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Digital Skills as Factors Predicting Employability of OTM Graduates in Global Age

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Abstract
The study examined digital skills as factors predicting employability of OTM graduates in global age. Two research questions were answered and a descriptive research method of survey strategy was used. The aggregate population of the study encompassed 32 OTM postgraduates in Olabisi Onabanjo University and University of Lagos for the academic session 2024/2025. For sample size, the whole population of the study were studied, using enumeration strategy. Researcher self-originated instrument titled: Digital Skills and Employability Questionnaire (DSEQ) with a reliability coefficient (r = .97) was employed for data collection. Mean, standard deviation and bar-chart were used for answering and presenting research questions 1 and 2 was answered using regression analysis. The findings of the study depicted that cloud computing, artificial intelligence, digital marketing, data analysis, cybersecurity, effective digital communication, digital collaboration, blockchain, proficiency in office suites skills and social media management skills were among digital skills required for employability of OTM graduates in global age. Exogenous variable (required digital skills) directly influence endogenous variable (employability of OTM graduates) (β = .295, t = 6.854, p <.05). In short, about 29.5% of an increase in employability of OTM graduates could be attributed towards predicting factors of required digital skills. It was recommended that OTM undergraduates should be equip with required digital skills for immediate employment opportunities, with this, the level of their employability after graduation could become high. The department of business education should also engage experts in training and equipping undergraduates in employability skills, through this, employability level of its graduates could be on better side.

Keywords: Digital Skills, Employability, Office Technology and Management, Graduates.

1. Introduction

In Nigeria today, some graduates face employability issues due to the skill gap between academic training and market demand, a lack of work experience and soft skills like critical thinking and communication, outdated curricula and teaching methods, and a highly competitive job market where employers struggle to find qualified candidates. Sophie and Crispus (2024) said that graduates may also lack career guidance, leading to difficulties matching their skills to jobs and securing meaningful employment. However, graduate employability is a comprehensive set of skills, understanding, and personal attributes that enable graduates to gain and sustain employment, advance their careers, and contribute to society, going beyond just holding a degree (McKinsey Global Institute, 2021). It encompasses academic knowledge, professional competencies, crucial soft skills like communication and problem-solving and personal characteristics such as adaptability and initiative.

For employers, employability reflects a graduate's "job-fit" based on their perceived attributes and skills. Graduate employability goes beyond simply securing a job after graduation, it encompasses the skills, knowledge, and attributes that equip graduates to thrive in their chosen careers, contributing meaningfully to the workforce and society. This includes technical skills, subject-specific knowledge and practical abilities relevant to their field; transferable skills, communication, teamwork, problem-solving, critical thinking, and digital literacy and personal qualities adaptability, resilience, initiative, and work ethic (Emmanuel et al., 2023). Observation from the body of literature have contended that there is a significant mismatch between the skills office technology and management (OTM) graduates possess and the skills employers require in today global age, with a particular lack of modern technical, digital, and entrepreneurial skills (Mshelia & Orheruata, 2023, Ukata & Okafor, 2022). Opinions of Amofah and Saladrigues, (2022), adjudged today OTM graduates enter the job market without practical work experience, and there are insufficient opportunities for internships or hands-on learning to bridge this gap. OTM is subset of Business Education programmes that developing the skills to manage and utilize office technologies and systems to improve productivity and efficiency within an organization (Akpojotor, 2024).

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Ukata and Okafor (20222) further complained that justification for many OTM graduates to lack employability skills associated with many factors including university curricula can be outdated and not aligned with the current needs of the labour market, failing to equip graduates with relevant and contemporary skills. In some cases, there is a low quality of education or a lack of qualified instructors to effectively deliver the necessary technical and generic skills. Also, a large number of OTM graduates entering the job market for a limited number of positions increases competition, with many applying for each entry-level role. OTM graduates often lack proper career orientation, leading to difficulties in choosing a vocation, understanding career paths, and identifying the qualities employers are seeking.

As reiterated by Tee et al. (2024), another critical issue eroding OTM graduates' employability in developing nation including Nigeria are the issues with transparency in job allocation which can hinder graduates' ability to secure suitable positions. Some OTM graduates focus solely in obtaining a certificate without understanding the practical application of their degree or the specific skills needed for their chosen field. Tee et al. (2024) and Ile and Abi (2021) contended that although one of the attributes of OTM graduate is having skills and expertise in digital skills so that they could be an expert in the field, but, previous observations from the body of literature have concluded that these aforementioned skills (digital) were among the issues or missing-gap today employers complained about missing among the graduates (Jorgensen, 2019; Edokpolor & Chukwu, 2017; Sophie & Crispus, 2024). However, it is agreed that in today global age, graduates across all disciplines must have acquired digital skills, because it's very scarce before employers of labour could considered graduates without digital skills (Dordevic et al., 2025).

According to Onwubuya et al. (2024), digital skills are the abilities to use, manage, create, and adapt to digital technologies and information to effectively work, collaborate, solve problems, and navigate the digital world. These skills blend technical proficiency, like using office software or cloud platforms, with cognitive aspects, such as critical evaluation of online information, and crucial soft skills like digital communication and ethical online behaviour. Essential digital skills according to Adeleke and Nwosu (2020) include information processing, communication, collaboration, digital problem-solving, and digital citizenship. Akinyemi and Salami (2021) contended that the ability to find, evaluate, organize, and manage digital information using various tools and platforms could be termed digital skill and it also entailed using digital tools and environments to communicate, share resources, and collaborate with others online. Producing and sharing digital content, whether it's a simple document or more complex media, to convey ideas and information were among attributes of graduates having digital skills which could further aid their level of employability in today market.

In another word, Akeke and Atah (2022) opined that OTM graduates ability utilizing technology to identify, analyze, and solve complex problems, including troubleshooting software issues and developing innovative solutions could be said to have acquired the required digital skills today organization are looking for immediate employment opportunities. Also, engaging with digital technologies safely, legally, and ethically, including managing digital footprints and protecting personal data as well as proficiency in digital skills is a mandatory requirement for most jobs and industries, providing a significant competitive edge in the modern workforce. In a fast-changing, technology-driven world, digital skills allow graduates to work, adapt, and thrive in new and evolving technological environments and served as essential for innovation, enabling graduates to integrate various digital tools to develop new solutions and improve existing processes.

The theoretical framework that drove this study was human capital theory propounded by Becker, G. in 1960. The theory propounded that an individual who desire for greater productivity in contemporary office work must invest in education to acquired better skills and competencies tomorrow could call for. However, the implications of this theory to the study was that, employability level of OTM graduates could be engender if they have acquired necessary digital skills required by today employer of labour. In Malaysia, Dordevic et al. (2025) examined the extent to which digital skills could predicts employability level of graduates and they found that there was direct or the two variables varies with each other as digital skills were found positively predicting employability of graduates while in the study of Tee et al. (2024) findings agreed that digital marketing, data analysis, cloud computing, artificial intelligence and cybersecurity skills were not limited to digital skills required by employer of labour for employment opportunities.

In the study of Ile and Abi (2021), they found that digital skills such as communication, collaboration, social media, problem-solving and blockchain skills were significant digital skills required by today organizations for employability of fresh graduates. Sophie and Crispus (2024) concluded that digital skills are germane factors predicting employability level of graduates in labour market. Akpojotor (2024) findings also agreed that OTM graduates with digital skills have positive chances of improving their employability level in labour market and beyond. Mshelia, and Orheruata (2023) came to conclusions that, one of the ways today graduates can aid their employment opportunities are for they to have required digital skills and can directly predicted their employability level while Ukata and Okafor (2022) concurred that OTM undergraduates must be trained in such a way that they acquired digital

Table 1: Mean and standard deviation responses on the digital skills required for employability of OTM graduates in global age

Items	Mean	Standard Deviation
Cloud computing skills	3.02	.840
Artificial intelligence skills	3.05	.811
Digital marketing skills	2.75	.987
Data analysis skills	2.94	.988
Cybersecurity skills	2.99	.941
Effective digital communication skills	3.21	.805
Digital collaboration skills	3.18	.764
Problem-solving skills	2.48	.995
Blockchain skills	3.00	.742
Proficiency in office suites skills	3.31	.788
Social media management skills	3.22	.794
Cluster Mean	3.01	

Source: Survey findings, 2026.

skills required by organizations, because these skills were found to germane towards enhancing employability skills of graduates. Akeke, and Atah (2022) conducted in Delta State among business education postgraduates found that digital skills are highly required for employment and such cases, these aforementioned skills positively influence employability skills of OTM graduates.

1.1 Statement of the Problem

Literature and public opinions have agreed that employability skills are important because they help graduate get a job, keep a job, and be successful in a job. They are also important because they are the skills that employers are looking for. However, the contemporary situations in Nigeria where majority of graduates including OTM graduates have been found not employable by employer of labour could be as results of lack of employability skills. These missing-gap among the graduates could be one of the manifestation of high unemployment level among various categories of graduates despite years spent in tertiary institutions. However, different factors could be attributed for this, and different numbers of literature have raised eye-brown that high numbers of insecurity in Nigeria could be directly unconnected with high rate of graduates' unemployment.

Despite steps taken so far by the Government and stakeholders in Business Education, to aid employability level of OTM graduates, much thing is yet to be achieved. Which call for new investigation on digital skills as factors predicting employability of OTM graduates in global age.

1.2 Objectives of the Study

The main objective of the study was to examine digital skills as factors predicting employability of OTM graduates in global age. Specifically, the study seeks to:

I. Identify digital skills required for employability of OTM graduates in global age.
II. Examine the extent to which required digital skills could predicts employability of OTM graduates in global age.

1.3 Research Questions

I. What are the digital skills required for employability of OTM graduates in global age?
II. To what extent required digital skills could predicts employability of OTM graduates in global age?

2. Methodology

In term of research design, descriptive research method of survey strategy was used for the study because opinions of the OTM graduates were needed towards the attainment of the objectives and research questions of the study. The aggregate population of the study encompassed 32 OTM postgraduates in Olabisi Onabanjo University and University of Lagos for the academic session 2024/2025. For sample size, the whole population of the study were studied, meaning that, sample size equal total numbers of the population and this was captured using enumeration strategy. Researcher self-originated instrument titled: Digital Skills and Employability Questionnaire (DSEQ) was adopted for data collection. This questionnaire was apportioned into 3 sections namely section A, B and C. These sections developed in alignments with the demographic characteristics of the respondents, required digital skills and level of employability of OTM graduates. For validation of the instrument, a total of 3 experts in the related field of study from Tai Solarin Federal University of Education, Ijagun, Ogun State done justice to the instrument, by ensuring the questionnaire measured what is been set for. All the corrections and suggestions raised were dully carried out by the researcher. The final draft was used for conducting reliability exercise for the study. A total of 7 OTM postgraduates from Tai Solarin Federal University of Education were given the questionnaire and their responses were subjected to Alpha Cronbach and a reliability coefficient (r = .97) was reported. The researcher employed 3 research assistants who helped during the administration and distribution of the instrument to the respondents. The respondents were given enough time to respond to the items of the questionnaire and after two weeks interval, the research assistants back to the selected university during seminar at OTM postgraduates and retrieved the copies of administered questionnaire. It unfortunately that, out

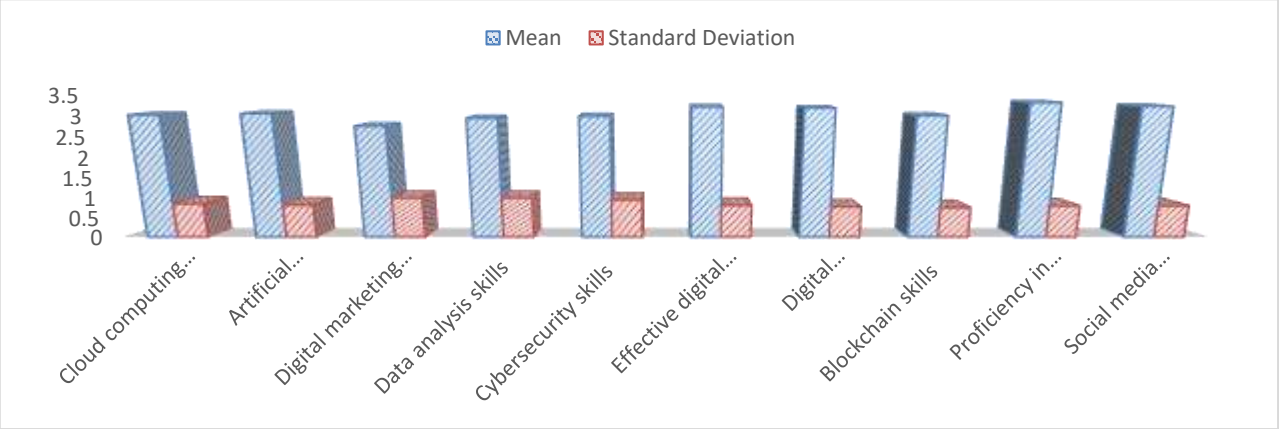


Fig 1: Bar-chart showing digital skills required for employability of OTM graduates in global age

Table 2: Extent required digital skills predicts employability of OTM graduates in global age

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	25.509	.970		26.311	.000
	Required digital skills	.291	.042	.295	6.854	.000

Dependent Variable: Employability of OTM graduates in global age
Source: Field Survey, 2026

of 32 copies of the instrument administered, only 29 were returned and retrieved rate was 91% and used for analyses. Mean, standard deviation and bar-chart were used for answering and presenting research questions 1 and 2 was answered using regression analysis.

3. Results

Research Question 1: What are the digital skills required for employability of OTM graduates in global age?

Table 1 showed that cluster mean value was 3.01 and the bench mark mean 2.50. Since, 3.01 > 2.50, this implied that cloud computing, artificial intelligence, digital marketing, data analysis, cybersecurity, effective digital communication, digital collaboration, blockchain, proficiency in office suites skills and social media management skills were among digital skills required for employability of OTM graduates in global age.

Research Question 2: To what extent required digital skills could predicts employability of OTM graduates in global age?

Table 2 indicated that exogenous and endogenous variables varies in the same direction. Meaning that, exogenous variable (required digital skills) directly influence endogenous variable (employability of OTM graduates) ($\beta = .295$, $t = 6.854$, $p < .05$). In short, about 29.5% of an increase in employability of OTM graduates could be attributed towards predicting factors of required digital skills.

4. Discussion of Findings

Research question 1 revealed that cloud computing, artificial intelligence, digital marketing, data analysis, cybersecurity, effective digital communication, digital collaboration, blockchain, proficiency in office suites skills and social media management skills were among digital skills required for employability of OTM graduates in global age. These findings were in correlation with Dordevic et al. (2025) who examined the extent to which digital skills could predicts employability level of graduates and they found that there was direct or the two variables varies with each other as digital skills were found positively predicting employability of graduates while in the study of Tee et al. (2024) findings agreed that digital marketing, data analysis, cloud computing, artificial intelligence and cybersecurity skills were not limited to digital skills required by employer of labour for employment opportunities. Ile and Abi (2021), they found that digital skills such as communication, collaboration, social media, problem-solving and blockchain skills were significant digital skills required by today organizations for employability of fresh graduates.

Research question 2 signified that, exogenous variable (required digital skills) directly influence endogenous variable (employability of OTM graduates) ($\beta = .295$, $t = 6.854$, $p < .05$). In short, about 29.5% of an increase in employability of OTM graduates could be attributed towards predicting factors of required digital skills. These findings were in consonant with Sophie and Crispus (2024) concluded that digital skills are germane factors predicting employability level of graduates in labour market. Akpojotor (2024) findings also agreed that OTM graduates with digital skills have positive chances of improving their employability level in labour market and beyond. Mshelia, and Orheruata (2023) came to conclusions that, one of the ways today graduates can aid their employment opportunities are for they to have required digital skills and can directly

predicted their employability level while Ukata and Okafor (2022) concurred that OTM undergraduates must be trained in such a way that they acquired digital skills required by organizations, because these skills were found to germane towards enhancing employability skills of graduates. Akeke, and Atah (2022) conducted in Delta State among business education postgraduates found that digital skills are highly required for employment and such cases, these aforementioned skills positively influence employability skills of OTM graduates.

5. Conclusion

The attainment of organizations goals largely depends or associated with the quality of employees, more reasons organizations are now demanding for high quality graduates who can positively contribute towards the performance in terms of using digital skills in their various offices to vividly communicate, create customers and profit maximization for performance. However, this study having examined digital skills as factors predicting employability of OTM graduates in global age, the following conclusions were made base on the findings that:

I. Cloud computing, artificial intelligence, digital marketing, data analysis, cybersecurity, effective digital communication, digital collaboration, blockchain, proficiency in office suites skills and social media management skills were among digital skills required for employability of OTM graduates in global age;
II. Exogenous variable (required digital skills) directly influence endogenous variable (employability of OTM graduates) ($\beta = .295$, $t = 6.854$, $p < .05$). In short, about 29.5% of an increase in employability of OTM graduates could be attributed towards predicting factors of required digital skills.

6. Recommendations

The following recommendations were raised in line with the findings of the study:

I. OTM undergraduates should be equip with required digital skills for immediate employment opportunities, with this, the level of their employability after graduation could become high.
II. The department of business education across all tertiary institutions in the country should be equip with digital software to aid the instructional delivery and training of OTM undergraduates with the view to equipped them with digital skills required in the labour market.
III. The department of business education should also engage experts in training and equipping undergraduates in employability skills, through this, employability level of its graduates could be on better side.

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