can significantly hinder effective curriculum delivery and, consequently, graduates' workforce readiness (Afufu et al., 2024).

Investment in continuous professional development, exposure to digital pedagogies, and curriculum alignment is therefore essential for equipping educators with the capacity to mentor students in emerging technologies. Such efforts strengthen the linkage between curriculum implementation and graduate employability outcomes.

Conceptual Linkages between Emerging Digital Skills and Workforce Readiness

The conceptual framework presented in Figure 1 (below) illustrates how emerging digital skills are integrated into the business education curriculum to enhance workforce readiness in tertiary institutions in Cross River State, Nigeria. Emerging digital skills such as digital literacy, digital marketing, artificial intelligence applications, and e-business tools serve as the primary inputs driving graduate employability and adaptability. The business education curriculum acts as the mechanism through which these skills influence workforce readiness by shaping instructional delivery, assessment practices, and practical digital training. In line with Human Capital Theory, embedding digital skills within the curriculum strengthens graduates' productive capacity and labor market relevance. Educators' digital competence, ICT infrastructure, institutional support, and policy environment moderate this process by influencing the effective adoption and utilization of digital tools, as emphasized by the Technology Acceptance Model.

Existing studies emphasize general ICT competence but rarely provide an integrated, theory-driven explanation of how emerging digital skills influence workforce readiness within business education, particularly in Cross River State. This study contributes by presenting a context-specific conceptual framework that integrates Technology Acceptance Model and Human Capital Theory to explain how curriculum-embedded emerging digital skills enhance workforce readiness, thereby informing curriculum reform, instructional practice, and policy development.

Figure 1: Conceptual Framework for Enhancing Workforce Readiness through Emerging Digital Skills in Business Education in Cross River State, Nigeria.

The conceptual framework illustrates the relationship between emerging digital skills and workforce readiness of business education graduates, with the business education curriculum serving as the mediating variable. Educators' digital competence, ICT infrastructure, institutional support, and government policy are included as moderating factors that may strengthen or weaken the influence of digital skill integration on workforce readiness.

Literature Review

The integration of emerging digital skills into the business education curriculum has become a critical determinant of workforce readiness among graduates of tertiary institutions. In an increasingly digitized economy, competencies such as artificial intelligence (AI) applications, digital marketing platforms, and the use of modern office equipment are no longer optional but essential for meeting employers' expectations (Etoma & Adie, 2025a; Etoma, Okute, & Adie, 2025). Empirical evidence indicates that graduates who lack these competencies often experience difficulties adapting to technologically driven workplaces, thereby underscoring the urgency of curriculum reforms that prioritize digital skill acquisition (Etoma & Bassey, 2024).

Recent studies demonstrate that AI-driven marketing practices and digital influencer strategies have significantly transformed marketing education, demanding that graduates possess both technical proficiency and strategic digital thinking. Etoma and Adie (2025a, 2025b) observed that employers increasingly expect graduates to be skilled in AI-enabled marketing analytics, digital content creation, and online consumer engagement. These findings reinforce the necessity for business education curricula to embed practical, industry-relevant digital skill modules that align learning outcomes with contemporary labor market requirements.

Similarly, the adoption of modern office equipment has been identified as a significant contributor to achieving business education objectives in universities, particularly within Cross River State (Etoma & Bassey, 2024). This aligns with global evidence emphasizing technology-enhanced learning and hands-on digital exposure as catalysts for improved workplace readiness. Supporting this view, Etoma, Adie, Ukam, and Patrick (2025) reported that marketing educators perceive competence in marketing metrics and economic context as essential for producing graduates capable of navigating complex digital marketplaces.

At the national level, studies across Nigeria further affirm the role of ICT integration in enhancing graduate employability. Ndubuisi, Ezeani, and Ile (2022) found that embedding digital skills—such as data analysis, digital communication, and online collaboration—within the curriculum significantly improves graduates' readiness for technology-driven work environments. However, Afufu, Afufu,

and Afufu (2024) revealed that deficiencies in lecturers' ICT competencies can undermine effective digital skills acquisition, highlighting the importance of educator capacity building.

This body of literature collectively advances understanding by establishing that the strategic integration of emerging digital skills within business education curricula significantly enhances workforce readiness, employability, and adaptability in a digital economy—particularly within the context of Nigerian tertiary institutions and Cross River State. Despite these insights, persistent challenges remain, including inadequate digital infrastructure, limited access to modern technologies, insufficient emphasis on applied digital competencies, and gaps in lecturers' digital capacity (Etoma, Okute, & Adie, 2025). Notably, there is limited empirical evidence specifically examining how emerging digital skills integration within business education curricula directly influences workforce readiness in Cross River State. Addressing these gaps requires targeted curriculum interventions, sustained professional development for educators, and continuous alignment with evolving labor market demands to ensure that business education graduates are adequately prepared for the realities of a digital economy.

Theoretical Framework

The theoretical framework for this study is anchored on the Technology Acceptance Model (TAM) and Human Capital Theory (HCT). Together, these theories explain how the integration of emerging digital skills in business education can enhance workforce readiness among tertiary graduates in Cross River State, Nigeria.

Technology Acceptance Model (TAM)

Developed by Davis (1989), TAM posits that individuals' adoption and effective use of technology are influenced by perceived usefulness and perceived ease of use. In business education, TAM suggests that the acceptance of emerging digital skills—such as AI applications, digital marketing tools, and data analytics—by educators and students determines how effectively these skills are embedded in the curriculum and applied in teaching and learning (Ng, 2012; Tondeur et al., 2017). When digital skills are perceived as relevant for employability and workplace performance, and when technologies are user-friendly and supported by digital literacy, adoption and sustained use are more likely. TAM provides a behavioral lens to examine educators' and students' engagement with digital tools, which is critical for acquiring competencies essential for workforce readiness (Etoma & Adie, 2025a; Etoma, Okute, & Adie, 2025).

Human Capital Theory (HCT)

HCT (Becker, 1964) asserts that investments in education and training enhance individuals' productivity and economic value. Emerging digital skills represent a form of human capital that strengthens graduates' capabilities, employability, and adaptability in technology-driven workplaces. In Cross River State, integrating these skills into business education constitutes an investment in students' knowledge and practical competencies, while educators' digital competence ensures effective skills transfer. Workforce readiness is thus the return on this investment, reflected in graduates who are employable and digitally proficient (Etoma & Bassey, 2024; Huang, Spector, & Yang, 2019). HCT emphasizes the role of tertiary institutions in aligning graduate skills with contemporary labor market demands.

Integrating TAM and HCT

Figure 2 below illustrates the theoretical framework of this study, showing how the Technology Acceptance Model (TAM) and

Human Capital Theory (HCT) jointly inform the integration of emerging digital skills in business education to enhance workforce readiness.

The TAM component highlights the behavioral dimension of technology adoption. Perceived usefulness and perceived ease of use influence both educators' and students' acceptance and utilization of digital tools in teaching and learning. This determines the extent to which emerging digital skills, such as AI applications, digital marketing, and data analytics, are embedded and applied effectively in the business education curriculum.

The HCT component frames digital skills as strategic investments in human capital, enhancing graduates' productivity, employability, adaptability, and entrepreneurial capabilities. When these skills are effectively transferred through the curriculum, workforce readiness is strengthened.

The integration box in the diagram below represents the business education curriculum as the mechanism through which behavioral adoption (TAM) is converted into human capital development (HCT), leading to workforce readiness. This process is influenced by contextual factors—including educators' digital competence, ICT infrastructure, institutional support, and government policy—which facilitate or constrain digital skill adoption and development.

This framework advances understanding by combining TAM and HCT to explain how curriculum-driven digital skill integration and technology adoption jointly enhance workforce. While TAM and HCT are widely applied independently, limited empirical evidence exists on their combined role in explaining how emerging digital skills are integrated into business education programs to improve employability, job performance, adaptability, and digital entrepreneurship.

Figure 2: Theoretical Framework Based on Technology Acceptance Model (TAM) and Human Capital Theory (HCT)

Source: Author's conceptualization (2025).

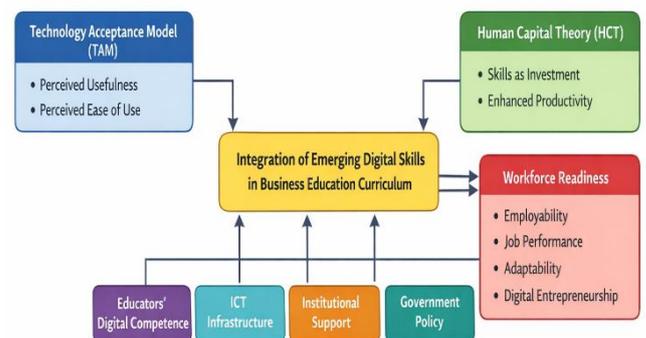


Figure 2: Theoretical Framework Based on Technology Acceptance Model (TAM) and Human Capital Theory (HCT).

The diagram depicts how integrating emerging digital skills into the business education curriculum enhances workforce readiness. TAM explains adoption of digital tools through perceived usefulness and ease of use, while HCT frames these skills as investments that boost productivity and employability. The curriculum bridges technology adoption and human capital development, with contextual factors—educators' digital competence, ICT infrastructure, institutional support, and government policy—further enabling the process, ultimately producing adaptable, employable graduates capable of digital entrepreneurship.

Statement of the Problem

The rapid digitalization of the global business environment has significantly altered the skills required for workforce participation, placing increasing emphasis on emerging digital competencies. However, graduates of business education programmes in many Nigerian tertiary institutions continue to demonstrate limited preparedness for technology-driven workplaces. This gap is largely attributed to curricula that remain predominantly theoretical and insufficiently aligned with contemporary digital business practices.

In Cross River State, the integration of emerging digital skills—such as data analytics, digital marketing tools, e-commerce platforms, and enterprise applications—into business education curricula is limited and inconsistent. As a result, many graduates lack the practical digital competencies required by employers, contributing to skills mismatch, graduate unemployment, and reduced capacity for self-employment and digital entrepreneurship.

Moreover, challenges including inadequate digital infrastructure, limited lecturer capacity, and weak industry–academic linkages further constrain effective curriculum implementation. Existing studies in Nigeria largely emphasize basic ICT literacy, with limited empirical focus on the integration of emerging digital skills within business education programmes and their implications for workforce readiness in Cross River State.

Consequently, a critical disconnect persists between business education curricula and the digital skill demands of the modern workplace. This study therefore addresses the need to examine the extent of emerging digital skill integration in business education curricula and its implications for workforce readiness in tertiary institutions in Cross River State, Nigeria.

Purpose of the Study

The general purpose of this study is to examine how the integration of emerging digital skills into business education programmes enhances the workforce readiness of graduates in tertiary institutions in Cross River State, Nigeria. Specifically, the study seeks to:

1. Examine the integration of emerging digital skills into the business education curriculum in tertiary institutions in Cross River State, Nigeria;
2. Determine the influence of emerging digital skills integration on the workforce readiness of business education graduates in Cross River State.

Research Questions

1. How are emerging digital skills integrated into the business education curriculum in tertiary institutions in Cross River State?
2. How does the integration of emerging digital skills influence the workforce readiness of business education graduates in Cross River State?

Research Hypotheses

1. There is no significant relationship between the integration of emerging digital skills and workforce readiness of business education graduates in tertiary institutions in Cross River State.
2. The integration of emerging digital skills has no significant influence on the workforce readiness of business education graduates in tertiary institutions in Cross River State.

Methodology

Research Design

The study adopted a descriptive survey research design. This design was considered appropriate because it enabled the systematic collection of data from respondents to determine the extent of emerging digital skills integration into the business education curriculum and to examine its influence on workforce readiness among graduates.

Area of the Study

The study was conducted in Cross River State, Nigeria, and focused on tertiary institutions offering business education programmes. The state was selected to generate context-specific evidence on digital skills integration and graduate workforce readiness. Business education lecturers and students in these institutions were targeted because of their direct involvement in curriculum delivery and participation.

Population of the Study

The population of the study comprised all business education lecturers and undergraduate students in tertiary institutions offering Business Education programmes in Cross River State, Nigeria. These institutions were the University of Calabar (UNICAL), Cross River University of Technology (CRUTECH), Federal College of Education, Obudu, and the University of Education and Entrepreneurship, Akamkpa.

Based on official departmental records, the total population was 3,953 respondents, including business education lecturers and students across all levels of study. These respondents were selected because of their direct involvement in curriculum implementation, teaching–learning processes, and the acquisition of emerging digital skills in Business Education.

Sample and Sampling Technique

A multi-stage sampling technique was adopted. Purposive sampling was used to select the relevant tertiary institutions, while proportionate stratified sampling ensured fair representation of lecturers and students across institutions. Subsequently, simple random sampling was employed to select individual respondents from each stratum.

Using the Krejcie and Morgan (1970) sample size determination table, a sample of 351 respondents was considered adequate for a population of 3,953 at a 95% confidence level and 5% margin of error. This approach ensured adequate representation, enhanced the reliability and validity of the findings, and minimized sampling bias.

Instrument for Data Collection

Data were collected using a structured questionnaire titled *Emerging Digital Skills Integration and Workforce Readiness Questionnaire (EDS-IWRQ)*. The instrument comprised sections measuring the extent of emerging digital skills integration into the business education curriculum and the workforce readiness of business education graduates. Respondents' answers were captured using a four-point Likert scale ranging from Strongly Agree to Strongly Disagree.

Validity of the Instrument

The instrument was subjected to face and content validity by experts in business education and measurement and evaluation. Their suggestions were incorporated to ensure clarity, relevance, and adequacy of the items in addressing the study objectives.

Reliability of the Instrument

The reliability of the instrument was established using the Cronbach's Alpha method. A pilot study was conducted, and a reliability coefficient of 0.70 and above was considered acceptable for the study.

Method of Data Collection

The questionnaires were administered to respondents through direct contact with the assistance of trained research assistants. This approach enhanced a high response rate and ensured accurate completion of the instruments.

Method of Data Analysis

Data collected were analyzed using descriptive and inferential statistics. Mean and standard deviation were used to answer the research questions, while Pearson Product Moment Correlation and simple linear regression were employed to test the null hypotheses at the 0.05 level of significance.

Research Question 1.

To what extent are emerging digital skills integrated into the business education curriculum in tertiary institutions in Cross River State?

Table 1. Descriptive Statistics Showing the Extent of Integration of Emerging Digital Skills into the Business Education Curriculum in Tertiary Institutions in Cross River State (N = 351)

S/N	Item Statement	SA	A	D	SD	Mean (\bar{X})	SD
1	Emerging digital skills are clearly embedded in the business education curriculum.	85	150	90	26	3.05	0.89
2	Business education courses incorporate modern digital tools and software.	70	160	90	31	3.00	0.91
3	Students receive practical training in relevant digital business applications.	60	140	110	41	2.84	0.95
4	Digital technologies are regularly used during business education lectures.	55	145	120	31	2.83	0.88
5	The curriculum reflects current digital trends in the business environment.	80	140	95	36	2.99	0.92
6	Assessment methods require the application of digital skills.	65	135	115	36	2.85	0.93
7	Students are exposed to digital entrepreneurship and e-business tools.	60	130	120	41	2.79	0.95
	Grand Mean					2.91	0.92

Note: N = 351; SA = Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree.

Interpretation of Table 1

Table 1 presents the descriptive statistics on the extent of integration of emerging digital skills into the business education curriculum in tertiary institutions in Cross River State. The mean scores for individual items range from **2.79 to 3.05**, indicating varying levels of digital skill integration across curriculum components. The highest mean score ($\bar{X} = 3.05$) suggests that emerging digital skills are moderately embedded in the curriculum, while the lowest mean score ($\bar{X} = 2.79$) indicates limited exposure of students to digital entrepreneurship and e-business tools.

The grand mean of 2.91 reflects an overall moderate extent of integration of emerging digital skills into the business education curriculum. This implies that although digital tools and competencies are present within the curriculum, their integration is not yet comprehensive or consistent across instructional delivery, practical training, and assessment methods. The relatively moderate standard deviation values further suggest a reasonable level of agreement among respondents regarding the current state of digital skill integration.

Hypothesis Testing

Hypothesis 1. (H₀ 1): There is no significant relationship between the integration of emerging digital skills and workforce readiness of business education graduates in tertiary institutions in Cross River State.

Table 3: Pearson Correlation Showing the Relationship between Integration of Emerging Digital Skills and Workforce Readiness of Business Education Graduates in Tertiary Institutions in Cross River State (N = 351)

Variable 1 (IV)	Variable 2 (DV)	N	r	p-value	Decision
Integration of Emerging Digital Skills	Workforce Readiness	351	0.72	0.000	Reject H ₀

Interpretation of Results

The Pearson correlation coefficient ($r = 0.72, p < 0.05$) indicates a strong positive and statistically significant relationship between the integration of emerging digital skills and workforce readiness of business education graduates.

Decision: The null hypothesis is **rejected**, confirming that **emerging digital skill integration significantly influences workforce readiness** in tertiary institutions in Cross River State.

Research Question 2.

How does the integration of emerging digital skills influence the workforce readiness of business education graduates in Cross River State?

Table 4. Descriptive Statistics Showing the Influence of Emerging Digital Skills Integration on the Workforce Readiness of Business Education Graduates in Cross River State (N = 351)

S/N	Item Statement	SA	A	D	SD	Mean (\bar{X})	SD
1	I am confident in using digital tools relevant to the workplace.	90	145	90	26	3.07	0.88
2	The digital skills acquired prepare graduates for modern business roles.	85	140	95	31	3.01	0.90
3	Graduates can adapt easily to technology-driven work environments.	80	135	100	36	2.95	0.91
4	Digital skills enhance graduates' employability and job performance.	95	135	90	31	3.08	0.88
5	The curriculum prepares graduates for digital entrepreneurship and self-employment.	70	130	115	36	2.85	0.93
6	Digital skills enable graduates to solve business problems effectively.	88	140	95	28	3.04	0.89
7	Graduates possess relevant digital competencies demanded by employers.	82	145	94	30	3.00	0.90
	Grand Mean					3.00	0.90

Table 2. Descriptive Statistics showing the Influence of Emerging Digital Skills Integration on the Workforce Readiness of Business Education Graduates in Cross River State (N=351)

Note: N = 351; SA = Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree.

Interpretation of Results

Table 2 presents the descriptive statistics on the influence of emerging digital skills integration on the workforce readiness of business education graduates in Cross River State. The mean scores for the seven items range from 2.85 to 3.08, indicating a high level of workforce readiness associated with the integration of emerging digital skills into the business education curriculum.

The highest mean score (3.08) was recorded for the item "Digital skills enhance graduates' employability and job performance," suggesting that respondents strongly perceive digital skills as critical to employability and effective job performance. Similarly, high mean values for confidence in using workplace digital tools and problem-solving ability indicate that digital skill integration positively supports graduates' functional readiness for the modern workplace.

Conversely, the lowest mean score (2.85) was observed for "The curriculum prepares graduates for digital entrepreneurship and self-employment," implying that while digital skills enhance employability, practical entrepreneurial and self-employment applications are comparatively less emphasized. The standard deviation values (0.88–0.93) reveal moderate variation in respondents' opinions, suggesting some differences in exposure and experience across institutions.

Overall, the findings indicate that integration of emerging digital skills positively influences workforce readiness of business education graduates in Cross River State. However, the results also highlight the need to strengthen practical, entrepreneurial, and applied digital skill components within the curriculum to further enhance graduate preparedness for a technology-driven labor market.

Hypothesis 2.

The integration of emerging digital skills has no significant influence on the workforce readiness of business education graduates in tertiary institutions in Cross River State.

Table 4: Regression Analysis Showing the Influence of Integration of Emerging Digital Skills on Workforce Readiness of Business Education Graduates in Tertiary Institutions in Cross River State (N = 351)

Model	Predictor (IV)	B (Unstandardized)	β (Standardized)	t-value	p-value	Decision
1	Integration of Emerging Digital Skills	0.68	0.72	18.23	0.000	Reject H_0

Interpretation of Results

The regression analysis shows that integration of emerging digital skills significantly predicts workforce readiness among business education graduates ($\beta = 0.72$, $p < 0.05$). The unstandardized coefficient ($B = 0.68$) indicates that for every unit increase in the integration of digital skills in the curriculum, workforce readiness increases by 0.68 units.

Decision: The null hypothesis is rejected, confirming that integration of emerging digital skills has a significant positive influence on the workforce readiness of business education graduates in tertiary institutions in Cross River State.

Discussion of Findings

This section discusses the findings of the study in relation to the research questions, hypotheses, existing literature, and the theoretical framework underpinning the study.

Extent of Integration of Emerging Digital Skills into the Business Education Curriculum

Findings addressing Research Question 1, as presented in Table 1, reveal that emerging digital skills are integrated into the business education curriculum in tertiary institutions in Cross River State to a moderate extent (Grand Mean = 2.91). While respondents generally agreed that digital skills are embedded in the curriculum and that modern digital tools are incorporated into courses, lower mean scores were recorded for practical exposure, assessment-based application, and digital entrepreneurship components.

This result suggests that digital skills integration in business education remains largely theoretical and uneven, with limited emphasis on hands-on application and entrepreneurial use of digital technologies. The relatively lower mean score for exposure to digital entrepreneurship and e-business tools indicates a gap between curriculum content and the realities of the digital economy.

These findings align with previous studies conducted in Nigeria, which report partial integration of ICT and digital competencies within tertiary curricula. For instance, Ndubuisi et al. (2022) found that although digital skills are acknowledged in curriculum documents, their implementation is often constrained by limited instructional resources and insufficient lecturer capacity. Similarly, Afufu et al. (2024) observed that inadequate ICT competence among lecturers in Cross River State restricts effective curriculum delivery, thereby limiting students' practical digital skill acquisition.

However, the present findings differ from studies conducted in more technologically advanced contexts, where digital skills are reported to be deeply embedded across curriculum content, instructional delivery, and assessment practices (Huang et al., 2019; Tondeur et al., 2017). This divergence underscores the contextual challenges facing developing economies such as Nigeria, particularly at the sub-national level.

From a theoretical standpoint, the moderate level of integration supports the Technology Acceptance Model (TAM), which emphasizes perceived usefulness and ease of use as determinants of technology adoption (Davis, 1989). The findings suggest that while digital tools are perceived as useful, institutional and pedagogical barriers may limit their consistent application. In addition, Human Capital Theory (Becker, 1964) explains that insufficient investment in practical digital training reduces the potential productivity returns of education, thereby constraining graduate readiness.

Influence of Emerging Digital Skills on Workforce Readiness

Findings related to Research Question 2, as shown in Table 2, indicate that the integration of emerging digital skills has a high positive influence on workforce readiness of business education graduates (Grand Mean = 3.00). Respondents expressed strong confidence in using workplace-relevant digital tools, adapting to technology-driven environments, and enhancing employability and job performance.

These findings demonstrate that even at a moderate level of curriculum integration, emerging digital skills significantly enhance graduates' functional readiness for the labor market. The strong perception that digital skills improve employability aligns with existing empirical evidence that positions digital competence as a

core determinant of graduate success in contemporary workplaces (Etoma & Adie, 2025a; Van Laar et al., 2017).

Nevertheless, the comparatively lower mean score for digital entrepreneurship preparation reinforces earlier findings from Table 1, suggesting that business education curricula emphasize employability for paid jobs more than digital self-employment and entrepreneurial innovation. This pattern reflects concerns raised by Etoma and Bassey (2024), who noted that Nigerian business education programmes often lag in translating digital skills into entrepreneurial outcomes.

Relationship between Digital Skills Integration and Workforce Readiness

The results of Hypothesis 1, presented in Table 3, reveal a strong, positive, and statistically significant relationship between integration of emerging digital skills and workforce readiness ($r = 0.72$, $p < 0.05$). This finding confirms that improvements in curriculum-based digital skill integration are directly associated with higher levels of graduate preparedness for the workplace.

This result is consistent with prior studies that establish digital competence as a strong predictor of employability and adaptability in technology-driven labor markets (Huang et al., 2019; Etoma, Okute, & Adie, 2025). However, the strength of the relationship observed in this study is higher than that reported in some national-level studies, suggesting that within Cross River State, digital skills may play an especially critical compensatory role in addressing broader labor market challenges.

Predictive Influence of Digital Skills Integration on Workforce Readiness

Further evidence from Table 4, addressing Hypothesis 2, shows that integration of emerging digital skills significantly predicts workforce readiness ($\beta = 0.72$, $p < 0.05$). The regression coefficient indicates that a unit increase in digital skill integration leads to a substantial increase in workforce readiness.

This finding strongly supports Human Capital Theory, which posits that investments in education and skills development yield measurable productivity outcomes (Becker, 1964). It also reinforces TAM by demonstrating that when digital tools are embedded within the curriculum and accepted by learners, they translate into tangible employability benefits.

Compared with previous studies that focused primarily on general ICT literacy, this study extends existing knowledge by empirically demonstrating the direct predictive power of emerging digital skills—including digital marketing tools, e-business platforms, and problem-solving technologies—within a specific disciplinary and regional context.

Contribution to Knowledge

This study contributes to the literature in several important ways. First, it provides context-specific empirical evidence on the integration of emerging digital skills in business education curricula in Cross River State—an area that has been underexplored in prior research. Second, it moves beyond descriptive accounts by empirically linking curriculum integration to workforce readiness using both correlation and regression analyses. Third, by integrating Technology Acceptance Model and Human Capital Theory, the study offers a robust explanatory framework that connects technology adoption behaviors with graduate productivity outcomes.

Implications of the Findings

The findings have important implications for curriculum design, instructional practice, and policy formulation. Curriculum developers should strengthen the practical and entrepreneurial dimensions of digital skill integration, ensuring that assessment methods require applied digital competencies. Tertiary institutions should prioritize continuous professional development for lecturers to enhance their digital pedagogical capacity. Policymakers and regulatory bodies should support infrastructure development and curriculum reforms that align business education with evolving digital labor market demands.

Overall, the study underscores that while progress has been made in integrating emerging digital skills into business education curricula in Cross River State, sustained and structured efforts are required to achieve comprehensive integration and maximize workforce readiness outcomes.

Recommendations, each directly tied to the findings and suitable for strict journal limits:

1. Business education curricula should be strengthened with practical, hands-on emerging digital skills.
2. Digital entrepreneurship and e-business competencies should be explicitly embedded in course content and learning outcomes.
3. Assessment strategies should prioritize applied digital tasks over purely theoretical evaluations.
4. Continuous digital capacity training should be provided for business education lecturers.
5. Tertiary institutions should invest in adequate ICT infrastructure to support digital learning.
6. Strong industry–institution linkages should be established to enhance students’ real-world digital exposure.
7. Educational policymakers should mandate comprehensive digital skills integration in business education programmes.
8. Regular monitoring should be conducted to evaluate the impact of digital skills integration on workforce readiness.

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