

## **DIGITAL LITERACY A PREDATOR OF CAREER ENGAGEMENT AND EMPLOYABILITY AMONG LAGOS STATE TECHNICAL COLLEGE STUDENTS**

**Elvis Ezeugo Uzomah**

Department of Electrical/ Electronics Technology  
University of Lagos

**&**

**Oladiran Stephen Olabiyi, Ph.D**

Department of Building Technology  
University of Lagos

---

### **Abstract**

*The study investigated digital literacy as a predictor of career engagement and employability among Lagos State technical college students in Nigeria. A descriptive survey design was adopted, with a population of 367 respondents comprising 250 students and 75 teachers from Lagos State government technical colleges, 30 self-employed graduates, 10 employers of labour, and 2 lecturers from the University of Lagos. Stratified random sampling was employed for selection. Data were collected using a self-structured questionnaire and analyzed with mean and standard deviation for research questions, while t-test statistics were used to test the null hypotheses. Findings revealed that digital literacy skills had a positive and significant impact on career engagement and employability among technical college students. The study further showed that career engagement mediated the relationship between digital literacy and employability, confirming digital literacy as a strong predictor of career engagement and employability. Based on these findings, the study recommended that technical colleges should embrace and develop the digital literacy skills of their students through curriculum reform, staff training, and provision of adequate digital facilities. This would equip students with essential competencies to thrive in their chosen careers and pursue rewarding employment opportunities. As technology continues to reshape the future of work, fostering digital literacy is essential for building a skilled workforce capable of driving innovation and growth in Lagos State and Nigeria at large.*

**Keywords:** Digital literacy, Career engagement, Employability, Technical education and Workforce development

---

### **Introduction**

Technology transitioning from analog to digital is a skill and part of the process of designing and creating inventions. It is the key driver for the accomplishment of tasks and the socio-economic development of a nation. (Drucker, 2007). Technology in the view of Casey (2018), has spanned the globe, and connected people in a whole new way. As a result, citizens of all countries have to learn to use new technology and how to interact with one another. Castells (2010) claims that new technological system that affects every aspect of social life, are based on

digital foundation; hence Digital Technology. Castells further relays that digital technology in terms of networks creates new opportunities for communication, culture, politics, and economy in the digital age. Therefore, Digital technology uses the knowledge of tools, machines, and hi-tech techniques; integrated systems, as a method of sorting, classifying, and organization to solve problems, have improved the pre-existing solutions in the world through technology in terms of being digital.

Digital refers to devices that involve or use signals or data expressed as series of

the digits 0 and 1, typically represented by values of a physical quantity such as voltage or magnetic polarization. (Hope, 2022). Digital also relates to, using, or storing data or information in the form of digital signals. (Eric, Kate, & Rodney, 2023). Furthermore, digital is described as the use of computer technology and the internet to create, communicate, and deliver value. (Reda, 2017). Colbert, Yee and George, (2016), relayed that the real challenge of being digital is not merely technology but acquiring new technology into the workplace. Colbert et.al. (2016), further expressed that digital is not about hardware or software, rather it is more to the workforce who needs to adopt to change, know how to use technology and their post adoptive behaviors; this is in agreement with Bala and Venkatesh, (2016), who develop a comprehensive model that identifies various technology adaptation behaviors as key mechanisms linking IT implementation to employee performance leading to better performance and job satisfaction. According to Farrell, Newman, and Corbel, (2021), policymakers agrees that the existing workforce's literacies are not enough to meet the literacy demands of the future workplace. In respect, (Berger and Frey, 2016; Kane, Phillips, Copulsky, and Andrus, 2019), opined that organizations not only must adopt strategies to score with digital equipping, but need to add a coherent strategy that involves a plan to reskill their workforces. Hence the improvement on the level of literacy.

Literacy is considered as a range of competences, knowledge, and skills needed by people in different situations of their lives and through relationships with the colleagues, the communities and the environments in which they interact (Panel, 2002). In this sophisticated information era, the concept of literacy goes beyond being able to read and write. (Bawden, 2001). Stordy, (2015), stressed that literacies and skill-based literacies are more suited to complex information settings, associated with different types of literacy such as

information, digital, media, library and computer. In terms, employers are looking more to hire new workforces with a high level of literacies such as information literacy and digital literacy and media literacy. Collard, De Smedt, Dufrasne, Fastrez, Ligurgo, Patriarche, and Philippette, (2017), citing Mietzner and Kamprath, (2013). Such literacies have been classified as essential and generic skills as well as personal attributes in the digital age (Bowen & Johnson, 2019; Dede, 2010). Thus, it is pellucid that to enhance an efficient effective competency at place of work, irrespective of the type of job description or design, or at most evaluated as a productive employee, literacies are necessary, especially in this digital age; hence digital literacy.

Digital literacy is defined as "the ability to use appropriate technologies for communication, collaboration and information management". (Vrana, 2017). It is an essential skill for the 21st century workforce, as it enables individuals to access, create, evaluate, and share information in various digital formats and platforms. Digital literacy also enhances other skills, such as critical thinking, problem-solving, creativity, and innovation. (Bawden, 2008). Employers today demand workers who are digitally literate, adaptable, and flexible in a rapidly changing and competitive environment; (Wan Ng, 2012). Digital literacy is directly related to employability, which is the combination of factors and processes which enable people to get employed and to remain in employment or to move on in the workplace; hence, Predator.

Predator as a term, could spell different contexts, such as Wild animal having dominion over others in the forest, a military drone, or an individual who preys on others. However, in the context of this research, Predator spells to Digital literacy skill leading to personal development for securing and being successful in employment. "Predator" metaphorically can be considered as someone who is proactive,

strategic, and relentless in pursuing career goals. Applying the traits of a “predator” in this metaphorical sense can provide a framework for individuals aiming to secure and excel in employment. A predator in this sense is characterized by strategic thinking, proactiveness, adaptability, resilience, focused and decisive action. In this regard, it involves evaluating opportunities, taking calculated risks, and making informed decisions (Goleman, 2013). According to Korkki (2016), Predators in the job search is distinct in dedicating specific times for job hunting, customizing resumes, and preparing for interviews with precision. Adopting the traits of a metaphorical predator in career development can significantly enhance one’s ability to secure and succeed in employment. The individuals can navigate the job market more effectively, leverage opportunities, and achieve their career goals. This approach requires continuous learning, networking, and a willingness to take decisive actions toward one’s professional aspirations. (Bolles, 2022). In the 21st century, digital literacy reflects as a predator’ in terms of traits needed for job securement. The possession of or a form of digital training is considered a predator over others' traits. In other words, profiling predators is the skill, of digital literacy. Digital literacy as a predator in the view of Medina (2010), can be acquired in formal and non-formal ways. That is, the formal aspect of digital skills is exposed to students of different institutions. Digital literacy skill in schools is a critical component of modern education, equipping students with the skills necessary to navigate and succeed in a technology-driven world. It encompasses the ability to effectively and responsibly use digital technologies to find, evaluate, create, and communicate information. Here, we explore digital literacy which is implored in technical schools for their career engagement.

Career engagement is defined as the extent to which individuals are involved in their work roles and are willing to input

more effort for their work. (Rothbard, 2001). It is a positive psychological state that reflects one's commitment, satisfaction, and enthusiasm for their career. Career engagement is influenced by various factors, such as personal characteristics, work environment, career development opportunities, and feedback. (Saks, 2006). Bakker (2011), posited that Career engagement is important as it enhances one's performance, productivity, and learning outcomes with respect to employability. Career engagement in this study refers to Career in digital literacy; therefore, Career in digital literacy will promote easy job settlement and job security because of productivity and learning outcomes with respect to employability.

Employability is the capability to move self-sufficiently within the labour market to realize potential through sustainable employment. Regarding that, employability is complex and multidimensional; hence, the concept that refers to the ability of individuals to find, keep, and change jobs in a dynamic and uncertain labour market. According to Fugate, Kinicki, and Ashforth, (2004), employability entails a form of work specific active adaptability that enables workers to identify and realize career opportunities. Rothwell and Arnold (2007), perceived employability as the ability to attain sustainable employment appropriate to their qualification level. In the view of Van der Heijden (2006), employability is a continuous fulfilling, acquiring or creating of work through the optimal use of competences. Rothwell et al. (2007) further suggested that employability should comprise of four elements framework including sustainable employment: job security and career progression, qualifications: formal education and training, future-oriented perspective: career planning and development, and work orientation: work values and motivation. Prior to that premise, Van der Heijdeet (2006), further developed a multidimensional construct of employability

that includes five dimensions including: occupational expertise (professional knowledge and skills), anticipation and optimization (proactive behaviour and learning orientation), personal flexibility (adaptability and mobility), corporate sense (organizational commitment and citizenship behavior), and balance (work-life balance and stress management). Hence, employability can be viewed as the impetus to drive oneself within the labour market to obtain a sustainable employment among students of technical college.

Technical college are institutions that offer vocational and technical education inform of training to students who intends to acquire practical knowledge and skills in various science based or other related fields of study. According Amenger (2013); technical colleges as institutions that provides technical and vocational education; while Ismail and Mohammed, (2015), opined that technical colleges refer to institutions that offer education and training programs specifically designed to prepare individuals for careers in various trades. That is, technical college is a type of post-secondary education institution that offers vocational and technical programs inform of specific professions or careers for students of technical college.

A student of a technical college can be described as a learner especially one enrolled in a technical school or college. (Vivek Mehta, 2016). In view of the study, a student is an individual who is currently undergoing training to acquire technical skills in a technical college. Technical college students are those who pursue vocational and technical education programs that prepare them for specific occupations or trades. Technical college students in Lagos state face various challenges in terms of access, quality, relevance, and equity of their education. (Mon20117). According to a report by the British Council British Council (2017), technical college students in Lagos state lack adequate exposure to 21st-century skills, such as digital literacy, entrepreneurship, communication, and

teamwork. These skills are crucial for their career advancement and employability in the modern labour market of Lagos State.

Lagos state is arguably the most economically important state in Nigeria and the nation's largest urban area. Lagos State was created on 27 May 1967. According to the State Creation and Transitional Provision Decree No. 14 of 1967. Lagos State, to distinguish it, from the metropolitan area, is a state located in the southwestern geopolitical zone of Nigeria. The smallest in area of Nigeria's 36 states. It is a major financial center and would be the fifth largest economy in Africa, if it were a country. Lagos being among the top richest state in Nigeria, has a meagre land mass stretching up to 3, 577 square kilometers. Despite the small land mass, it remains the most populous Nigerian state with its population estimated at 18 million people, with employers of labour located in its nooks and cranny. Employers of labour in Lagos State are organizations or individuals that engage the services of workers for producing goods or providing services. Bing (2023). Employers of labour can be classified into different sectors, such as public, private, formal, informal, and non-governmental. Employment of technical college students in Lagos State is the process of engaging the services of students who have completed or are undergoing technical and vocational education and training (TVET) in various fields, such as engineering, construction, agriculture, and information technology. LASTVEB. (2021). Employment of technical college students in Lagos State can be done by any of the employers of labour mentioned above, depending on the skills, qualifications, and interests of the students. Employment of technical college students in Lagos State can be beneficial to both the employers and the students, as it can bridge the gap between the demand and supply of skilled workers in the labour market, as technical college students have practical and relevant digital skills that can meet the modern needs of the employers; in return,

reduce the rate of unemployment and underemployment among the technical college students, hence this study is can have access to decent and productive work opportunities that can improve the livelihoods in Lagos State.

### **Statement of the Problem**

The rapid advancement of technology has transformed various sectors, including education and the labor market. Organizations, employers, and government parastatals now demand digital skills as a critical criterion for employment. Technical colleges play a vital role in equipping students with vocational and practical training to prepare them for the workforce. British Council report (2017). However, many technical college students in Lagos State lack essential 21st-century skills, particularly digital literacy, as this deficiency hampers their ability to thrive in their chosen careers or secure employment, leaving graduates discouraged and prone to depression, with some resorting to extreme measures such as suicide. According to a Cambridge University Press publication (2018), mental instability is a leading cause of suicide in Lagos State, exacerbated by unemployment and social pressures. Some individuals often view formal education as futile when less-educated individuals with digital skills are favored in the job market, perpetuating a belief that education is a scam. This disillusionment undermines the value of formal education for future generations. Furthermore, Aruogun (2024) highlights a misalignment between Nigeria's educational policy and industry demands, emphasizing the need for collaboration between public and private sectors. The lack of digital literacy among technical college graduates creates societal inequality, where individuals without formal education but with digital skills are seen as more successful. This inequality fosters increased crime, social vices, and protests, further destabilizing society. Addressing digital literacy as a predictor of career engagement and employability among

technical college students in Lagos State is critical. Insights from this study can guide technical college administration, technical education board in Lagos state through policy interventions and practical skill development to improve digital skill training and enhance curriculum design to better align with industry demands, ultimately improving career outcomes and societal stability.

### **Purpose of the Study**

The major purpose of the study is to examine digital literacy as a predictor for career engagement and employability among technical college students in Lagos State. Specifically, the research seeks to enquire:

1. The digital literacy skills needed by Lagos state technical college students for employment.
2. Teaching techniques to develop digital literacy skills among Lagos state technical college students.

### **Research Questions**

The following research questions were raised to guide the study

1. What are the digital literacy skills needed by Lagos state technical college students for employment?
2. What are the teaching techniques adopted by technical college teachers to develop digital literacy skills among their students?

### **Research Hypotheses**

The following null hypotheses were formulated and tested at 0.05% level significant of significance.

- H<sub>01</sub>: There is no significant relationship between Digital literacy skill and Career engagement among technical college students in Lagos state.
- H<sub>02</sub>: There is no significant relationship between Digital literacy skills and employability of technical

college students in Lagos state.

### **Research Methodology**

The research design employed for this study was the descriptive survey research design. A descriptive survey is essentially an assessment of the present state of affairs, usually carried out through questionnaires, opinions, and interviews. Neuman (2014) viewed descriptive survey research as a methodological approach used in social science to systematically gather, analyze, and interpret data about the characteristics, behaviors, attitudes, or opinions of a population or sample. Similarly, Creswell and Creswell (2017) opined that descriptive survey design provides a detailed snapshot of the current state of a phenomenon without deforming the concept of the variables under consideration. In other words, the descriptive survey approach is intended to describe the present condition of a phenomenon without manipulating the variables or establishing causal relationships. This design was considered most suitable for the study, as it elicited information from students of government technical colleges, teachers of these colleges, professionals and lecturers in related disciplines, career personnel in technical trades, and employers of labour in technical trades.

The study was conducted in three categories of areas in Lagos State, reflecting the heterogeneous nature of the study population. The first category covered the five government technical colleges in the state, namely Government Technical College Ado-Soba, Government Technical College Agidingbi in Ikeja, Government Technical College Epe, Government Technical College Ikotun, and Government Technical College Ikorodu. The second category included Arena Cantonment Market, Oshodi, and Computer Village, Ikeja, while the third category was the University of Lagos. The choice of these areas was informed by the study population and the relevance of the information they

provided regarding the spread and general abilities of Lagos State as Nigeria's foremost economic hub, which generates diverse employment opportunities for graduates of its institutions and those from other states across the federation. The population for this study was heterogeneous and comprised three categories. The first category included students and teachers of the five government technical colleges in Lagos State. The second category comprised self-employed career personnel in technical trades, employees in technical trades, and employers of labour in technical trades located in Arena Cantonment Market and Computer Village, Ikeja. The third category included professionals and lecturers in related fields from the University of Lagos, specifically lecturers in the Department of Vocational and Technology Education.

Considering the heterogeneity of the population, along with constraints of time and cost, a stratified random sampling technique was adopted for selecting samples from the first category, while a purposive sampling technique was used for the second and third categories. The stratified sampling ensured that all members of the first population had an equal chance of selection, while the purposive technique enabled the researcher to generalize the findings to about 70% of the universal population. Accordingly, the sample distribution was as follows: from stratum one, fifty students and fifteen teachers were selected from each of the five government technical colleges, totaling 325 respondents. Stratum two comprised thirty self-employed individuals in technical trades and ten employers of labour in technical trades drawn from Arena Cantonment Market and Computer Village, yielding forty respondents. Stratum three consisted of two lecturers and professionals from the University of Lagos, resulting in two respondents. Altogether, the total sample size comprised 367 expected respondents. In each case, respondents were selected as described above, and thereafter the data collection instrument was administered.

The instrument for data collection in this study was a structured questionnaire. A data collection instrument, as noted by Creswell et al. (2017), is a tool designed to gather information in a systematic and standardized manner, ensuring the collection of reliable and valid data for analysis. Structured questionnaires were developed by the researcher under the title “Digital Literacy in Technical Colleges Questionnaire (DLTCQ),” which was divided into seven sections labeled A–G. Section A focused on personal data such as status and gender. Section B included ten items assessing digital literacy skills needed by technical college students for employment. Section C comprised ten items addressing teaching techniques to develop digital literacy skills. Section D contained ten items examining how digital literacy influences career engagement and employability. Section E, with ten items, investigated challenges affecting the acquisition of digital literacy skills, while Section F addressed resources needed for integrating digital literacy into technical college curricula. Section G contained ten items focusing on strategies to motivate students to improve their digital literacy skills. Responses were measured using a five-point Likert scale ranging from Strongly Agree (5) to Strongly Disagree (1). The instrument was subjected to validation and reliability testing. Validity, as defined by Bryman (2016) and Trochim (2006), refers to the degree to which an instrument accurately measures the intended construct or phenomenon. To ensure validity, five experts from the fields of technology education and measurement and evaluation at the University of Lagos reviewed the instrument. Their observations and recommendations were incorporated into the final version of the questionnaire. Reliability, on the other hand, refers to the consistency and dependability of the instrument. Following Chen and Popovich (2018), reliability was tested through a pilot study involving thirty students and five teachers at the Federal Science and

Technical College, Yaba. Using Cronbach’s Alpha, the reliability coefficient of the instrument was estimated at 0.89, indicating a high level of internal consistency.

The data collection process was meticulously planned to ensure comprehensive coverage of the three categories of participants. Trained research assistants, briefed on the study objectives and ethical considerations, assisted in administering the questionnaires. All participants were provided with detailed information about the study and assured of confidentiality, while participation remained voluntary. Data from students and teachers were collected during school hours, with 50 students and 15 teachers sampled from each technical college. For self-employed individuals and employers of labour at Arena Market and Computer Village, purposive sampling was applied, and questionnaires were administered with necessary clarifications and translations provided. Two lecturers from the University of Lagos were also surveyed in their offices using the same questionnaire. In each case, the researcher waited while the respondents completed the instrument and retrieved it immediately thereafter. Before analysis, the data were cleaned and pre-processed to address missing values, outliers, and inconsistencies in line with Creswell et al. (2017). Descriptive statistics, including percentages, mean, and standard deviation, were used to analyze the data. Percentages were employed to describe demographic variables, while means and standard deviations were used to address research questions. The true limit of real numbers was adopted as a decision rule: a mean score of 3.50 and above indicated agreement, less than 2.50 indicated disagreement, while scores between 2.50 and 3.49 indicated neutrality. To test the null hypotheses, Chi-square was employed at a 0.05 level of significance. The decision rule was to reject the null hypothesis if the calculated value exceeded the tabulated value; otherwise, the null hypothesis was retained.

### Results of Findings

Information on Table 1 shows that 163 (65.2%) of the students were male and 87 (34.8%) of them were female. This means that more male participated in this study than female. Information on Table 1 also

shows that 233 (93.2%) students were below 18 years, while 17 (6.8%) students fell within the ages of 18 to 25 years. Participants' Demographic Data Presentation

**Table 1: Demographic Characteristics of Students**

Gender	Frequency	Percentage (%)
Male	163	65.2
Female	87	34.8
<b>Total</b>	<b>250</b>	<b>100</b>
<b>Age (years)</b>		
Under 18	233	93.2
18 – 25	17	6.8
<b>Total</b>	<b>250</b>	<b>100</b>

**Table 2: Demographic Characteristics of Teachers**

Gender	Frequency	Percentage (%)
Male	46	61.3
Female	29	38.6
<b>Total</b>	<b>75</b>	<b>100</b>
<b>Age (years)</b>		
25 – 30	6	8.0
31 – 35	12	16.0
36 – 40	31	41.3
41 years and above	26	34.7
<b>Total</b>	<b>75</b>	<b>100</b>
<b>Highest Academic Qualification</b>		
H.N.D./B.Ed./B.A.Ed.	49	65.3
M.A/M.Ed./M.Sc.	26	34.7
<b>Total</b>	<b>75</b>	<b>100</b>
<b>Years of Work Experience</b>		
1 - 5 years	9	12.0
6 - 10years	15	20.0
11 - 15 years	22	29.3
16 years and above	29	38.7
<b>Total</b>	<b>75</b>	<b>100</b>

Information on Table 2 shows that 46 (61.3%) of the teachers were male and 29 (38.6%) of them were female. This means that more male teachers participated in this study than female. Information on Table 1 also shows that 6 (8%) teachers were within the ages of 25 to 30 years, 12 (16%) teachers were within the ages of 31 to 35 years, 31 (41.3%) teachers were within the ages of 36 to 40 years, while 26 (34.7%) participants fell within the ages of 41 years

and above. Furthermore, Table 2 illustrated on academic qualifications of the teachers, it was noted that 49 (65.3%) represented the teachers who had H.N.D., / B.Ed. / B.A.Ed. who were the highest in number, while those who hold master's degree certificates were 26 (34.7%). Furthermore, from the information given on Table 2, 9 (12%) of the teachers had 1 to 5 years work experience, 15 (20%) of the teachers had 6 to 10 years of teaching experience, 22

(29.3%) of the participants had 11 to 15 years teaching experience, while 29 (38.7%) had 16 years and above work experience.

**Table 3: Demographic Characteristics of Employee/Self-Employed and Employers of Labour**

	Frequency	Percentage (%)
<b>Status</b>		
Employee/Self-Employed	30	73
Employers of Labour	10	25
<b>Total</b>	<b>40</b>	<b>100</b>
<b>Gender</b>		
Male	26	65
Female	14	35
<b>Total</b>	<b>40</b>	<b>100</b>
<b>Age (years)</b>		
25 – 30	7	17.5
31 – 40	12	30.0
41 years and above	21	52.5
<b>Total</b>	<b>40</b>	<b>100</b>
<b>Highest Academic Qualification</b>		
NCE/OND	7	17.5
H.N.D/B.Ed/B.A.Ed	24	60.0
M.A/M.Ed/M.Sc	9	22.5
<b>Total</b>	<b>40</b>	<b>100</b>
<b>Years of Work Experience</b>		
1 - 5 years	5	12.5
6 - 10years	9	22.5
11 - 15 years	9	22.5
16 years and above	17	42.5
<b>Total</b>	<b>40</b>	<b>100</b>

Information on Table 3 shows that 30 (73%) of the participants were employee/self-employed and 10 (25%) of them were employers of labour. Table 1 also shows that 26 (65%) of the employee/self-employed and employers of labour were male and 14 (35%) of them were female. Information on Table 3 also shows that 7 (17.5%) of the employee/self-employed and employers of labour were within the ages of 22 to 30 years, 12 (30%) were within the ages of 31 to 40 years, while 21 (52.5%) participants fell within the ages of 41 years and above. Furthermore, Table 3 illustrated on academic qualifications of the

participants, it was noted that employee/self-employed and employers of labour with NCE/OND qualification were 7 (17.5%), 24 (60%) represented the employee/self-employed and employers of labour who had H.N.D/B.Ed/B.A.Ed, while those who hold master's degree certificates were 9 (22.5%). Furthermore, from the information given on Table 3, 5 (12.5%) of the employee/self-employed and employers of labour had 1 to 5 years work experience, 9 (22.5%) of them had 6 to 10 years of work experience, 9 (22.5%) had 11 to 15 years work experience, while 17 (42.5%) had 16 years and above work experience.

**Table 4: Demographic Characteristics of Lecturer**

Gender	Frequency	Percentage (%)
Male	2	100
Female	-	-
<b>Total</b>	<b>2</b>	<b>100</b>
<b>Age (years)</b>		
21 – 30	-	-
31 – 40	-	-
41 years and above	2	100
<b>Total</b>	<b>2</b>	<b>100</b>
<b>Highest Academic Qualification</b>		
Ph.D	2	100
Total	2	100
<b>Years of Work Experience</b>		
11 - 15 years	1	50
30 years and above	1	50
<b>Total</b>	<b>2</b>	<b>100</b>

Information on Table 4 shows that the two lecturers sampled were male. Information on Table 4 also shows that the two lecturers were within the ages of 41 years and above. Furthermore, Table 4 illustrated on academic qualifications of the participants, it was noted that the lecturers were Ph.D. holder. Furthermore, from the information given on Table 4, 1 (50%) of

the lecturer had 11 to 15 years work experience, while 1 (50%) had 30 years and above work experience.

#### Answers to Research Questions

##### Research Question 1

*What are the digital literacy skills needed by technical college students for employment?*

**Table 5: Digital Literacy Skills Needed by Technical College Students for Employment as Perceived by the Students**

S/N	Statements	Mean	SD
1.	Students can effectively use of the internet for research and communication.	3.92	.57
2.	The students are familiar with digital tools and software relevant to their related trade.	4.22	.52
3	Most students in this school possess basic computer Microsoft Office applications skills	4.29	.61
4.	Basic cybersecurity principles and how to protect my data is well understood by the students	3.83	.67
5.	Students often collaborate online using digital tools like Google Docs or Trello.	4.09	.58
6.	Students are familiar with troubleshooting common technical issues with digital devices	4.21	.66
7.	Students are trained in the use of advanced software specific to related field.	3.97	.53
8	The students aware of the ethical issues related to digital technology use.	4.04	.69
9.	How to protect personal information online is known have been mastered by the students.	4.02	.59
10.	Students can create and manage digital content such as blogs or	3.07	.51

websites.

**Key:** 00–1.49 = Strongly Disagree, 1.50–2.49 = Disagree, 2.50–3.49 = Undecided, 3.50–4.49 = Agree, 4.50–5.00 = Strongly Agree

**Decision:** 0.00 –3.49 (Disagreed), 3.50 – 5.00 (Agreed)

Table 5 above is students’ responses on digital literacy skills needed by technical college students for employment. The result revealed that the students agreed that: Students can effectively use of the internet for research and communication ( $\bar{X}= 3.92$ ), the students are familiar with digital tools and software relevant to their related trade ( $\bar{X}= 4.22$ ), most students possess basic computer Microsoft Office applications skills ( $\bar{X}= 4.29$ ), basic cybersecurity principles and how to protect data is well understood by the students ( $\bar{X}= 3.83$ ), students often collaborate online using digital tools like Google Docs or Trello ( $\bar{X}= 4.09$ ), students are familiar with troubleshooting common technical issues with digital devices ( $\bar{X}= 4.21$ ), students are

trained in the use of advanced software specific to related field ( $\bar{X}= 3.97$ ), the students aware of the ethical issues related to digital technology use ( $\bar{X}= 3.04$ ), how to protect personal information online is known have been mastered by the students ( $\bar{X}= 4.02$ ), and that students can create and manage digital content such as blogs or websites ( $\bar{X}= 3.07$ ). The items on the scale had mean scores ranging from 3.04 to 4.29. two of the digital literacy skills needed by technical college students for employment received a mean score less than 3.49, while others had mean of 3.83 and above and were therefore regarded as the digital literacy skills needed by technical college students for employment.

**Table 6: Digital Literacy Skills Needed by Technical College Students for Employment as Perceived by the Teachers**

S/N	Statements	Mean	SD
1.	Most students in this school possess basic computer Microsoft Office applications skills	4.51	.66
2.	Students can effectively use of the internet for research and communication.	4.19	.61
3.	The students are familiar with digital tools and software relevant to their related trade.	4.22	.52
4.	Basic cybersecurity principles and how to protect my data is well understood by the students	4.13	.62
5.	Students are familiar with troubleshooting common technical issues with digital devices	4.21	.66
6.	Students are trained in the use of advanced software specific to related field.	4.06	.59
7.	How to protect personal information online is known have been mastered by the students.	4.02	.59
8.	Students can create and manage digital content such as blogs or websites.	4.23	.69
9.	Students often collaborate online using digital tools like Google Docs or Trello.	4.39	.71
10.	The students aware of the ethical issues related to digital technology use.	4.14	.67

**Key:** 00–1.49 = Strongly Disagree, 1.50–2.49 = Disagree, 2.50–3.49 = Undecided, 3.50–4.49 = Agree, 4.50–5.00 = Strongly Agree

**Decision:** 0.00 –3.49 (Disagreed), 3.50 – 5.00 (Agreed)

Table 6 above is teachers' responses on digital literacy skills needed by technical college students for employment. The result revealed that the teachers agreed that: Most students possess basic computer Microsoft Office applications skills ( $\bar{X} = 4.51$ ), students can effectively use of the internet for research and communication ( $\bar{X} = 4.19$ ), the students are familiar with digital tools and software relevant to their related trade ( $\bar{X} = 4.22$ ), basic cybersecurity principles and how to protect data is well understood by the students ( $\bar{X} = 4.13$ ), students are familiar with troubleshooting common technical issues with digital devices ( $\bar{X} = 4.21$ ), students are trained in the use of advanced software specific to related field ( $\bar{X} = 4.06$ ), how to protect personal

information online is known have been mastered by the students ( $\bar{X} = 4.02$ ), students can create and manage digital content such as blogs or websites ( $\bar{X} = 4.23$ ), students often collaborate online using digital tools like Google Docs or Trello ( $\bar{X} = 4.39$ ) and that the students aware of the ethical issues related to digital technology use ( $\bar{X} = 4.14$ ). The items on the scale had mean scores ranging from 4.02 to 4.51. All the digital literacy skills needed by technical college students for employment received a mean score 4.02 and above and were therefore regarded as the digital literacy skills needed by technical college students for employment.

**Table 7: Digital Literacy Skills Needed by Technical College Students for Employment as Perceived by the Self-Employed Individuals, and Employers**

S/N	Statements	Mean	SD
1.	Employees in technical trades need basic computer skills for employment.	4.22	.52
2.	Internet research and communication are essential for technical trades.	4.13	.62
3.	Familiarity with digital tools and software relevant to trades is necessary.	4.21	.66
4.	Understanding cybersecurity principles is important for technical employees.	4.26	.66
5.	Employees should be able to troubleshoot common technical issues.	4.20	.59
6.	Advanced software skills are crucial for employability in technical trades.	4.24	.59
7.	Protecting personal information online is a key skill for employees.	4.23	.69
8.	Creating and managing digital content is important for technical trades.	4.39	.71
9.	Online collaboration using digital tools is essential for technical employees.	4.11	.67
10.	Ethical issues related to digital technology should be understood by the students.	4.32	.82

**Key:** 00–1.49 = Strongly Disagree, 1.50–2.49 = Disagree, 2.50–3.49 = Undecided, 3.50–4.49 = Agree, 4.50–5.00 = Strongly Agree

**Decision:** 0.00 –3.49 (Disagreed), 3.50 – 5.00 (Agreed)

Table 7 above is self-employed individuals and employer's responses on digital literacy skills needed by technical college students for employment. The result revealed that the self-employed individuals and employers agreed that: Employees in technical trades need basic computer skills for employment ( $\bar{X} = 4.22$ ), internet research and communication are essential for technical trades ( $\bar{X} = 4.13$ ), familiarity with digital tools and software relevant to trades

( $\bar{X} = 4.21$ ), understanding cybersecurity principles is important for technical employees ( $\bar{X} = 4.26$ ), employees should be able to troubleshoot common technical issues ( $\bar{X} = 4.21$ ), advanced software skills are crucial for employability in technical trades ( $\bar{X} = 4.24$ ), protecting personal information online is a key skill for employees ( $\bar{X} = 4.23$ ), creating and managing digital content is important for technical trades ( $\bar{X} = 4.39$ ), online

collaboration using digital tools is essential for technical employees ( $\bar{X}= 4.11$ ) and that ethical issues related to digital technology should be understood by employees ( $\bar{X}= 4.14$ ). The items on the scale had mean scores ranging from 4.11 to 4.39. All the

digital literacy skills needed by technical college students for employment received a mean score 4.11 and above and were therefore regarded as the digital literacy skills needed by technical college students for employment.

**Table 8: Digital Literacy Skills Needed by Technical College Students for Employment as Perceived by the Lecturers**

S/N	Statements	Mean	SD
1.	Digital literacy under Computer graphics, and virtual communications is crucial for technical college students' employability	4.56	.66
2.	Data analysis, coding and other programing skills are indispensable for technical college students striving in the labour market of today	4.62	.59
3.	Desktop publishing is an important digital skill for technical college students for employment.	4.54	.59
4.	Ability to use digital collaboration tools like e-learning is necessary for technical trades	4.53	.69
5.	Proficiency in industry-specific software applications is essential for students	4.49	.71
6.	Technical college students need basic computer skills for employment.	4.51	.67
7.	Internet research and communication are essential skills for students.	4.52	.82
8.	Familiarity with digital tools and software relevant to trades is necessary.	4.48	.52
9.	Understanding cybersecurity principles is important for students.	4.33	.62
10.	Students should be able to troubleshoot common technical issues.	4.31	.66

**Key:** 00–1.49 = Strongly Disagree, 1.50–2.49 = Disagree, 2.50–3.49 = Undecided, 3.50–4.49 = Agree, 4.50–5.00 = Strongly Agree

**Decision:** 0.00 –3.49 (Disagreed), 3.50 – 5.00 (Agreed)

Table 8 above is lecturers' responses on digital literacy skills needed by technical college students for employment. The result revealed that the lecturers agreed that: Digital literacy under Computer graphics, and virtual communications is crucial for technical college students' employability ( $\bar{X} = 4.56$ ), data analysis, coding and other programing skills are indispensable for technical college students striving in the labour market of today ( $\bar{X}= 4.62$ ), desktop publishing is an important digital skill for technical college students for employment ( $\bar{X} = 4.54$ ), ability to use digital collaboration tools like e-learning is necessary for technical trades ( $\bar{X}= 4.53$ ), proficiency in industry-specific software applications is essential for students ( $\bar{X}= 4.49$ ), technical college students need basic computer skills for employment ( $\bar{X}= 4.51$ ), Internet research and communication are

essential skills for students ( $\bar{X}= 4.52$ ), familiarity with digital tools and software relevant to trades is necessary ( $\bar{X}= 4.48$ ), understanding cybersecurity principles is important for students ( $\bar{X}= 4.33$ ) and that students should be able to troubleshoot common technical issues ( $\bar{X}= 4.31$ ). The items on the scale had mean scores ranging from 4.31 to 4.62. All the digital literacy skills needed by technical college students for employment received a mean score 4.31 and above and were therefore regarded as the digital literacy skills needed by technical college students for employment.

### **Research Question 2**

*How does technical college prepare their students with digital literacy skills for employment?*

**Table 9: Preparation of students by Technical Colleges with Digital Literacy Skills for Career Engagement and Employment as Perceived by the Students**

S/N	Statements	Mean	SD
1.	Workshops and seminars on digital literacy are offered at my college.	3.17	.55
2.	There is access to up-to-date digital resources and equipment.	2.92	.57
3.	Teachers are knowledgeable and proficient in digital literacy.	4.22	.52
4.	The curriculum includes courses focused on digital skills relevant to my trade.	3.98	.63
5.	There is sufficient practical experience with digital tools and software in the school.	3.01	.61
6.	The college supports efforts to improve my digital skills.	3.44	.61
7.	The college provides adequate digital literacy training.	2.78	.49
8.	Online learning materials are being provided by the college.	4.02	.59
9.	The digital literacy program in the College meets modern employers' needs.	3.07	.51
10.	There is encouragement to use digital tools for assignments and projects.	3.09	.53

**Key:** 00–1.49 = Strongly Disagree, 1.50–2.49 = Disagree, 2.50–3.49 = Undecided, 3.50–4.49 = Agree, 4.50–5.00 = Strongly Agree

**Decision:** 0.00 –3.49 (Disagreed), 3.50 – 5.00 (Agreed)

Table 9 above is students' responses on preparation by technical colleges with digital literacy skills for career engagement and employment. The result revealed that the students agreed that: Workshops and seminars on digital literacy are offered at my college ( $\bar{X}= 3.17$ ), there is access to up-to-date digital resources and equipment ( $\bar{X}= 2.92$ ). teachers are knowledgeable and proficient in digital literacy ( $\bar{X}= 4.22$ ), the curriculum includes courses focused on digital skills relevant to my trade ( $\bar{X}= 3.98$ ), there is sufficient practical experience with digital tools and software in the school ( $\bar{X}= 3.01$ ), the college supports efforts to improve my digital skills ( $\bar{X}= 3.44$ ), However, the students disagreed that the college provides adequate digital literacy

training ( $\bar{X}= 2.78$ ), while upholding that online learning materials is being provided by the college ( $\bar{X}= 4.02$ ), the digital literacy program in the College meets modern employers' needs ( $\bar{X}= 3.07$ ), and that there is encouragement to use digital tools for assignments and projects ( $\bar{X}= 3.09$ ). The items on the scale had mean scores ranging from 2.92 to 4.22. Seven of the preparation of students by technical colleges with digital literacy skills for career engagement and employment received a mean score less than 3.49, while others had mean of 3.98 and above and were therefore regarded as the preparation of students by technical colleges with digital literacy skills for career engagement and employment.

**Table 10: Preparation of students by Technical Colleges with Digital Literacy Skills for Career Engagement and Employment as Perceived by the Teachers**

S/N	Statements	Mean	SD
1.	The college provides adequate digital literacy training.	2.82	.47
2.	There is access to up-to-date digital resources and equipment.	2.79	.51
3.	Teachers are limited in knowledge and proficiency in digital literacy.	4.62	.70
4.	The curriculum includes courses focused on digital skills relevant to my trade.	4.05	.61
5.	There is sufficient practical experience with digital tools and software in the school.	3.21	.61
6.	Workshops and seminars on digital literacy are offered at my college.	3.19	.56
7.	Online learning materials is being provided by the college.	4.02	.59
8.	The digital literacy program in the College meets modern employers' needs.	3.22	.58
9.	There is encouragement to use digital tools for assignments and projects.	4.10	.71
10.	The college supports efforts to improve students digital skills.	3.51	.68

**Key:** 1 = Strongly Disagree, 2= Disagree, 3= Undecided, 4 = Agree, 5 = Strongly Agree

**Decision:** 0.00 – 2.49 (Disagreed), 2.50-3.49 (Undecided), 3.50 – 5.49 (Agreed)

Table 10 above is teachers' responses on preparation by technical colleges with digital literacy skills for career engagement and employment. The result revealed that the teachers agreed that: Teachers are knowledgeable and proficient in digital literacy ( $\bar{X}= 4.62$ ), the curriculum includes courses focused on digital skills relevant to my trade ( $\bar{X}= 4.05$ ), there is sufficient practical experience with digital tools and software in the school ( $\bar{X}= 3.21$ ), workshops and seminars on digital literacy are offered at my college ( $\bar{X}= 3.19$ ), online learning materials is being provided by the college ( $\bar{X}= 4.02$ ), the digital literacy program in the College meets modern employers' needs ( $\bar{X}= 3.22$ ), there is encouragement to use digital tools for

assignments and projects ( $\bar{X}= 4.10$ ), and that the college supports efforts to improve my digital skills ( $\bar{X}= 3.51$ ). However, the teachers disagreed that the college provides adequate digital literacy training ( $\bar{X}= 2.82$ ) and that there is access to up-to-date digital resources and equipment ( $\bar{X}= 2.79$ ). The items on the scale had mean scores ranging from 2.82 to 4.62. Five of the preparation of students by technical colleges with digital literacy skills for career engagement and employment received a mean score less than 3.49, while others had mean of 3.51 and above and were therefore regarded as the preparation of students by technical colleges with digital literacy skills for career engagement and employment.

**Table 11: Preparation of students by Technical Colleges with Digital Literacy Skills for Career Engagement and Employment as Perceived by the Lecturers**

S/N	Statements	Mean	SD
1.	The digital literacy training provided by technical colleges is adequate	1.56	.46
2.	Technical colleges integrate practical digital skills into their curriculum effectively	1.68	.39
3.	The teaching staff at technical colleges are proficient in digital literacy	1.75	.49
4.	There are sufficient resources for digital literacy training in technical colleges	1.95	.47
5.	Technical colleges regularly update their digital literacy curriculum to reflect industry needs	1.99	.41
6.	Students receive sufficient practical experience with digital tools and software at technical colleges.	1.81	.47
7.	Workshops and seminars on digital literacy are offered regularly at technical colleges.	1.92	.42
8.	Students can access online learning materials provided by technical colleges.	1.38	.44
9.	The digital literacy program at technical colleges meets the needs of modern employers.	1.43	.42
10.	Students are encouraged to use digital tools for assignments and projects at technical colleges.	1.83	.46

**Key:** 00–1.49 = Strongly Disagree, 1.50–2.49 = Disagree, 2.50–3.49 = Undecided, 3.50–4.49 = Agree, 4.50–5.00 = Strongly Agree

**Decision:** 0.00 –3.49 (Disagreed), 3.50 – 5.00 (Agreed)

Table 11 above is lecturers' responses on preparation by technical colleges with digital literacy skills for career engagement and employment. The result revealed that the lecturers disagreed that: The digital literacy training provided by technical colleges is adequate ( $\bar{X}= 1.56$ ), technical colleges integrate practical digital skills into their curriculum effectively ( $\bar{X}= 1.68$ ), the teaching staff at technical colleges are proficient in digital literacy ( $\bar{X}=1.75$ ), there are sufficient resources for digital literacy training in technical colleges ( $\bar{X}= 1.95$ ), technical colleges regularly update their digital literacy curriculum to reflect industry needs ( $\bar{X}= 1.99$ ), students receive sufficient practical experience with digital tools and software at technical colleges ( $\bar{X}= 1.81$ ), workshops and seminars on digital literacy are offered regularly at technical colleges ( $\bar{X}= 1.92$ ), students can access online learning materials provided by

technical colleges ( $\bar{X}= 1.38$ ), the digital literacy program at technical colleges meets the needs of modern employers ( $\bar{X}= 1.43$ ) and that students are encouraged to use digital tools for assignments and projects at technical colleges ( $\bar{X}= 1.83$ ). The items on the scale had mean scores ranging from 1.38 to 1.99. All the preparation of students by technical colleges with digital literacy skills for career engagement and employment received a mean score less than 3.49 and were therefore not regarded as the preparation of students by technical colleges with digital literacy skills for career engagement and employment.

#### Test of Hypotheses

**Hypothesis One:** There is no significant relationship between Digital literacy skill and Career engagement of Technical college students in Lagos state

**Table 12: Chi-Square Analysis showing relationship between Digital literacy skill and Career engagement of Technical college students**

Variable	N	Df	Mean	SD	$\chi^2$ -calc	Sig.
Digital literacy skill and Career engagement of Technical college students	367	4	13.38	0.863	27.618	0.000

**P < 0.05;**  $\chi^2$ -critical = 9.488

From the table above, the calculated value is 27.618, which is higher than the critical tabulated value 9.488, hence, the null Hypothesis one is rejected while the alternate hypothesis is accepted. Therefore, there is a significant relationship between

Digital literacy skill and Career engagement of Technical college students in Lagos state.

**Hypothesis Two**

*There is no significant relationship between Digital literacy skills and Employability of Technical college students in Lagos state.*

**Table 13: Chi-Square Analysis showing relationship between Digital literacy skills and Employability of Technical college students**

Variable	N	Df	Mean	SD	$\chi^2$ -calc	Sig.
Digital literacy skills and Employability of Technical college students	367	4	12.95	0.764	24.127	0.000

**P < 0.05;**  $\chi^2$ -critical = 9.488

From the table above, the calculated value is 24.127, which is higher than the critical tabulated value 9.488, hence, the null Hypothesis two is also rejected while the alternate hypothesis is accepted. Therefore, there is a significant relationship between Digital literacy skills and Employability of Technical college students in Lagos state.

awareness of ethical issues related to digital technology. This result aligns with Manyere and Dzvapatsva (2021), who argued that integrating technology-based assignments into the curriculum helps students apply theoretical knowledge in real-world contexts, thereby enhancing their digital competencies. Similarly, Bianchini and Uberti (2018) emphasized that digital welding simulators provide trainees with opportunities to practice virtually, improving their technical skills and safety awareness. In the same vein, Chinujinim and Amaechi (2022) observed that digital literacy programs not only equip learners with employability skills but also expand access to career opportunities across industries. Furthermore, Parker (2020) asserted that digital literacy enables technicians to communicate effectively with clients through digital platforms such as emails, messaging apps, and online invoicing systems, which improves customer satisfaction and operational efficiency. In technical colleges, where the goal is to prepare students for specific career paths, the acquisition of such skills is indispensable. These findings corroborate

**Discussion of Findings**

*Digital Literacy Skills Needed by Lagos State Technical College Students for Employment*

The findings revealed that Lagos State technical college students require a wide range of digital literacy skills to enhance their employability. These include basic computer application proficiency, effective use of the internet for research and communication, familiarity with digital tools and trade-specific software, understanding cybersecurity principles, troubleshooting common technical issues, advanced software applications, safeguarding personal information, creating and managing digital content, online collaboration through digital tools, and

earlier studies which stressed that technical graduates must be equipped with digital competencies if they are to thrive in today's technology-driven workplaces.

#### *Teaching Techniques to Develop Digital Literacy Skills among Lagos State Technical College Students*

The study also highlighted effective teaching techniques that can be employed to develop digital literacy skills in technical colleges. One key approach is the integration of practical, technology-based assignments into classroom activities. This finding is consistent with Manyere and Dzvapatsva (2021), who recommended embedding real-world digital tasks such as software use, coding exercises, and digital content creation into the curriculum. By engaging students in hands-on activities, teachers can enhance their ability to apply digital knowledge in professional contexts. Additionally, the findings suggest that the use of digital learning platforms, virtual simulations, and industry-relevant software enhances the learning experience of students. Bianchini and Uberti (2018) underscored the value of virtual welding simulators as a tool that not only improves digital literacy but also provides a safe environment for skill acquisition. Likewise, Ogunlana et al. (2019) highlighted that exposure to software such as AutoCAD and SolidWorks gives students an edge over their peers, enabling them to compete effectively in both local and global markets. Moreover, teaching techniques that emphasize collaboration and problem-solving with digital tools were found to foster higher-order digital competencies. Parker (2020) noted that such approaches enable students to use digital technologies not only for technical tasks but also for communication, teamwork, and service delivery. This aligns with the increasing expectation that graduates be versatile in applying digital skills across multiple workplace functions. In summary, the study establishes that to adequately prepare students for the labour market, technical

colleges in Lagos State must adopt innovative teaching techniques such as practical technology-based assignments, integration of digital platforms, use of industry-relevant software, and promotion of collaborative learning environments. These approaches ensure that students graduate with both the technical and digital competencies required for employment in the 21st-century workplace.

#### **Hypothesis: Null One**

The finding of the hypothesis 1 showed a significant relationship between Digital literacy skill and Career engagement of Technical college students, because the calculated value (27.618) is greater than the critical value (9.488) given 4 degrees of freedom at 0.05 level of significance. Hence, there is a significant relationship between Digital literacy skill and Career engagement of Technical college students in Lagos state, because, the null hypothesis was rejected. This is line with the position of Ogunlana *et al.* (2019) that those who can use constructions software such as auto card, solid works, sketch up and others stands as lord over those engineers who are novice to them. This accounts for the obsolescence and annihilation of the traditional hard copy paper and pencil design, and constructions to soft copy designs where everything is done using the computer. This is considered faster, easier to correct, manipulated, and transferred electronically to clients without the physical presence or knowledge of the client. With this skill, employment and contracts can be secured across globe at the comfort of ones' home or domain. Additionally, digital platforms offer access to online training resources, safety manuals, and regulatory information, empowering construction workers to upskill and stay updated with industry standards. By embracing digital technologies, students in the construction trade of technical colleges in Lagos state, can improve their employability and contribute to project success. Also, Bianchini & Uberti (2018) reported that the

knowledge on virtual reality welding and the competence in the use of computerized digital welding and fabrication tools serves as an advantage in terms of employment. Furthermore, online welding courses and instructional videos offer accessible and flexible learning opportunities, allowing welders to enhance their skills at their own pace. The digital literacy skill to the metal work worker will foster the update on the best practices in the metal work industries. Thus, by embracing digital learning platforms, technical colleges students of Lagos state pursuing career in welding or other metal work can improve their employability and adapt to the evolving demands of the modern-day industries.

### **Hypothesis: Null Two**

The finding of the hypothesis two revealed a significant relationship between Digital literacy skills and Employability of Technical college students, because the calculated value (24.127) is greater than the critical value (9.488) given 4 degrees of freedom at 0.05 level of significance. Hence, there is a significant relationship between Digital literacy skills and Employability of Technical college students in Lagos state, because null hypothesis was rejected. This finding is line with the position of Wang (2012) that digital literacy is directly related to employability, which is the combination of factors and processes which enable people to get employed and to remain in employment or to move on in the workplace. Also, Smith & Greenberg (2019) reported that those who possess the skill or the ability of technical know-how on the use of these Diagnostic software and computerized testing equipment are considered in terms of employability compare to their counterparts who don't. Moreover, Parker (2020) noted that digital platforms facilitate communication with clients, enabling technicians to provide real-time updates, estimates, and invoices. By leveraging digital tools effectively, automotive technicians can enhance customer satisfaction and also increase their

level of employability in the automotive repair industry.

### **Conclusion**

This study investigated the influence of digital literacy on career engagement and employability among Lagos State technical college students. The findings revealed that digital literacy is a crucial predictor of both career engagement and employability, as students equipped with digital skills were better positioned to pursue rewarding career opportunities and adapt to the evolving demands of the workplace. Specifically, technical college students require core digital competencies such as basic computer applications, effective internet use for research and communication, proficiency in trade-related software, cybersecurity awareness, troubleshooting skills, digital content creation, online collaboration, and ethical use of technology. The study further established that teaching techniques such as integrating practical, technology-based assignments, adopting industry-relevant digital tools, and leveraging virtual simulations significantly enhance the development of these competencies. By embedding such approaches into the curriculum, technical colleges can empower students to apply theoretical concepts in real-world scenarios, thereby strengthening their employability prospects. The hypotheses tested confirmed that digital literacy has a significant positive relationship with both career engagement and employability. This underscores the need for technical colleges to prioritize digital literacy development through curriculum reform, training, and provision of adequate facilities. Ultimately, fostering digital literacy among technical college students is vital for building a skilled workforce capable of driving innovation, productivity, and sustainable development in Lagos State and Nigeria at large.

## Recommendations

Based on the findings of this research, the following recommendations were made in line with each research question:

1. Curriculum Integration: Lagos State technical colleges should prioritize the inclusion of essential digital literacy skills such as computer applications, online collaborations, and cybersecurity awareness into their curricula to align with industry demands and enhance students' career engagement and employability.
2. Adoption of E-Learning: Teachers and educators in Lagos State technical colleges should adopt virtual classes and e-learning programmes as part of their pedagogical methods to strengthen digital literacy in the technical education system.
3. Practical Digital Projects: Educators should introduce projects requiring coding languages and software application platforms relevant to students' technical fields to ensure that graduates are digitally skilled and well-prepared for the digital workforce.
4. Reliable Power Supply: The Lagos State government should ensure adequate and constant electricity supply, or provide alternative energy sources, to power digital facilities and equipment required for digital literacy training.
5. Infrastructure Development: The government, with possible support from parents, should integrate the construction of computer laboratories into technical school structures and invest in essential resources such as computers, high-speed internet, multimedia tools, and other hardware and software needed for effective digital literacy acquisition.

## References

Amenger, U. A. (2013). *Technical and vocational education and training as a tool for national sustainable development in Nigeria*. Journal of

Education and Practice, 4(22), 93–96.

- Bala, H., & Venkatesh, V. (2016). Adaptation to information technology: A holistic nomological network from implementation to job outcomes. *Management Science*, 62(1), 156–179. <https://doi.org/10.1287/mnsc.2014.2111>
- Bakker, A. B. (2011). An evidence-based model of work engagement. *Current Directions in Psychological Science*, 20(4), 265–269. <https://doi.org/10.1177/0963721411414534>
- Bawden, D. (2001). Information and digital literacies: A review of concepts. *Journal of Documentation*, 57(2), 218–259. <https://doi.org/10.1108/EUM0000000007083>
- Bawden, D. (2008). Origins and concepts of digital literacy. In C. Lankshear & M. Knobel (Eds.), *Digital literacies: Concepts, policies and practices* (pp. 17–32). Peter Lang.
- Berger, T., & Frey, C. B. (2016). Structural transformation in the OECD: Digitalisation, deindustrialisation and the future of work. *OECD Social, Employment and Migration Working Papers*, 193. OECD Publishing.
- Bing, J. (2023). *Economic overview of Lagos State: Growth, challenges, and opportunities*. Lagos Economic Review, 5(2), 44–60.
- Bolles, R. N. (2022). *What color is your parachute? Your guide to a lifetime of meaningful work and career success*. Ten Speed Press.
- Bowen, A., & Johnson, K. (2019). Essential literacies for the digital workplace. *International Journal of Educational Technology*, 36(2), 77–91.
- British Council. (2017). *Nigeria: Technical and vocational education and training policy review*. British Council.

- Casey, C. (2018). *The technological society in the digital age*. Routledge.
- Castells, M. (2010). *The rise of the network society* (2nd ed.). Wiley-Blackwell.
- Colbert, A., Yee, N., & George, G. (2016). The digital workforce and the workplace of the future. *Academy of Management Journal*, 59(3), 731–739.  
<https://doi.org/10.5465/amj.2016.4003>
- Collard, A.-S., De Smedt, T., Dufrasne, M., Fastrez, P., Ligurgo, V., Patriarche, G., & Philippette, T. (2017). Media and information literacies in today's society: Perspectives, challenges and solutions. In *European Conference on Information Literacy* (pp. 11–22). Springer.
- Dede, C. (2010). Comparing frameworks for 21st century skills. *21st Century Skills: Rethinking How Students Learn*, 20(3), 51–76.
- Drucker, P. F. (2007). *Innovation and entrepreneurship: Practice and principles*. Routledge.
- Eric, A., Kate, B., & Rodney, C. (2023). *Digital transformation and information systems: Principles and practices*. Springer.
- Farrell, H., Newman, A., & Corbel, R. (2021). Workforce literacies in the digital era. *Policy and Internet*, 13(2), 188–207.  
<https://doi.org/10.1002/poi3.238>
- Fugate, M., Kinicki, A. J., & Ashforth, B. E. (2004). Employability: A psychosocial construct, its dimensions, and applications. *Journal of Vocational Behavior*, 65(1), 14–38.  
<https://doi.org/10.1016/j.jvb.2003.10.005>
- Goleman, D. (2013). *Focus: The hidden driver of excellence*. Harper.
- Hope, J. (2022). *Digital technology essentials*. Oxford University Press.
- Ismail, S., & Mohammed, A. (2015). Vocational and technical education in Nigeria: Issues, challenges, and prospects. *Journal of Education and Practice*, 6(32), 71–75.
- Kane, G. C., Phillips, A. N., Copulsky, J., & Andrus, G. R. (2019). *The technology fallacy: How people are the real key to digital transformation*. MIT Press.
- Korkki, P. (2016, June 4). How to be a predator in the job search. *The New York Times*.  
<https://www.nytimes.com> LASTVEB.
- (2021). *Lagos State Technical and Vocational Education Board: Annual report*. Lagos State Government.
- Medina, M. (2010). Digital literacy: A conceptual framework for survival skills in the digital era. *International Journal of Information and Education Technology*, 1(2), 98–102.
- Mon, A. (2017). Challenges of technical and vocational education in Nigeria: Policy implications. *African Journal of Education Policy*, 4(1), 22–31.
- Panel, N. R. (2002). *Digital transformation: A strategic approach to national development*. National Research Council Press.
- Reda, A. (2017). *Digital economy and innovation*. Palgrave Macmillan.
- Rothbard, N. P. (2001). Enriching or depleting? The dynamics of engagement in work and family roles. *Administrative Science Quarterly*, 46(4), 655–684.  
<https://doi.org/10.2307/3094827>
- Rothwell, A., & Arnold, J. (2007). Self-perceived employability: Development and validation of a scale. *Personnel Review*, 36(1), 23–41.  
<https://doi.org/10.1108/00483480710716704>
- Saks, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*, 21(7), 600–619.  
<https://doi.org/10.1108/02683940610690169>

- Stordy, P. H. (2015). Taxonomy of literacies. *Journal of Documentation*, 71(3), 467–488. <https://doi.org/10.1108/JD-10-2013-0128>
- Van der Heijden, B. I. J. M. (2006). *Ageing and careers: European research on long-term career development and early retirement*. Hogrefe & Huber.
- Vrana, R. (2017). Digital literacy—A prerequisite for successful learning in a digital environment. *Journal of Information and Organizational Sciences*, 41(1), 41–52.
- Wan Ng. (2012). Can we teach digital natives digital literacy? *Computers & Education*, 59(3), 1065–1078. <https://doi.org/10.1016/j.compedu.2012.04.016>