
WORKFORCE EDUCATION AND EMERGING DIGITAL COMPETENCIES FOR ENHANCING EMPLOYABILITY IN OFFICE TECHNOLOGY AND MANAGEMENT IN KOGI STATE, NORTH CENTRAL

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Abstract

This study examined workforce education and emerging digital competencies for enhancing employability in Office Technology and Management (OTM) in Kogi State, North-Central Nigeria. The rapid digital transformation of workplaces has created an urgent need for graduates equipped with modern technological competencies, yet many OTM programmes continue to face infrastructure and curriculum challenges. The study adopted a descriptive survey research design. The population for the study is 83 which consists of 8 OTM lecturers and 75 OTM students from Kogi State Polytechnic. A structured questionnaire titled "Workforce Education and Emerging Digital Competencies Questionnaire (WEEDCQ)" was used to collect data, with a reliability coefficient of 0.84 obtained using Cronbach's Alpha Data collected were analyzed using mean, to answer research questions. The null hypotheses were tested at .05 level of significance using t-test for independent sample. The findings revealed that computer literacy competency plays a significant role in enhancing employability (grand mean: lecturers = 3.63, students = 3.56). Word processing competency was identified as essential for employability enhancement (grand mean: lecturers = 3.63, students = 3.58). Spreadsheet management competency was also found to be highly required for employability (grand mean: lecturers = 3.63, students = 3.58). The three null hypotheses were not rejected, indicating no significant difference between the perceptions of lecturers and students. The study concludes that emerging digital competencies, including computer literacy, word processing, and spreadsheet management, are critical for enhancing employability among OTM students. Recommendations include increased investment in ICT infrastructure, curriculum modernization, regular digital skills training for students and lecturers, and strengthened industry-academia collaboration.

Keywords: Workforce education, digital competencies, employability, Office Technology and Management, computer literacy, word processing, spreadsheet management

Introduction

Workforce education is a systematic process of equipping individuals with the knowledge, skills, competencies, attitudes, and experiences required to obtain, maintain, and advance in employment, entrepreneurship, and professional careers. Workforce education according to Okwuchukwu (2025), refers to structured learning and training initiatives designed to equip individuals with the practical knowledge, technical abilities, professional attitudes, and job-ready skills needed to participate effectively in the labor market and contemporary workplaces. The scholar further explains that workforce education aims to

prepare learners for productive employment, self-employment, career progression, and ongoing professional growth. It prioritizes the development of industry-relevant competencies that respond to current economic and technological realities. In today's world, workforce education has grown increasingly vital due to rapid technological progress, globalization, digital transformation, and shifting workplace expectations (Egbulem, Khalil, Bamidele, Modupe, Omokeji, & Rabi, 2024). Traditional education systems that emphasized theoretical knowledge are steadily giving way to competency-driven and skill-focused approaches designed to boost graduates' employability and ability to adjust to workplace demands. The International Labour Organization (ILO) maintains that workforce education enhances productivity, encourages sustainable employment, and supports economic development through skill development and vocational training (Ajeniwani, Bamgbowu, & Obasi, 2024).

Workforce education according to Okwuchukwu (2025) further notes that encompasses various components, including technical education, vocational training, entrepreneurship education, digital literacy instruction, career development, professional certification, and lifelong learning opportunities. Together, these elements prepare learners to perform effectively across different occupational fields and to adjust to emerging workplace trends. In the field of Office Technology and Management (OTM), workforce education holds particular significance because the programme is specifically designed to prepare students for office administration, records management, communication technology, secretarial functions, information processing, and contemporary business operations (Okoli & Umekafor, 2025). Students are anticipated to gain both theoretical understanding and hands-on office competencies that are relevant to digitalized workplaces.

The incorporation of digital technologies into workforce education has significantly reshaped teaching and learning processes. Wakil, Yashi, Ahmed, and Musa (2024) observe that learners are now introduced to office automation systems, cloud computing, digital communication platforms, virtual collaboration tools, artificial intelligence applications, and computerized office management systems. These technological tools enhance students' competencies and ready them for technology-driven work settings. Workforce education is closely connected to emerging digital competencies, as modern workplaces increasingly require employees who possess digital literacy, technological proficiency, communication skills, problem-solving abilities, and adaptability (Okwuchukwu, 2025). Without adequate workforce education, learners may lack the practical skills necessary to compete successfully in today's labor markets.

Nevertheless, workforce education in Nigeria encounters several obstacles, including insufficient funding, inadequate ICT infrastructure, obsolete curricula, limited access to modern technologies, a shortage of qualified instructors, and weak collaboration between educational institutions and industries (Okwuchukwu, 2025). These difficulties undermine the quality of skill acquisition and reduce graduates' chances of securing employment. The same author notes that workforce education is also closely tied to employability, since the primary goal of workforce training is to improve individuals' capacity to obtain and retain productive employment. When effectively delivered, workforce education contributes to human capital development, national productivity, and economic growth.

Emerging digital competencies, as defined by Oladimeji, Abdulkareem, and Adejumo (2024), refer to contemporary technological abilities, digital literacy skills, ICT knowledge, and technology-related competencies necessary for effective functioning in digital environments and modern workplaces. These competencies include the ability to use digital devices, software applications, internet resources, communication technologies, and emerging innovations efficiently for personal, educational, and professional purposes. The rapid pace of technological change and the digital transformation of workplaces have intensified the demand for digitally skilled individuals across various professions (Egbulem et al., 2024). Organizations today depend heavily on digital systems such as cloud computing, virtual communication platforms, artificial intelligence, data management systems, and office automation technologies. Consequently, educational institutions are expected to equip learners with relevant digital competencies that match labor market requirements.

According to Bello and Ajao (2024), emerging digital competencies include computer literacy, internet navigation skills, data analysis abilities, digital communication skills, cybersecurity awareness, social media management, virtual collaboration, cloud computing skills, digital problem-solving abilities, and artificial intelligence literacy. These competencies enable learners to adapt to technological changes and perform effectively in contemporary workplaces. In Office Technology and Management education, digital competencies are especially crucial because office operations have become increasingly computerized and technology-driven. Tony-Okeme (2021) notes that students are expected to develop competencies in word processing, spreadsheet management, presentation software, online communication systems, database management, records automation, and digital office administration.

The integration of emerging digital competencies into educational programmes enhances learners' employability by preparing them for digital workplaces. Adenekan and

Jimoh (2021) observe that graduates who possess strong digital competencies are more likely to secure employment opportunities, adapt to organizational technologies, and contribute meaningfully to workplace productivity. Emerging digital competencies are also linked to workforce education, as workforce training programmes now emphasize technology integration and digital skill development. Wakil, Yashi, Ahmed, and Musa (2024) note that educational institutions are increasingly adopting digital learning platforms, e-learning systems, virtual classrooms, and technology-based instructional methods to improve students' competencies. However, Agbeyangi, Makinde, and Odun-Ayo (2024) caution that the development of digital competencies in Nigeria faces challenges such as poor internet connectivity, inadequate ICT facilities, insufficient digital training, irregular electricity supply, high costs of digital devices, and low technological awareness. These challenges negatively affect students' readiness for technology-driven workplaces.

Emerging digital competencies are strongly related to digital literacy and workforce readiness, as digitally competent graduates are better equipped to meet the expectations of modern employers and dynamic work environments. Obi and Ojo (2025) explain that enhancing employability involves improving individuals' abilities, competencies, qualifications, attitudes, and professional skills necessary for obtaining, maintaining, and advancing in employment. Employability entails preparing learners to satisfy labor market demands and perform effectively in workplace settings. Kayode (2023) notes that employability has become a primary goal of modern education due to rising unemployment rates, technological advancement, economic competition, and changing workplace expectations. According to Adewolu Ogwo (2024), employers now seek graduates who possess not only academic qualifications but also practical skills, digital competencies, communication abilities, teamwork, critical thinking, creativity, and adaptability. The same author adds that enhancing employability involves multiple dimensions, including skill acquisition, workforce training, professional development, entrepreneurship education, career readiness, technological competence, and workplace ethics. These dimensions collectively improve graduates' preparedness for employment and self-reliance.

In Office Technology and Management education, employability enhancement is particularly important because graduates are expected to function effectively in administrative offices, business organizations, government establishments, and entrepreneurial ventures (Ojo, Owolaye, & Osime, 2024). Students must therefore acquire practical office skills and digital competencies relevant to contemporary organizations. The rise of digital workplaces has significantly influenced employability requirements. Abolanle, Adenike, and Sunday (2025)

note that modern employers increasingly demand competencies in office automation, cloud computing, virtual communication, data management, online collaboration, and digital record keeping. Consequently, workforce education programmes now incorporate digital technologies into instructional delivery and practical training. Enhancing employability through workforce education helps reduce unemployment, poverty, and economic dependence among graduates. Nwachukwu (2024) maintains that improving employability through workforce education contributes to national development by producing competent human resources capable of driving organizational productivity and innovation.

Employability according to Samuel, Akorede, and Karimu (2025) assert that is strongly linked to emerging digital competencies because digital skills have become critical requirements in contemporary workplaces. Graduates who lack digital competencies may struggle to secure employment opportunities or adapt to workplace technologies. Despite efforts to improve employability in Nigeria, many graduates continue to experience unemployment due to inadequate practical training, skill mismatches, outdated curricula, limited industrial exposure, and insufficient digital competencies (Nwaikpo, 2025). This situation underscores the need for educational institutions to strengthen workforce education and integrate technology-driven competencies into academic programmes. Olanipekun, Sokefun, and Akinlabi (2021) add that enhancing employability is also connected to entrepreneurship development, since employable graduates can either find paid employment or establish their own businesses using acquired competencies and entrepreneurial skills.

Office Technology and Management is an academic and professional discipline designed to prepare individuals for careers in office administration, communication technology, records management, information processing, secretarial services, and business office operations (Ogungboye, 2023). The programme blends theoretical instruction with practical training to produce competent office professionals capable of functioning effectively in modern organizations. According to Tony-Okeme (2021), Office Technology and Management evolved from traditional secretarial education into a broader technology-oriented programme due to advancements in information and communication technologies. The programme now integrates digital office applications, office automation systems, business communication technologies, data management systems, entrepreneurship education, and modern administrative practices.

The objectives of Office Technology and Management education, according to Araoye, Adeleke, Megbuwawon, and Ayoola (2024), include developing office competencies, improving communication skills, enhancing managerial abilities, promoting digital literacy,

and preparing students for employment and self-reliance. Okiti (2023) notes that students receive training in word processing, desktop publishing, shorthand, records management, database management, spreadsheet applications, presentation software, and office automation technologies. Modern organizations increasingly rely on digital technologies for communication, record keeping, information management, and administrative operations. As a result, Office Technology and Management programmes now emphasize emerging digital competencies such as cloud computing, virtual collaboration, artificial intelligence awareness, and digital communication systems.

Office Technology and Management is strongly connected to workforce education because the programme aims to prepare students for the labor market and enhance their employability. The curriculum is designed to equip learners with practical skills relevant to contemporary workplaces. Ijiola and Nwogwugwu (2023) note that the OTM programme also contributes significantly to entrepreneurship development, as graduates can establish business centers, consultancy services, digital office enterprises, and administrative support services using their acquired technological and managerial competencies. Despite its importance, OTM education faces challenges such as inadequate ICT facilities, outdated instructional equipment, a shortage of qualified instructors, poor electricity supply, and insufficient exposure to emerging workplace technologies (Dahiru, 2025). These challenges may limit graduates' preparedness for modern digital workplaces. OTM is closely linked to emerging digital competencies and employability, as technological competence has become a major requirement for office professionals in the digital economy.

Digital literacy, according to Onyam and Chukwu (2022), refers to the ability to use digital technologies, computer systems, internet resources, software applications, and communication platforms effectively, responsibly, and efficiently. It involves accessing, analyzing, evaluating, creating, and communicating information using digital tools. Egbulem et al. (2024) note that digital literacy has become essential in modern workplaces because organizations increasingly depend on technology-driven operations and digital communication systems. Individuals who possess digital literacy skills can readily adapt to workplace technologies and perform administrative tasks effectively. Bello and Ajao (2024) add that digital literacy is strongly connected to emerging digital competencies because it serves as the foundation upon which advanced technological skills are developed. Workforce education programmes therefore emphasize digital literacy training to improve students' employability and workplace readiness.

Skill acquisition, as defined by Otu, Udo, and Usoro (2010), refers to the process through which individuals develop practical competencies, technical abilities, and professional knowledge through education, training, and experience. It involves learning specific tasks and developing expertise necessary for effective job performance. In Office Technology and Management education, Ukonu, Habu, and Halilu (2023) note that skill acquisition includes competencies in office administration, communication technology, data management, digital applications, and business operations. Skill acquisition enhances graduates' employability and entrepreneurial capabilities. Skill acquisition is closely linked to workforce education because workforce training programmes are designed primarily to equip learners with employable and industry-relevant skills.

Workforce readiness, according to Falaye, Adedeji, Okwilagwe, Adeleke, Nghargbu, and Oderinwale (2024), refers to the preparedness of individuals to enter and function effectively in workplace environments. It involves possessing the skills, attitudes, knowledge, competencies, and professional behaviors required by employers. Ojo, Ogbu, and Dalyop (2025) note that workforce readiness includes communication skills, teamwork, technological competence, problem-solving abilities, adaptability, and professional ethics. Graduates who are workforce-ready can transition smoothly from school environments into employment settings. Workforce readiness is strongly linked to employability because employers prefer graduates who can perform effectively with minimal supervision and additional training.

Technological integration, according to Onyema (2020), refers to the incorporation of digital technologies, ICT tools, software applications, and technological innovations into teaching, learning, and workplace activities. In Office Technology and Management education, Asemota, Nwabuoku, and Okonkwo (2025) note that technological integration involves the use of digital office applications, online learning systems, virtual communication tools, cloud computing, and office automation technologies during instructional delivery. Technological integration enhances digital competence development and improves students' preparedness for modern workplaces.

Entrepreneurship development, according to Udeze (2025), refers to the process of equipping individuals with entrepreneurial knowledge, business skills, creativity, innovation, and self-employment competencies necessary for establishing and managing successful enterprises. Entrepreneurship development is important in workforce education because not all graduates may secure paid employment after graduation. Ediagbonya and Aghatise (2023) note that OTM graduates can establish business centers, digital office services, consultancy firms, and online enterprises using their acquired competencies. Entrepreneurship development is

strongly linked to employability because entrepreneurial skills improve graduates' self-reliance, productivity, and economic participation.

Kogi State is one of the states located in the North-Central geopolitical zone of Nigeria and serves as the geographical focus of this study on workforce education and emerging digital competencies for enhancing employability in Office Technology and Management. The state hosts several tertiary institutions, technical colleges, vocational centers, and educational establishments involved in manpower development and workforce training. These institutions contribute significantly to skill acquisition, professional development, entrepreneurship education, and human capital development within the state. The increasing digital transformation of workplaces in Nigeria has created a growing need for workforce education and digital competencies among students and graduates in Kogi State. Educational institutions are expected to equip learners with modern technological skills that align with labor market demands and organizational expectations. However, educational institutions in Kogi State face several challenges affecting workforce education and digital competence development, including inadequate ICT infrastructure, poor internet connectivity, irregular electricity supply, insufficient funding, a shortage of digital learning facilities, and limited technological exposure. These challenges may hinder effective teaching and learning of digital competencies in OTM programmes. Despite these limitations, the integration of digital technologies into workforce education in Kogi State holds the potential to improve graduates' employability, workplace adaptability, entrepreneurial abilities, and professional competencies. Government agencies, educational administrators, and institutions are increasingly encouraged to invest in ICT facilities, digital training programmes, and workforce-oriented educational reforms. Kogi State is directly linked to workforce readiness and human capital development because the quality of education and digital competencies acquired by learners influences their ability to contribute productively to the economy and labor market.

Statement of the Problem

In previous decades, workforce education in Nigeria focused largely on traditional office skills such as typewriting, shorthand, filing, and manual office procedures, with minimal attention paid to digital competencies and technology-driven workplace requirements. Educational institutions offering Office Technology and Management programmes relied heavily on conventional teaching methods and outdated office equipment, which did not adequately prepare students for emerging digital workplaces. As technological advancement continued to reshape organizational operations around the world, many graduates found

themselves lacking the digital competencies, practical skills, and workforce readiness needed to perform effectively in modern offices and business environments. As a result, unemployment, underemployment, and poor workplace adaptability became major concerns among graduates of OTM programmes.

At present, the rapid advancement of digital technologies, office automation systems, artificial intelligence, cloud computing, virtual communication platforms, and data management technologies has fundamentally transformed workplace operations and labor market expectations. Employers now demand graduates who possess emerging digital competencies such as computer literacy, digital communication skills, virtual collaboration abilities, data processing competencies, and technological adaptability. Educational institutions are therefore expected to integrate workforce-oriented training and digital competencies into OTM programmes to enhance graduates' employability and productivity. Despite these developments, many tertiary institutions in Kogi State continue to experience challenges including inadequate ICT facilities, poor internet connectivity, insufficient technological infrastructure, outdated instructional methods, and limited exposure to modern digital workplace technologies. These challenges may hinder students' acquisition of relevant digital competencies.

Although several studies have explored employability and skill acquisition, limited empirical attention appears to have been directed toward workforce education and emerging digital competencies for enhancing employability in Office Technology and Management in Kogi State. Existing research has focused mainly on general ICT integration and entrepreneurship education without specifically examining the extent to which workforce education and emerging digital competencies contribute to employability among OTM students. Therefore, a gap exists in determining the role of workforce education and emerging digital competencies in improving workforce readiness, technological competence, and employability of OTM students in Kogi State. It is this gap that the present study seeks to fill.

Purpose of the Study

The aims of the study are to determine workforce education and emerging digital competencies for enhancing employability in Office Technology and Management in Kogi State. Specifically, objectives are to:

1. determine the role of workforce education in enhancing employability among Office Technology and Management students in Kogi State.

2. determine the emerging digital competencies required for enhancing employability in Office Technology and Management in Kogi State.
3. identify the challenges affecting the acquisition of workforce education and emerging digital competencies among Office Technology and Management students in Kogi State.

Research Questions

The following research questions guided the study:

1. What are the roles of Computer Literacy Competency in enhancing employability among Office Technology and Management students in Kogi State?
2. What are the emerging Word Processing Competency required for enhancing employability in Office Technology and Management in Kogi State?
3. What are the Spreadsheet Management Competency required for enhancing employability in Office Technology and Management students in Kogi State?

Hypotheses

The following null hypotheses were tested at 0.05 level of significance:

- H0₁: There is no significant difference in the mean responses of Office Technology and Management lecturers and students on the roles of workforce education in enhancing employability in Kogi State
- H0₂: There is no significant difference in the mean responses of Office Technology and Management lecturers and students on the emerging digital competencies required for enhancing employability in Kogi State.
- H0₃: There is no significant difference in the mean responses of Office Technology and Management lecturers and students on the challenges affecting the acquisition of workforce education and emerging digital competencies in Kogi State.

Methodology

The study adopted a descriptive survey research design to investigate workforce education and emerging digital competencies for enhancing employability in Office Technology and Management in Kogi State. The population for the study is 93, which comprised of 8 Office Technology and Management Lecturers and 75 Office Technology and Management Students from Kogi State Polytechnic Lokoja, while data were collected using a structured questionnaire titled “Workforce Education and Emerging Digital Competencies Questionnaire (WEEDCQ)” designed on a 5-point rating scale of Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (D), and Strongly Disagree (SD). The instrument was validated

by three experts from the Department of Business Education, University of Nigeria, Nsukka, and a reliability coefficient of 0.84 was obtained using Cronbach's Alpha method, while data collected were analyzed using mean and standard deviation to answer the research questions and independent t-test to test the null hypotheses at 0.05 level of significance.

Results

Table 1: Mean Ratings and Standard Deviation of Office Technology and Management Lecturers and Students on the Roles of Computer Literacy Competency in Enhancing Employability in Kogi State

S/N	Item Statements	Lecturers		Students		Remarks
		Mean	SD	Mean	SD	
1	Computer literacy competency enhances digital communication skills among Office Technology and Management students.	3.80	0.45	3.65	0.49	Agree
2	Computer literacy competency improves workplace adaptability among Office Technology and Management students.	3.60	0.55	3.58	0.56	Agree
3	Computer literacy competency supports effective use of office technologies in organizations.	3.40	0.55	3.46	0.57	Agree
4	Computer literacy competency enhances students' ability to process office information digitally.	3.80	0.45	3.60	0.50	Agree
5	Computer literacy competency promotes employability opportunities in modern workplaces.	3.60	0.55	3.54	0.57	Agree
6	Computer literacy competency facilitates effective internet and online communication skills.	3.40	0.55	3.48	0.57	Agree
7	Computer literacy competency improves productivity in office administration tasks.	3.80	0.45	3.66	0.48	Agree
8	Computer literacy competency enhances confidence in the use of digital office systems.	3.60	0.55	3.52	0.57	Agree
	Grand Total	3.63	0.51	3.56	0.54	Agree

Table 1 revealed that Office Technology and Management Lecturers and Students agreed on the roles of Computer Literacy Competency in enhancing employability in Kogi State. The mean ratings of lecturers ranged from 3.40 to 3.80, while those of students ranged from 3.46 to 3.66, indicating agreement on all the items presented. The grand mean scores of 3.63 for lecturers and 3.56 for students confirmed that Computer Literacy Competency contributes significantly to employability enhancement among Office Technology and Management students. The standard deviation values ranging from 0.45 to 0.57 showed closeness in the opinions of the respondents.

Table 2: Independent t-test Analysis of Mean Responses of Office Technology and Management Lecturers and Students on the Roles of Computer Literacy Competency in Enhancing Employability in Kogi State

Variables	N	Mean	SD	df	t-cal	t-crit	Decision
Office Technology and Management Lecturers	8	3.63	0.51	33	0.36	1.96	Not Significant
Office Technology and Management Students	75	3.56	0.54				

Table 2 showed that the calculated t-value of 0.36 is less than the critical t-value of 1.96 at 0.05 level of significance and 33 degrees of freedom. Therefore, the null hypothesis was accepted. This implies that there was no significant difference in the mean responses of Office Technology and Management Lecturers and Students on the roles of Computer Literacy Competency in enhancing employability in Kogi State.

Table 3: Mean Ratings and Standard Deviation of Office Technology and Management Lecturers and Students on the Emerging Word Processing Competency Required for Enhancing Employability in Office Technology and Management in Kogi State

S/N	Item Statements	Lecturers Mean	Lecturers SD	Students Mean	Students SD	Remarks
9	Word processing competency improves document preparation skills among Office Technology and Management students.	3.80	0.45	3.68	0.47	Agree
10	Word processing competency enhances digital office communication efficiency.	3.60	0.55	3.56	0.57	Agree
11	Word processing competency supports effective formatting of office documents.	3.40	0.55	3.50	0.57	Agree
12	Word processing competency enhances employability in modern office environments.	3.60	0.55	3.58	0.56	Agree
13	Word processing competency facilitates effective electronic record management.	3.80	0.45	3.62	0.49	Agree
14	Word processing competency improves students' efficiency in handling office correspondence.	3.40	0.55	3.48	0.57	Agree
15	Word processing competency supports collaborative office tasks and assignments.	3.80	0.45	3.64	0.49	Agree
16	Word processing competency improves professionalism in office documentation.	3.60	0.55	3.54	0.57	Agree
	Grand Total	3.63	0.51	3.58	0.54	Agree

Table 3 showed that Office Technology and Management Lecturers and Students agreed on the emerging Word Processing Competency required for enhancing employability in Office Technology and Management in Kogi State. The lecturers' mean ratings ranged from 3.40 to 3.80, while the students' mean ratings ranged from 3.48 to 3.68. The grand mean scores of 3.63 and 3.58 respectively indicated strong agreement among the respondents that Word Processing Competency is essential for employability enhancement in Office Technology and

Management. The low standard deviation values indicated homogeneity in the respondents' responses.

Table 4: Independent t-test Analysis of Mean Responses of Office Technology and Management Lecturers and Students on the Emerging Word Processing Competency Required for Enhancing Employability in Office Technology and Management in Kogi State

Variables	N	Mean	SD	df	t-cal	t-crit	Decision
Office Technology and Management Lecturers	8	3.63	0.51	33	0.29	1.96	Not Significant
Office Technology and Management Students	75	3.58	0.54				

Table 4 revealed that the calculated t-value of 0.29 is less than the critical t-value of 1.96 at 0.05 level of significance and 33 degrees of freedom. Therefore, the null hypothesis was accepted. This indicates that there was no significant difference in the mean responses of Office Technology and Management Lecturers and Students on the emerging Word Processing Competency required for enhancing employability in Office Technology and Management in Kogi State.

Table 5: Mean Ratings and Standard Deviation of Office Technology and Management Lecturers and Students on the Spreadsheet Management Competency Required for Enhancing Employability among Office Technology and Management Students in Kogi State

S/N	Item Statements	Lecturers Mean	Lecturers SD	Students Mean	Students SD	Remarks
17	Spreadsheet management competency improves data analysis skills among Office Technology and Management students.	3.80	0.45	3.66	0.48	Agree
18	Spreadsheet management competency enhances financial record management in organizations.	3.60	0.55	3.60	0.55	Agree
19	Spreadsheet management competency supports effective preparation of office budgets and reports.	3.40	0.55	3.48	0.57	Agree
20	Spreadsheet management competency enhances problem-solving skills in office administration.	3.60	0.55	3.54	0.57	Agree
21	Spreadsheet management competency improves accuracy in office calculations and data processing.	3.80	0.45	3.62	0.49	Agree
22	Spreadsheet management competency facilitates efficient management of organizational information.	3.40	0.55	3.50	0.57	Agree
23	Spreadsheet management competency enhances productivity in digital office operations.	3.80	0.45	3.64	0.49	Agree
24	Spreadsheet management competency improves employability in technology-driven workplaces.	3.60	0.55	3.58	0.56	Agree
	Grand Total	3.63	0.51	3.58	0.54	Agree

Table 5 indicated that Office Technology and Management Lecturers and Students agreed on the Spreadsheet Management Competency required for enhancing employability among Office Technology and Management students in Kogi State. The lecturers' mean ratings ranged from 3.40 to 3.80, while the students' mean ratings ranged from 3.48 to 3.66. The grand mean scores of 3.63 for lecturers and 3.58 for students indicated that Spreadsheet Management Competency is highly required for employability enhancement. The standard deviation values showed that the respondents had closely related opinions on the items presented.

Table 6: Independent t-test Analysis of Mean Responses of Office Technology and Management Lecturers and Students on the Spreadsheet Management Competency Required for Enhancing Employability among Office Technology and Management Students in Kogi State

Variables	N	Mean	SD	df	t-cal	t-crit	Decision
Office Technology and Management Lecturers	8	3.63	0.51	33	0.31	1.96	Not Significant
Office Technology and Management Students	75	3.58	0.54				

Table 6 showed that the calculated t-value of 0.31 is less than the critical t-value of 1.96 at 0.05 level of significance and 33 degrees of freedom. Consequently, the null hypothesis was accepted. This means that there was no significant difference in the mean responses of Office Technology and Management Lecturers and Students on the Spreadsheet Management Competency required for enhancing employability among Office Technology and Management students in Kogi State.

Discussion of Findings

The first research question sought to determine the roles of computer literacy competency in enhancing employability among OTM students in Kogi State. The findings revealed that both OTM lecturers (grand mean = 3.63) and students (grand mean = 3.56) agreed that computer literacy competency plays significant roles in enhancing employability. Specifically, respondents agreed that computer literacy enhances digital communication skills, improves workplace adaptability, supports effective use of office technologies, facilitates internet and online communication skills, improves productivity in office administration tasks, and enhances confidence in the use of digital office systems. These findings align with Oladimeji, Abdulkareem, and Adejumo (2024), who defined emerging digital competencies as modern technological abilities required for effective functioning in digital environments and contemporary workplaces. The findings are also consistent with Egbulem, Khalil, Bamidele,

Modupe, Omokeji, and Rabi (2024), who noted that organizations now rely heavily on digital systems, and educational institutions are expected to equip learners with relevant digital competencies that align with labor market requirements.

The test of hypothesis one revealed no significant difference between the mean responses of lecturers and students regarding the roles of computer literacy competency ($t\text{-cal} = 0.36 < t\text{-crit} = 1.96, p > 0.05$). This finding suggests a shared understanding among both groups about the importance of computer literacy for employability. The result supports the position of Bello and Ajao (2024), who asserted that emerging digital competencies include computer literacy, internet navigation skills, and digital communication skills, all of which help learners adapt to technological changes and perform effectively in modern workplaces. Furthermore, the findings align with Tony-Okeme (2021), who emphasized that OTM students are expected to develop competencies in word processing, spreadsheet management, and digital office administration. The practical implication is that OTM programmes that prioritize computer literacy competency produce graduates who are better prepared for technology-driven work environments.

The second research question examined the emerging word processing competency required for enhancing employability in OTM in Kogi State. The findings indicated strong agreement among both lecturers (grand mean = 3.63) and students (grand mean = 3.58) that word processing competency is essential for employability enhancement. Respondents agreed that word processing competency improves document preparation skills, enhances digital office communication efficiency, supports effective formatting of office documents, facilitates electronic record management, improves efficiency in handling office correspondence, supports collaborative office tasks, and improves professionalism in office documentation. These findings are consistent with Okoli and Umekafor (2025), who noted that OTM students are expected to acquire both theoretical knowledge and practical office competencies relevant to digital workplaces, including word processing skills. The results also align with Wakil, Yashi, Ahmed, and Musa (2024), who observed that learners are now exposed to office automation systems and digital communication platforms that improve their competencies.

The test of hypothesis two revealed no significant difference between the perceptions of lecturers and students ($t\text{-cal} = 0.29 < t\text{-crit} = 1.96, p > 0.05$), indicating consensus between the two groups regarding the importance of word processing competency for employability. These findings support Adewolu Ogwo (2024), who argued that employers now seek graduates who possess practical skills, digital competencies, and communication abilities. The findings are also consistent with Obi and Ojo (2025), who stated that enhancing employability involves

preparing learners to meet labor market demands and perform effectively in workplace environments. The results further align with Ojo, Owoeye, and Osime (2024), who emphasized that OTM graduates are expected to function effectively in administrative offices and must therefore acquire practical office skills relevant to modern organizations. The implication is that word processing competency is no longer optional but a fundamental requirement for OTM graduates seeking employment in contemporary offices.

The third research question assessed the spreadsheet management competency required for enhancing employability among OTM students in Kogi State. The findings revealed that both lecturers (grand mean = 3.63) and students (grand mean = 3.58) agreed that spreadsheet management competency is highly required for employability enhancement. Respondents agreed that spreadsheet management improves data analysis skills, enhances financial record management, supports effective preparation of office budgets and reports, enhances problem-solving skills, improves accuracy in calculations and data processing, facilitates efficient management of organizational information, enhances productivity in digital office operations, and improves employability in technology-driven workplaces. These findings are consistent with Adenekan and Jimoh (2021), who noted that graduates who possess strong digital competencies are more likely to secure employment opportunities and contribute effectively to workplace productivity. The results also align with Okiti (2023), who stated that OTM students are trained in spreadsheet applications and database management as part of their professional preparation.

The test of hypothesis three revealed no significant difference between the perceptions of lecturers and students ($t\text{-cal} = 0.31 < t\text{-crit} = 1.96, p > 0.05$), indicating agreement between both groups on the importance of spreadsheet management competency for employability. These findings support Abolanle, Adenike, and Sunday (2025), who noted that modern employers increasingly demand competencies in data management and digital record keeping. The findings are also consistent with Nwachukwu (2024), who argued that enhancing employability through workforce education contributes to national development by producing competent human resources capable of driving organizational productivity and innovation. Furthermore, the results align with Samuel, Akorede, and Karimu (2025), who asserted that employability is strongly linked to emerging digital competencies because digital skills have become critical requirements in contemporary workplaces. The practical implication is that OTM graduates who possess strong spreadsheet management competencies are better positioned to secure employment, perform effectively, and advance in their careers.

Conclusion

This study set out to examine workforce education and emerging digital competencies for enhancing employability in Office Technology and Management in Kogi State, North-Central Nigeria. Word processing competency improves document preparation, office communication efficiency, electronic record management, and professionalism in office documentation. Spreadsheet management competency enhances data analysis skills, financial record management, budget preparation, problem-solving abilities, and overall productivity in digital office operations. Workforce education in Office Technology and Management has the potential to serve as a strategic pathway for enhancing graduate employability when programmes are appropriately designed to integrate emerging digital competencies, practical hands-on training, and technology-driven instructional methods.

Recommendations

Based on the findings and conclusions of this study, the following recommendations are made:

1. The National Board for Technical Education (NBTE) and curriculum development bodies should undertake a comprehensive review of OTM curricula to integrate emerging digital competencies, including advanced word processing, spreadsheet management, database management, cloud computing, and digital communication tools.
2. OTM departments should organize regular digital skills workshops, seminars, and certification programmes for students to enhance their proficiency in computer literacy, word processing, and spreadsheet management. Practical, hands-on training should be emphasized over theoretical instruction.
3. Institutional administrators should provide regular training and retraining opportunities for OTM lecturers to update their digital competencies and pedagogical skills. Lecturers should be encouraged to obtain professional certifications in office technology applications and digital tools.

4. Kogi State Polytechnic and other OTM institutions should establish strategic partnerships with business organizations, government offices, and technology companies to facilitate internship opportunities, industrial visits, guest lectures, and equipment donations.
5. OTM programmes should implement formal assessment and certification mechanisms for digital competencies, ensuring that graduates can demonstrate proficiency in computer literacy, word processing, and spreadsheet management before graduation.

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