



PERCEIVED INFLUENCE OF DIGITAL LITERACY AND ENTREPRENEURSHIP SKILLS ON EMPLOYABILITY AND SELF-SUSTENANCE AMONG FINAL-YEAR STUDENTS OF COLLEGE OF EDUCATION BILLIRI, GOMBE STATE

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ABSTRACT

The study examined the perceived influence of digital literacy and entrepreneurship skills on employability and self-sustenance among final-year students of the Department of Education, College of Education Billiri, Gombe State, Nigeria. Two research objectives and two corresponding research questions guided the study. A descriptive survey design was adopted. The population comprised 82 final-year students, from which a sample of 40 students who had completed digital literacy and entrepreneurship courses was purposively selected. Data were collected using a researcher-developed instrument titled Digital Literacy and Entrepreneurship for Employability and Self-Sustenance Questionnaire (DLEESQ), consisting of 20 items rated on a four-point Likert scale. The instrument was validated by experts, while a pilot study yielded a Cronbach's alpha reliability coefficient of 0.82. Data were analysed using mean and standard deviation, with a criterion mean of 2.50 for decision-making. The findings indicated that the respondents generally perceived digital literacy as enhancing their employability and self-sustenance by improving their ability to search for jobs, communicate professionally, and utilise digital tools for work-related activities. The respondents also perceived entrepreneurship, supported by digital literacy skills, as an important pathway to self-employment and sustainable livelihood. Based on these findings, the study recommends strengthening digital literacy and entrepreneurship education, improving access to digital infrastructure and learning resources, and expanding institutional support for student entrepreneurship through training, mentorship, and access to start-up funding.

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INTRODUCTION

In the 21st century, digital literacy and entrepreneurship have become critical pillars of socio-economic development, particularly among the youth population. The rapid advancement of information and communication technologies (ICTs) has significantly transformed various



sectors globally, creating numerous opportunities for individuals, especially in developing regions. In this context, digital literacy, the ability to access, evaluate, create, and communicate information using digital technologies, is a crucial skill for personal, educational, and professional growth. Likewise, entrepreneurship is increasingly recognized as a key driver of economic empowerment, innovation, and self-sustenance. These two concepts, when combined, offer a powerful means of improving employability, reducing poverty, and fostering socio-economic development among young people.

Gombe State, located in the North-Eastern part of Nigeria, is predominantly agrarian and comparatively less developed than many other regions of the country. The state's youth population, which constitutes a significant proportion of its overall population, faces numerous challenges, including limited access to quality education, unemployment, and poverty. As Nigeria strives to diversify its economy beyond oil dependence, increasing emphasis has been placed on equipping young people with skills that will not only enhance their employability but also empower them to become self-reliant through entrepreneurship. Digital literacy is fundamental to achieving this goal, as it enables individuals to leverage technology for entrepreneurial ventures, access broader markets, and develop innovative solutions to local challenges (Gorski, 2017). Globally, digital literacy has become a cornerstone of modern education and employment. According to UNESCO (2021), digital literacy is essential for participation in the digital economy, which is expected to generate millions of employment opportunities worldwide. Furthermore, entrepreneurship has been widely recognized as a critical driver of job creation and economic development, particularly in developing countries. The World Bank (2020) estimates that small and medium-sized enterprises (SMEs), largely established and managed by entrepreneurs, account for approximately 90% of businesses and more than 50% of employment worldwide.

In Nigeria, the Federal Government has introduced several initiatives to promote entrepreneurship and digital literacy, including the National Digital Economy Policy and Strategy (2020–2030) and the Youth Entrepreneurship Support (YES) Programme. Despite these efforts, considerable gaps remain in the availability and accessibility of digital literacy and entrepreneurial training, particularly in rural communities in Gombe State. According to the National Bureau of Statistics (2022), youth unemployment remains a major challenge in Nigeria, with rural youth being disproportionately affected because of limited access to quality education, skills training, and digital technologies. This underscores the need for targeted interventions that address the peculiar challenges confronting young people in underserved communities. Gombe State's economy is largely dependent on agriculture, with limited industrial and technological



development. Consequently, many young people remain engaged in subsistence farming or informal economic activities that provide limited income and career prospects. According to the National Bureau of Statistics (2022), youth unemployment and underemployment remain major concerns in the state. This situation is exacerbated by low levels of digital literacy and limited access to entrepreneurial opportunities. As a result, many young people lack the competencies required to compete effectively in the digital economy or establish sustainable business ventures.

The lack of digital infrastructure and educational resources further compounds this challenge. Many rural communities in Gombe State have limited access to reliable electricity and internet connectivity, while awareness and utilization of digital technologies for business and employment purposes remain relatively low. According to Kadhim (2024), digital literacy is a foundational competency that enables individuals to access information, communicate effectively, and participate meaningfully in the digital economy. For young entrepreneurs, digital literacy opens opportunities in e-commerce, digital marketing, online learning, and freelancing. Goss et al. (2021) further observed that digital skills are essential for modern entrepreneurship because they facilitate innovation, improve productivity, and expand access to local and international markets. For example, digitally literate young entrepreneurs can leverage social media platforms such as Facebook, Instagram, and WhatsApp to market their products and services and connect with customers beyond their immediate geographical locations.

In addition to expanding market access, digital literacy enhances the efficiency of traditional businesses. For instance, farmers in Gombe State can utilize mobile applications to obtain real-time information on weather conditions, market prices, and improved agricultural practices, thereby increasing productivity and profitability. Likewise, digital financial services such as mobile banking and electronic payment platforms enable entrepreneurs to manage their finances more efficiently while promoting transparency and reducing dependence on cash transactions. Entrepreneurship, on the other hand, provides young people with opportunities to create their own jobs and attain economic independence. In a state such as Gombe, where formal employment opportunities are limited, entrepreneurship represents a viable pathway to self-sustenance. According to the International Labour Organization (2021), entrepreneurship is among the most effective strategies for addressing youth unemployment because it not only creates employment for entrepreneurs themselves but also generates additional employment opportunities within their communities.

Despite these enormous benefits, several challenges continue to hinder the widespread adoption of digital literacy and entrepreneurship in Gombe State. One major challenge is inadequate



digital infrastructure, including poor electricity supply, limited internet connectivity, and inadequate access to digital devices. These infrastructural deficiencies significantly restrict young people's ability to acquire digital competencies and utilize digital technologies effectively. Another major challenge is limited access to quality education and skills acquisition programmes. According to the Universal Basic Education Commission (2022), educational challenges continue to affect learning outcomes in many parts of Nigeria, including Gombe State. Consequently, many young people are unable to acquire the foundational knowledge and practical skills required for digital literacy and entrepreneurship. Furthermore, inadequate vocational training centres and entrepreneurship support programmes restrict opportunities for young people to develop practical entrepreneurial competencies and establish sustainable businesses.

Cultural and social factors also limit the participation of young people, particularly young women, in digital literacy and entrepreneurial activities. In many rural communities in Gombe State, traditional gender norms and societal expectations restrict women's participation in education and economic activities. Abubakar et al. (2021) observed that prevailing cultural practices in Northern Nigeria often discourage women from pursuing higher education and entrepreneurial ventures, thereby widening gender disparities in employment and economic participation. In response to these challenges, both government and non-governmental organizations (NGOs) have implemented programmes aimed at promoting digital literacy and entrepreneurship among young people in Gombe State. For instance, the Federal Government's Digital Economy Policy seeks to expand internet access and digital skills acquisition, while several NGOs have introduced training and mentorship programmes for young entrepreneurs in rural communities.

However, these initiatives have remained fragmented and insufficient to adequately address the magnitude of the challenges confronting young people in Gombe State. There is therefore a need for more coordinated and comprehensive interventions that improve access to digital infrastructure, quality education, entrepreneurial training, finance, mentorship, and market linkages. Bridging the digital literacy and entrepreneurship gap is essential for achieving sustainable development and economic growth. As Nigeria continues to experience rapid population growth, with young people constituting a substantial proportion of the population, there is an urgent need to equip them with the competencies required to thrive in the digital economy. Rashid (2019) argued that promoting digital literacy and entrepreneurship can unlock the productive potential of young people, create new economic opportunities, and contribute significantly to poverty reduction and employment generation. According to Olaniyi et al.



(2022), investment in digital skills and entrepreneurship not only empowers individuals but also contributes to broader economic development. When young people possess relevant digital and entrepreneurial competencies, they are better positioned to develop innovative solutions to local challenges, generate sustainable income, and contribute meaningfully to community and national development. Consequently, digital literacy and entrepreneurship have the potential to serve as important catalysts for socio-economic transformation in Gombe State.

Although digital literacy and entrepreneurship are important for all categories of youth, students in Colleges of Education represent a particularly important group because they are preparing to transition from formal education into the labour market. Their perceptions of the influence of digital literacy and entrepreneurship on employability and self-sustenance can provide valuable evidence for improving institutional training and graduate preparedness. Consequently, this study focuses on final-year students of the Department of Education, College of Education Billiri, Gombe State. The promotion of digital literacy and entrepreneurship among young people in Gombe State is therefore an important step towards enhancing employability, self-sustenance, and socio-economic development. While challenges such as inadequate infrastructure, limited educational opportunities, insufficient entrepreneurial support, and socio-cultural barriers remain, there is considerable potential for improvement. Investing in digital skills development and entrepreneurship education can better prepare young people to take advantage of opportunities in the digital economy and contribute meaningfully to the sustainable development of Gombe State and Nigeria as a whole.

STATEMENT OF THE PROBLEMS

Despite various government initiatives aimed at promoting digital skills acquisition and entrepreneurship development, many young people in Gombe State continue to face challenges associated with unemployment, underemployment, limited entrepreneurial opportunities, and inadequate access to digital technologies. These challenges are further compounded by inadequate digital infrastructure, limited access to quality education and entrepreneurial training, and other socio-economic constraints that hinder the acquisition and effective utilization of relevant skills.

Although previous studies have emphasized the importance of digital literacy and entrepreneurship in improving employability and economic empowerment, there is limited empirical evidence on how students in Colleges of Education perceive the influence of these skills on their employability and self-sustenance. In particular, little is known about the perceptions of final-year students who are preparing to transition from school into the labour

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market. It is against this background that this study was undertaken to examine the perceptions of final-year students of the Department of Education, College of Education Billiri, Gombe State, regarding the influence of digital literacy and entrepreneurship on employability and self-sustenance.

OBJECTIVES OF THE STUDY

The study worked on the following objectives:

1. To determine the perceived influence of digital literacy on the employability and self-sustenance of final-year students of the Department of Education, College of Education Billiri, Gombe State.
2. To determine the perceived role of entrepreneurship in enhancing the employability and self-sustenance of final-year students of the Department of Education, College of Education Billiri, Gombe State.

RESEARCH QUESTIONS

The following research questions guided the study:

1. What are the perceptions of final-year students regarding the influence of digital literacy on their employability and self-sustenance?
2. What are the perceptions of final-year students regarding the role of entrepreneurship in enhancing their employability and self-sustenance?

METHODOLOGY

Research Design

The study adopted descriptive survey research design to examine the perceptions of final-year students regarding the influence of digital literacy and entrepreneurship on employability and self-sustenance at the College of Education Billiri, Gombe State. The descriptive survey design was considered appropriate because it enabled the researchers to collect and describe respondents' opinions and perceptions on the variables under investigation without manipulating any variable.



Population, Sample, and Sampling Technique

The population of the study comprised 82 final-year students of the Department of Education, College of Education Billiri, Gombe State. A sample of 40 students was purposively selected from the population. The purposive sampling technique was adopted to ensure that only students who had completed courses related to digital literacy and entrepreneurship participated in the study. This approach enabled the researchers to obtain information from respondents with adequate knowledge and experience of the concepts being investigated.

Instrument for Data Collection

Data were collected using a researcher-developed questionnaire titled *Digital Literacy and Entrepreneurship for Employability and Self-Sustenance Questionnaire (DLEESQ)*. The instrument consisted of two sections. Section A contained 10 items designed to elicit respondents' perceptions of the influence of digital literacy on employability and self-sustenance. Section B consisted of 10 items that assessed respondents' perceptions of the role of entrepreneurship in enhancing employability and self-sustenance. The questionnaire comprised a total of 20 items measured on a four-point Likert rating scale as follows: Strongly Disagree (1), Disagree (2), Agree (3), and Strongly Agree (4).

To establish the content validity of the instrument, the questionnaire was subjected to expert review by three specialists, comprising two experts in education and one expert in mathematics. Their observations and suggestions were used to improve the clarity, relevance, and adequacy of the questionnaire items in relation to the objectives and research questions of the study.

The reliability of the instrument was established through a pilot study involving 10 final-year students who possessed characteristics similar to those of the study participants but were not included in the final sample. The responses obtained from the pilot study were analysed using Cronbach's Alpha reliability technique, which yielded a reliability coefficient of 0.82. This coefficient indicated that the instrument possessed satisfactory internal consistency and was suitable for data collection.

Method of Data Collection

The researchers personally administered the questionnaire to the selected respondents and retrieved the completed copies within one week, resulting in a high response rate.



Method of Data Analysis

The data collected were analysed using mean and standard deviation to answer the research questions. The mean was used to determine the respondents' level of agreement with each questionnaire item, while the standard deviation was used to determine the degree of variability in their responses. A criterion mean of 2.50 was adopted for decision-making. Mean scores of 2.50 and above were interpreted as indicating that the respondents agreed with the statement, whereas mean scores below 2.50 indicated that the respondents disagreed with the statement. The interpretation of the findings was based on the respondents' perceptions of the influence of digital literacy and entrepreneurship on employability and self-sustenance.

RESULTS

Research Question 1: What is the perception of final-year students regarding the influence of digital literacy on employability and self-sustenance?

TABLE 1: RESPONDENTS' PERCEPTION ON DIGITAL LITERACY ON EMPLOYABILITY AND SELF-SUSTENANCE (N= 40)

S/N	Statement	Mean	SD	Remark
1	I am confident that my digital skills can improve my employability.	2.69	0.321	Agreed
2	Access to digital tools has helped me enhance my job prospects.	3.42	0.786	Agreed
3	I believe that acquiring digital literacy is essential for finding employment.	3.21	0.522	Agreed
4	I use digital platforms (e.g., job portals and social media) to search for job opportunities.	2.78	0.481	Agreed
5	I have taken online courses or training to improve my employability.	3.72	0.899	Agreed
6	My digital skills have made it easier for me to find job-related information.	2.89	0.325	Agreed
7	Employers in Gombe State value digital literacy as a key employability skill.	3.78	0.961	Agreed
8	I feel that digital literacy improves my chances of becoming self-sustained through freelance or remote work.	3.13	0.499	Agreed
9	I can effectively use digital tools (e.g., email and word-processing software) for professional tasks.	3.16	0.321	Agreed
10	I am capable of using digital devices (e.g., smartphones and computers) for work-related purposes.	3.33	0.739	Agreed
Grand Mean		3.11	0.59	Agreed

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Table 1 shows the respondents' perceptions of the influence of digital literacy on employability and self-sustenance. All the items recorded mean scores above the criterion mean of 2.50, ranging from 2.69 to 3.78, indicating that the respondents agreed with all the statements. The grand mean of 3.11 further indicates that the respondents generally perceived digital literacy as positively influencing their employability and self-sustenance. The average standard deviation of 0.59 suggests relatively low variability in the respondents' opinions, indicating a reasonable level of consensus.

Research Question 2: What are the perceptions of final-year students regarding the role of entrepreneurship in enhancing employability and self-sustenance?

TABLE 2: RESPONDENTS' PERCEPTION ON ROLE OF ENTREPRENEURSHIP IN ENHANCING EMPLOYABILITY AND SELF-SUSTENANCE (N= 40)

S/N	Item Statement	Mean	SD	Remark
1	I believe entrepreneurship is a viable pathway to achieving self-sustenance.	3.30	0.668	Agreed
2	Digital literacy has helped me start or grow my business.	2.84	0.520	Agreed
3	I am confident that digital tools can help me succeed as an entrepreneur.	3.00	0.687	Agreed
4	Digital platforms (e.g., social media and e-commerce) have expanded my entrepreneurial opportunities.	3.38	0.922	Agreed
5	I can effectively use digital marketing to promote my business or entrepreneurial activities.	3.16	0.839	Agreed
6	I use digital tools to manage my business finances (e.g., online banking and accounting software).	3.23	0.522	Agreed
7	My digital literacy enables me to access a larger customer base online.	3.02	0.499	Agreed
8	Entrepreneurship has given me more opportunities for self-employment.	2.78	0.481	Agreed
9	I believe that digital skills are essential for running a successful business.	3.45	0.961	Agreed
10	I am able to manage my business remotely through the use of digital tools.	3.23	0.522	Agreed
Grand Mean		3.12	0.66	Agreed

Table 2 presents the respondents' perceptions of the role of entrepreneurship in enhancing employability and self-sustenance. The mean scores for all the items ranged from 2.78 to 3.45, which are above the criterion mean of 2.50. This indicates that the respondents agreed that entrepreneurship, supported by digital literacy, plays an important role in enhancing



employability and self-sustenance. The grand mean of 3.12 indicates an overall positive perception of the role of entrepreneurship, while the average standard deviation of 0.66 suggests that the respondents' opinions were relatively homogeneous.

DISCUSSION

The findings of this study revealed that the respondents generally perceived digital literacy as an important factor in enhancing employability and self-sustenance among final-year students at the College of Education Billiri, Gombe State. The high mean ratings obtained for all the items under the first research question indicate that the respondents believed that digital literacy improves their employability by equipping them with competencies required for job search, professional communication, information retrieval, and participation in remote and freelance work. These findings are consistent with the report of UNESCO (2021), which emphasized that digital literacy has become an indispensable skill for participation in the contemporary labour market and digital economy. Similarly, the findings corroborate those of Goss et al. (2021), who reported that digital skills enhance young people's employability by improving access to employment opportunities and facilitating participation in entrepreneurial activities through digital technologies.

The study also found that the respondents perceived entrepreneurship as an effective pathway to self-employment and economic self-sustenance. The respondents agreed that entrepreneurship provides opportunities for creating employment rather than depending solely on government or private-sector jobs. They further perceived that digital literacy strengthens entrepreneurial success by supporting digital marketing, financial management, online customer engagement, and remote business operations. These findings agree with the position of the International Labour Organization (2021), which identified entrepreneurship as an important strategy for addressing youth unemployment and promoting inclusive economic development. Likewise, the findings support those of Olaniyi et al. (2022), who reported that digital literacy enhances entrepreneurial capacity by enabling entrepreneurs to utilize digital platforms for business promotion, customer acquisition, and access to wider markets.

Furthermore, although the respondents expressed positive perceptions regarding the benefits of digital literacy and entrepreneurship, they also acknowledged that several challenges could limit the realization of these benefits. These include inadequate digital infrastructure, poor internet connectivity, and limited access to digital devices, insufficient entrepreneurial training, and inadequate financial support for business start-ups. This finding is in agreement with the report



of the Nigerian Communications Commission (2022), which highlighted the persistent digital divide between urban and rural communities in Nigeria. It also supports the findings of Abubakar et al. (2021), who identified inadequate access to finance, entrepreneurship training, and mentorship as major constraints confronting young entrepreneurs in Northern Nigeria. Thus, the findings suggest that the respondents perceive digital literacy and entrepreneurship as complementary competencies capable of enhancing employability and self-sustenance among youths. However, they also recognize that maximizing these benefits requires improvements in digital infrastructure, entrepreneurship education, institutional support, and access to financial resources.

CONCLUSION

The study concludes that final-year students at the College of Education Billiri, Gombe State, generally perceive digital literacy and entrepreneurship as essential for enhancing employability, self-sustenance, and economic stability. However, inadequate digital infrastructure, limited entrepreneurship training, and insufficient financial support remain major barriers. Therefore, strengthening digital infrastructure, expanding digital and entrepreneurship education, and providing adequate institutional and financial support are necessary to improve youths' employability and promote sustainable self-reliance.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations were proposed:

1. Government and other relevant stakeholders such as educational institutions, technology companies, private sector organizations, development partners, and non-governmental organizations (NGOs) should strengthen digital infrastructure by expanding reliable internet access, improving the availability of digital devices, integrating practical digital literacy and entrepreneurship education into the curriculum, establishing business incubation centres, and training students to leverage digital platforms for job search, e-commerce, digital marketing, freelancing, and online service delivery.
2. Government, financial institutions, educational institutions, development partners, private sector organizations, non-governmental organizations (NGOs), and technology companies should collaborate to provide entrepreneurship training, mentorship, startup funding, and free or subsidized access to digital devices, software, internet services, and



online learning platforms to enhance youths' employability, entrepreneurial success, and economic self-reliance.

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