Awareness and Utilisation of Infopreneurship Opportunities for Job Creation Among Undergraduate Students in Adamawa State Universities, Nigeria

By

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Abstract

The high rate of unemployment among graduates in Nigeria is a source of concern to governments at all levels. Despite the growing number of universities and other higher institutions in the country, coupled with the increasing number of graduates that these institutions are producing annually, the job opportunities available from both public and private sectors for these graduates remain grossly inadequate. This is why there are growing calls for students to embrace entrepreneurship opportunities as a means for self-employment and job creation even before graduation. Infopreneurship, being a branch of entrepreneurship, involves the process of creating, packaging, marketing, and selling information products and services for profit using digital or traditional platforms. This study investigates the awareness and utilisation of infopreneurship opportunities for job creation among undergraduate students in Adamawa State Universities, Nigeria. The study aims to determine the level of awareness of infopreneurship opportunities, the extent of utilisation of infopreneurship opportunities for job creation, and the challenges affecting students' utilisation of infopreneurship activities for job creation in Adamawa State Universities, Nigeria. One null hypothesis was tested at the 0.05 level of significance. The study was quantitative in nature and adopted a descriptive survey research design. The population of the study comprised undergraduate students in the two (2) universities in Adamawa State, Nigeria. Multi-Stage sampling techniques were employed in selecting the sample that participated in the study. A questionnaire was used as the instrument for data collection, which was validated by three (3) experts. Data collected were analysed using mean and standard deviation, while Pearson Product Moment Correlation (PPMC) was used to test the null hypothesis. The findings revealed that undergraduate students in Adamawa State universities had a high level of awareness of infopreneurship opportunities; the level of utilization of infopreneurship opportunities was to a **low extent;** the challenges hindering the utilization of infopreneurship opportunities among undergraduate students were generally high. Moreover, the study indicated that there is a significant relationship between awareness of infopreneurship opportunities and the utilisation of infopreneurship opportunities for job creation among undergraduate students in Adamawa State universities, Nigeria. Recommendations were made based on the findings of the study.

Keywords: Infopreneurship, Job Creation, Undergraduate Students, Adamawa State, Nigeria.

Introduction

The increasing rate of graduate unemployment has become one of the most persistent socio-economic challenges confronting developing countries, particularly Nigeria. Despite the expansion of higher education and the increasing number of university graduates produced annually, employment opportunities in both the public and private sectors have remained inadequate to absorb the growing labour force. Consequently, policymakers, educational institutions, and development agencies have continued to advocate entrepreneurship as a viable strategy for promoting self-employment, innovation, and sustainable economic development. Within this context, infopreneurship has emerged as a promising entrepreneurial pathway that enables individuals to create, package, market, and commercialize information products and information-based services for income generation and job creation. Recent evidence indicates that infopreneurship is increasingly recognized as a critical component of the knowledge economy and an important driver of youth employment, digital innovation, and wealth creation (Amakiri, 2025).

The digital transformation witnessed across the globe has significantly altered the production, dissemination, and consumption of information. Advances in information and communication technologies (ICTs), artificial intelligence, cloud computing, social media platforms, digital publishing, e-commerce, and mobile technologies have created numerous opportunities for individuals to establish information-based enterprises with relatively low start-up capital. These developments have expanded the scope of infopreneurship beyond traditional information services to include digital content creation, online tutoring, research consultancy, information brokerage, data analytics, web design, digital marketing, academic editing, electronic publishing, virtual assistance, and knowledge management services. Consequently, information has become not only a strategic resource but also an economic commodity capable of generating employment and contributing to national productivity (Mubofu & Malekani, 2023).

Infopreneurship refers to the entrepreneurial process of identifying information needs within society and developing innovative information products or services that satisfy those needs while generating economic value. Unlike conventional entrepreneurship, which often focuses on the production of physical goods, infopreneurship emphasizes the commercialization of knowledge, information resources, and intellectual capital. The growing relevance of infopreneurship is attributable to the emergence of the knowledge economy, where competitive advantage increasingly depends on the creation, management, and utilisation of information. Contemporary studies have shown that infopreneurship contributes significantly to employment generation by enabling graduates to establish independent businesses based on information expertise and digital competencies (Amakiri, 2025).

Universities occupy a strategic position in preparing students for participation in the digital economy through entrepreneurship education, digital literacy programmes, and innovation initiatives. In Nigeria, entrepreneurship education has been institutionalized across universities to equip graduates with practical competencies that can reduce dependence on paid employment. Nevertheless, while considerable attention has been devoted to conventional entrepreneurial ventures such as agriculture, fashion, and manufacturing, comparatively less emphasis has been placed on information-based entrepreneurship despite its enormous employment potential. Recent research among Nigerian Library and Information Science graduates found a high level of readiness to engage in infopreneurship and technopreneurship, particularly in research services, current awareness services, information repackaging, publishing, abstracting, and document

delivery, suggesting substantial prospects for graduate self-employment (Sulyman, Ajani, Idowu, & Badmus, 2024).

Awareness constitutes one of the most important determinants of entrepreneurial participation. Awareness involves the extent to which individuals possess knowledge of available entrepreneurial opportunities, understand their potential benefits, and recognize the competencies required for successful participation. Students who are adequately informed about infopreneurship opportunities are more likely to develop entrepreneurial intentions, acquire relevant digital skills, and establish information-based enterprises. However, awareness alone does not necessarily translate into effective utilisation. The utilisation of infopreneurship opportunities depends on several enabling factors, including digital competence, access to ICT infrastructure, entrepreneurial training, mentorship, financial support, institutional encouragement, and favourable government policies. A systematic review of infopreneurship literature emphasizes that although opportunities continue to expand globally, challenges such as inadequate digital infrastructure, insufficient entrepreneurial skills, limited financing, and weak institutional support continue to constrain participation among graduates (Mubofu & Malekani, 2023).

Recent empirical studies in Nigeria have demonstrated increasing interest in infopreneurship among university students. For example, a study of Library and Information Science undergraduates reported that students were generally aware of infopreneurship opportunities, with business centres, photocopying, printing, lamination, and information services being among the most preferred ventures. However, inadequate funding, limited practical exposure, and insufficient access to modern technological facilities were identified as major barriers to effective participation. More recent studies have further recommended strengthening practical entrepreneurship education, expanding digital skills training, and integrating infopreneurship more comprehensively into university curricula to enhance graduate employability and self-reliance Oloniruha *et al*., 2023).

In recent years, the concept of infopreneurship has evolved beyond Library and Information Science to encompass multidisciplinary digital entrepreneurship. The emergence of artificial intelligence tools, online learning platforms, freelance marketplaces, social media monetization, podcasting, digital publishing, and content creation has broadened the spectrum of information-based businesses accessible to undergraduate students regardless of their academic disciplines. Recent evidence also suggests that entrepreneurial curiosity, innovativeness, and digital competence significantly influence students' intentions to engage in infopreneurial activities, reinforcing the importance of entrepreneurial orientation in higher education (Adegbilero, 2026).

Adamawa State, located in North-Eastern Nigeria, hosts several universities comprising federal, state, and private institutions that collectively produce thousands of graduates annually. Similar to other parts of Nigeria, the state continues to experience rising youth unemployment and underemployment, thereby increasing the importance of entrepreneurship as an alternative pathway to economic empowerment. Despite the enormous opportunities presented by the digital economy, there is limited empirical evidence regarding the level of awareness and utilisation of infopreneurship opportunities among undergraduate students across universities in Adamawa State. Existing studies have largely concentrated on Library and Information Science students or institutions located in other geopolitical zones, leaving an important knowledge gap concerning undergraduate students in Adamawa State.

Against this background, the present study investigates the awareness and utilisation of infopreneurship opportunities for job creation among undergraduate students in universities in Adamawa State, Nigeria. Specifically, the study seeks to determine students' level of awareness of available infopreneurship opportunities, examine the extent to which these opportunities are utilized for income generation and self-employment, identify factors influencing their utilisation, and provide evidence that can guide universities, policymakers, entrepreneurship educators, and development agencies in designing interventions that strengthen graduate employability and promote sustainable job creation through information-based entrepreneurship. The findings are expected to contribute to the growing body of literature on infopreneurship, digital entrepreneurship, and youth employment within the Nigerian higher education context.

Statement of the Problem

Youth unemployment remains one of the most pressing socio-economic challenges confronting Nigeria despite the increasing number of graduates produced annually by universities. Although entrepreneurship education has been institutionalized in Nigerian universities to promote self-reliance and reduce dependence on paid employment, graduate unemployment continues to rise, suggesting that many students are yet to acquire or effectively utilize entrepreneurial competencies that can translate into sustainable livelihoods. The emergence of the digital economy has created numerous information-based business opportunities through infopreneurship, enabling individuals to commercialize information products and services such as digital publishing, content creation, online tutoring, research consultancy, information brokerage, web design, digital marketing, data analysis, and academic editing. These opportunities require relatively low start-up capital and offer viable alternatives for employment generation among university graduates (Friday & Sawyer-George, 2023).

Despite these opportunities, evidence from recent studies indicates that many undergraduate students possess limited awareness of the wide range of infopreneurship opportunities available within the knowledge economy. Even among students who are aware of such opportunities, the level of actual utilisation remains relatively low due to inadequate digital competencies, limited entrepreneurial training, poor access to ICT facilities, lack of mentorship, financial constraints, and insufficient institutional support (Liman & Shuaibu, 2024). Consequently, many graduates continue to rely almost exclusively on scarce formal employment opportunities instead of exploiting information-based entrepreneurial ventures capable of generating income and creating jobs.

Existing empirical studies on infopreneurship in Nigeria have largely focused on Library and Information Science students or graduates, information professionals, or single institutions in a few states. While these studies have provided useful insights into awareness and participation in infopreneurship, they do not adequately represent undergraduate students from diverse academic disciplines. Furthermore, little empirical evidence exists on the awareness and utilisation of infopreneurship opportunities among undergraduate students in universities located in Adamawa State, Nigeria. This creates a significant knowledge gap, particularly because the state continues to experience increasing youth unemployment and possesses expanding digital infrastructure that could support information-based entrepreneurship.

Without empirical evidence on undergraduate students' awareness and utilisation of infopreneurship opportunities, universities, policymakers, entrepreneurship educators, and development agencies may find it difficult to design effective interventions that promote digital entrepreneurship and graduate self-employment. There is therefore a need to investigate the level

of awareness of infopreneurship opportunities among undergraduate students in Adamawa State universities, determine the extent to which these opportunities are utilized for job creation, identify the factors influencing their utilisation, and generate evidence that can inform policies and programmes aimed at strengthening entrepreneurship education, digital skills development, and sustainable youth employment. It is this gap in knowledge that the present study seeks to address.

Objectives of the Study

The main objective of this study is to investigate the awareness and utilisation of infopreneurship opportunities for job creation among undergraduate students in Adamawa State universities, Nigeria. The specific objectives are to:

1. Determine the level of awareness of infopreneurship opportunities among undergraduate students in Adamawa State universities, Nigeria.
2. Examine the extent of utilisation of infopreneurship opportunities for job creation among undergraduate students in Adamawa State universities, Nigeria.
3. Determine the challenges hindering the utilisation of infopreneurship opportunities for job creation among undergraduate students in Adamawa State universities, Nigeria.

Research Questions

The following research questions will guide the study:

1. What is the level of awareness of infopreneurship opportunities among undergraduate students in Adamawa State universities, Nigeria?
2. To what extent do undergraduate students in Adamawa State universities, Nigeria, utilize infopreneurship opportunities for job creation?
3. What challenges hinder the utilisation of infopreneurship opportunities for job creation among undergraduate students in Adamawa State universities, Nigeria?

Research Hypotheses

H_{01}: There is no significant relationship between awareness of infopreneurship opportunities and the utilisation of infopreneurship opportunities for job creation among undergraduate students in Adamawa State universities, Nigeria.

Literature Review

Infopreneurship is an emerging dimension of entrepreneurship that focuses on the creation, processing, packaging, dissemination, and commercialization of information products and services for economic benefits. It involves transforming information resources, knowledge, and intellectual abilities into marketable products and services capable of generating income and employment opportunities. Unlike traditional entrepreneurship, which is largely concerned with physical goods and tangible resources, infopreneurship is driven by knowledge, digital technologies, information management skills, and innovation. The growing importance of infopreneurship is linked to the transition from an industrial economy to a knowledge-based economy where information has become a valuable economic resource. The increasing availability of digital platforms, social media, online marketplaces, and communication technologies has created opportunities for individuals, especially young graduates, to develop information-based enterprises with minimal physical infrastructure. Such ventures include digital content creation, blogging, online training, information brokerage, research consultancy, database development, electronic publishing, document management, digital marketing, graphic design, and web-based information services (Mubofu & Malekani, 2023).

Awareness is the extent to which individuals possess knowledge and understanding of available opportunities, resources, and strategies within a particular field. In the context of infopreneurship, awareness refers to students' knowledge of information-based business opportunities, the skills required to exploit them, and their potential contribution to employment generation. Oloniruha et al. (2023) investigated infopreneurship awareness and opportunities among Library and Information Science students in Prince Abubakar Audu University, Anyigba, Kogi State, Nigeria. The study was motivated by the problem of graduate unemployment and examined the level of awareness of infopreneurship among LIS undergraduate students. The study reported considerable awareness of infopreneurship and identified activities such as printing, photocopying, lamination, and other information-related business services as opportunities available to students. The study is particularly relevant to the present study because both examined infopreneurship among university students in Nigeria, although the present study focuses specifically on students in Adamawa State universities.

Moreover, Bamgbose (2021) conducted a comparative study on the influence of demographic factors on the interest of LIS undergraduates in infopreneurship. The study employed a descriptive survey design and used systematic sampling to select 226 LIS undergraduate students. The study focused on students from the University of Ibadan and Tai Solarin University of Education and examined the influence of demographic factors on their interest in infopreneurship. The study established the relevance of infopreneurship as a potential avenue for self-employment among LIS students, suggesting that students can develop income-generating activities before graduation rather than depend exclusively on conventional library employment.

Furthermore, Akidi and Udoh (2021) examined infopreneurship skills for sustainable development: A focus on library and information science students of selected federal universities in Nigeria. The researchers adopted a descriptive survey design and investigated infopreneurship opportunities, motivational factors, required skills, methods of acquiring infopreneurship skills, challenges, and strategies for improving infopreneurship development among LIS students. The study found that LIS students could engage in several information-based entrepreneurial activities, but inadequate skills and other institutional and environmental constraints could limit their ability to exploit information as an economic resource. The study is closely related to the present research because it demonstrates that awareness of infopreneurship opportunities does not necessarily guarantee effective utilisation; students also require appropriate entrepreneurial, technical, and information-management skills.

Utilisation refers to the actual application or adoption of available opportunities for practical purposes. While awareness provides the foundation for entrepreneurial engagement, utilisation reflects whether individuals actively participate in infopreneurial activities. For undergraduate students, utilisation of infopreneurship opportunities can contribute to personal income generation, skill development, and employment creation. Okolie et al. (2021) investigated entrepreneurial competencies of undergraduate students of universities in Nigeria. The study examined the extent to which entrepreneurship education influences the development of entrepreneurial competencies among Nigerian undergraduates. The findings indicated that entrepreneurship education significantly influenced five of the thirteen entrepreneurial competencies examined, including opportunity recognition. The study concluded that participation in entrepreneurship education can contribute to the development of important entrepreneurial competencies and recommended more practical rather than predominantly theoretical entrepreneurship programmes. This finding is important to the present study because awareness of an infopreneurship opportunity may be

insufficient if students do not possess the competencies required to identify, evaluate, and exploit the opportunity. Thus, the low awareness/utilisation of printing, photocopying, scanning and document-related services found among students in Adamawa State could partly reflect inadequate practical entrepreneurial exposure.

In addition, Amao-Taiwo, Shittu and Yinusa (2023) investigated higher education student entrepreneurship support services: implications for the development of entrepreneurial skills. The study employed a mixed-method design involving 2,394 students and six directors of entrepreneurship centres from public and private universities in Lagos and Ogun States. Quantitative data were analysed using frequencies, means, standard deviations, and Pearson Product Moment Correlation, while qualitative data were analysed thematically. The study found a significant positive relationship between student support services and entrepreneurship skills development ($r = .42$, $p = .01$). The researchers concluded that university support services constitute an important driver of entrepreneurship development and recommended personalised support, mentoring, internships, competitions and seed funding. The implication for the present study is that the low awareness and utilisation of infopreneurship opportunities among students may not be attributable solely to individual student characteristics. Institutional support, entrepreneurship centres, mentoring, practical training, access to facilities and funding may determine whether students can translate awareness into actual entrepreneurial activity.

Also, Enang (2023) examined digital entrepreneurial skills and competencies required from Business Education students to work in the digital era. The study emphasised that inadequate digital entrepreneurial competencies can reduce students' effectiveness in business activities and their competitiveness in the digital economy. The study argued for the integration of digital entrepreneurial competencies into educational curricula and recommended that institutions provide the resources and enabling environment required for students to acquire these competencies. This finding supports the argument that students' inability to effectively utilise infopreneurship opportunities may be associated with insufficient digital and entrepreneurial competencies.

Similarly, Sunoma and Adamu (2026) examined the mediating role of entrepreneurial self-efficacy on the relationship between digital competence, entrepreneurship education, and digital entrepreneurial intention of university students in North-Eastern Nigeria. Using a quantitative cross-sectional design and structural equation modelling, the study examined university students across the six states of North-Eastern Nigeria. The results showed that digital competence and entrepreneurship education alone were not sufficient to produce strong digital entrepreneurial intention. Rather, entrepreneurial self-efficacy significantly strengthened their effects on digital entrepreneurial intention. This study is particularly important to research conducted in Adamawa State because it provides recent empirical evidence from the same geopolitical zone. It suggests that providing entrepreneurship education or digital skills alone may not automatically result in entrepreneurial behaviour. Students must also develop confidence in their ability to identify opportunities, establish businesses, and overcome entrepreneurial challenges.

Furthermore, Pham et al. (2024) examined antecedents of digital entrepreneurial intention among engineering students. The study surveyed 345 engineering students in three universities in Hanoi, Vietnam, and used structural equation modelling to examine the relationships among digital entrepreneurial education, digital entrepreneurial knowledge, digital entrepreneurial self-efficacy, attitudes, and digital entrepreneurial intention. The results showed that digital entrepreneurial knowledge significantly and positively affected both entrepreneurial self-efficacy and attitudes

toward digital entrepreneurship. Digital entrepreneurial education also positively affected knowledge and self-efficacy, while entrepreneurial self-efficacy positively influenced attitudes, and attitudes positively influenced digital entrepreneurial intention. The study reinforces the importance of knowledge, skills, self-efficacy, and educational exposure in transforming students from passive observers of entrepreneurial opportunities into potential entrepreneurs. It therefore provides a useful explanation for differences between students who are aware of infopreneurship opportunities and those who actually utilise them.

Methodology

The study adopted a descriptive survey research design. The design is considered appropriate because the study sought to investigate the awareness and utilisation of infopreneurship opportunities for job creation among undergraduate students in Adamawa State universities, Nigeria. The population of the study comprised all registered undergraduate students. They are 11,261 in Adamawa State University (ADSU), Mubi, and 15,531 in Modibbo Adama University (MAU), Yola, Adamawa State, Nigeria. The sample size was determined using Taro Yamane's (1967) formula and yielded a sample size of 394. A multi-stage sampling technique was employed. First, universities were selected based on ownership category (Federal and State). Second, faculties were selected to ensure representation of different academic disciplines. Finally, undergraduate students were selected using a simple random sampling technique to give every student an equal opportunity of participation. The questionnaire was subjected to face and content validity by experts in Library and Information Science. The researchers administered copies of the questionnaire directly to sampled undergraduate students with the assistance of trained research assistants. The data collected were analysed using descriptive statistics employing mean and standard deviation, while inferential statistics were used to test the null hypothesis using PPMC at the 0.05 level of significance.

Data Analysis

Out of the three hundred and ninety-four (394) copies of the questionnaire administered, three hundred and twenty-one (321) were filled, returned, and found usable for the study, representing 81.5%.

Research Question One: What is the level of awareness of infopreneurship opportunities among undergraduate students in Adamawa State universities, Nigeria?

S/N	Awareness of Infopreneurship Opportunities	N	Mean	Std	Decision
1	I am aware that information can be converted into a business opportunity.	**321**	3.62	0.68	Very High
2	I am aware of online information-based businesses.	**321**	2.23	0.99	Low
3	I am aware of digital content creation as an entrepreneurial opportunity.	**321**	3.21	0.70	High
4	I am aware that blogging and online publishing can generate income.	**321**	3.58	0.74	Very High
5	I am aware of research and information consultancy services as business opportunities.	**321**	3.57	0.80	Very High
6	I am aware of online tutoring and training services as sources of income.	**321**	3.04	0.81	High
7	I am aware of digital marketing and social media management opportunities.	**321**	3.11	0.89	High
8	I am aware of web design and information technology-related business opportunities.	**321**	3.12	0.83	High
9	I am aware of printing, photocopying, scanning, and document services as information businesses.	**321**	2.16	0.94	Low
10	I understand the concept and benefits of infopreneurship.	**321**	3.29	0.64	High
	Cluster Mean		**3.09**	**0.80**	**High**

Source: Field Survey, 2026

Table 1 showed the analysis of the level of awareness of infopreneurship opportunities among undergraduate students in Adamawa State universities, Nigeria. The findings revealed that undergraduate students in Adamawa State universities had a high level of awareness of infopreneurship opportunities, with an overall mean of 3.09 and a standard deviation of 0.80. The highest awareness was recorded in the ability to convert information into business opportunities (Mean = 3.62; Std = 0.68), followed by blogging and online publishing (Mean = 3.58; Std = 0.74) and research and information consultancy services (Mean = 3.57; Std = 0.80), all rated very high. Awareness was also high regarding digital content creation, web design and ICT-related businesses, digital marketing and social media management, online tutoring, and the concept and benefits of infopreneurship. However, respondents demonstrated low awareness of online information-based businesses (Mean = 2.23; Std = 0.99) and printing, photocopying, scanning, and document services as information businesses (Mean = 2.16; Std = 0.94). Overall, the finding indicates that students possess a good general awareness of infopreneurship, particularly with respect to popular digital opportunities, but their awareness of some specific information-based business models remains limited.

Research Question Two: To what extent do undergraduate students in Adamawa State universities, Nigeria, utilise infopreneurship opportunities for job creation?

S/N	Utilisation of Infopreneurship Opportunities	N	Mean	Std	Decision
1	I create and sell digital information content.	**321**	2.52	0.91	High
2	I provide online tutoring or training services.	**321**	2.18	0.94	Low
3	I engage in research assistance and information consultancy services.	**321**	2.09	0.91	Low
4	I provide typing, printing, photocopying, scanning, and document processing services.	**321**	2.77	0.86	High
5	I engage in blogging, online publishing, or content writing.	**321**	2.16	0.94	Low
6	I provide social media management or digital marketing services.	**321**	2.17	0.89	Low
7	I engage in graphic design and digital content development.	**321**	2.06	0.88	Low
8	I provide web design or technology-based information services.	**321**	1.07	1.12	Very Low
9	I use online platforms to market information products or services.	**321**	2.20	0.92	Low
10	Infopreneurship activities contribute to my income generation.	**321**	2.86	0.92	High
	Cluster Mean		**2.21**	**0.93**	**Low**

Source: Field Survey, 2026

Table 2 showed the analysis on the extent of utilisation of infopreneurship opportunities for job creation among undergraduate students in Adamawa State universities, Nigeria. The findings revealed that undergraduate students in Adamawa State universities utilise infopreneurship opportunities to a low extent, with a cluster mean of 2.21 and a standard deviation of 0.93. The highest utilisation was recorded for typing, printing, photocopying, scanning and document processing services (Mean = 2.77; Std = 0.86), followed by income-generating infopreneurship activities (Mean = 2.86; Std = 0.92) and creating and selling digital information content (Mean = 2.52; Std = 0.91). However, utilisation of online tutoring, information consultancy, blogging, digital marketing, graphic design, online marketing and technology-based information services was generally low. Web design and technology-based information services recorded the lowest utilisation (Mean = 1.07; Std = 1.12). Overall, the result indicates an awareness–utilisation gap, suggesting that although students may be aware of infopreneurship opportunities, they have not sufficiently translated this awareness into practical activities for income generation and job creation.

Research Question Three: What challenges hinder the utilisation of infopreneurship opportunities for job creation among undergraduate students in Adamawa State universities, Nigeria?

S/N	Challenges Hindering Utilisation of Infopreneurship Opportunities	N	Mean	Std	Decision
1	Lack of awareness limits students' participation in infopreneurship.	**321**	3.09	0.81	High
2	Poor internet connectivity affects participation in online information businesses.	**321**	3.10	0.87	High
3	Lack of adequate digital skills discourages students from engaging in infopreneurship.	**321**	3.43	0.69	Very High
4	Lack of startup capital prevents students from establishing information businesses.	**321**	3.19	0.83	High
5	Inadequate ICT facilities in universities limit participation.	**321**	3.07	0.85	High
6	Lack of mentorship reduces students' confidence in infopreneurship.	**321**	3.12	0.86	High
7	Limited knowledge of business management affects sustainability.	**321**	3.30	0.70	Very High
8	Insufficient university support affects students' entrepreneurial activities.	**321**	2.88	1.05	High
	Cluster Mean		**3.15**	**0.83**	**High**

Source: Field Survey, 2026

Table 3 showed the analysis of the challenges hindering the utilisation of infopreneurship opportunities for job creation among undergraduate students in Adamawa State universities, Nigeria. The findings showed that challenges hindering the utilisation of infopreneurship opportunities among undergraduate students were generally high, with an overall mean of 3.15 (SD = 0.83). The most serious challenges were lack of adequate digital skills (Mean = 3.43; Std = 0.69) and limited knowledge of business management (Mean = 3.30; Std = 0.70), both rated very high. Other significant challenges include lack of start-up capital, poor internet connectivity, inadequate ICT facilities, lack of mentorship, insufficient awareness, and inadequate university support. Overall, the findings suggest that although students may be aware of infopreneurship opportunities, skills deficiencies, financial constraints, inadequate infrastructure, limited mentorship, and weak institutional support substantially hinder their ability to utilise these opportunities for job creation.

Hypothesis Testing

H_{01}: There is no significant relationship between awareness of infopreneurship opportunities and the utilisation of infopreneurship opportunities for job creation among undergraduate students in Adamawa State universities, Nigeria.

Table 4: Significant relationship between awareness of infopreneurship opportunities and the utilisation of infopreneurship opportunities.

		Awareness of Infopreneurship Opportunities	Utilisation of Infopreneurship Opportunities	Decision
Awareness of Infopreneurship Opportunities	Pearson Correlation	1	.119*	Not Significant
	Sig. (2-tailed)		.046	
	N	**321**	**321**	
Utilisation of Infopreneurship Opportunities	Pearson Correlation	.119*	1	
	Sig. (2-tailed)	.046		
	N	**321**	**321**	

Source: Field Survey, 2026

Table 4 presents the results of the Pearson Product-Moment Correlation (PPMC) analysis conducted to determine the relationship between awareness of infopreneurship opportunities and the utilisation of infopreneurship opportunities for job creation among undergraduate students in Adamawa State universities, Nigeria. Since the probability value (**p = 0.046**) is less than the **0.05** level of significance, the **null hypothesis (H_{03})** is **rejected**. Therefore, it is concluded that there is a significant relationship between awareness of infopreneurship opportunities and the utilisation of infopreneurship opportunities for job creation among undergraduate students in Adamawa State universities, Nigeria.

Summary of Findings

Based on the analysis and presentation of data, the following are the summary of findings:

1. The findings revealed that undergraduate students in Adamawa State universities had a high level of awareness of infopreneurship opportunities.
2. The findings revealed that undergraduate students in Adamawa State universities utilise infopreneurship opportunities to a **low extent.**
3. The findings further showed that challenges hindering the utilisation of infopreneurship opportunities among undergraduate students were generally high.
4. Moreover, the study indicated that there is a significant relationship between awareness of infopreneurship opportunities and the utilisation of infopreneurship opportunities for job creation among undergraduate students in Adamawa State universities, Nigeria.

Discussion of Findings

The finding revealed that undergraduate students in Adamawa State universities had a high level of awareness of infopreneurship opportunities. This indicates that the students generally possess considerable knowledge of the opportunities available for transforming information, digital knowledge, and information-related skills into income-generating activities. The finding is encouraging because awareness is an important prerequisite for recognising entrepreneurial opportunities and developing the intention to participate in information-based businesses. The

finding is consistent with Oloniruha et al. (2023), who investigated infopreneurship awareness and opportunities among Library and Information Science students at Prince Abubakar Audu University, Anyigba, Kogi State. Their study found that the majority of the students were aware of infopreneurship as a means of creating employment. The researchers further reported that business-centre activities such as photocopying, printing and lamination were among the common forms of infopreneurship preferred by students. However, the present finding differs somewhat from the specific pattern reported by Oloniruha et al. (2023). While their respondents identified printing, photocopying, and lamination relatively strongly, students in Adamawa State recorded low awareness of printing, photocopying, scanning and document services. This difference may be attributable to differences in students' academic backgrounds, institutional environments, exposure to entrepreneurship education and the extent to which traditional information businesses are incorporated into university entrepreneurship programmes. The present finding is also supported by Bamgbose (2021), which found generally positive responses concerning students' interest in infopreneurship and emphasized its potential to provide self-employment opportunities for students before graduation.

Furthermore, the finding of the study revealed that undergraduate students in Adamawa State universities utilise infopreneurship opportunities for job creation to a low extent. Although students reported relatively high utilisation of typing, printing, photocopying, scanning and document-processing services, as well as income-generating infopreneurship activities generally, their participation in more advanced information and digital entrepreneurial activities was low. This finding suggests that undergraduate students have not sufficiently converted information and digital competencies into diverse entrepreneurial activities capable of generating sustainable income and employment. The finding is consistent with Okolie et al. (2021), who found that entrepreneurship education was positively associated with opportunity recognition, opportunity assessment, creative problem-solving, self-efficacy, and networking, but was not significantly associated with several other competencies, including resource leveraging, innovation, and resilience. The present finding also agrees with Amao-Taiwo, Shittu and Yinusa (2023), who found a significant positive relationship between student support services and entrepreneurship skills development. A particularly relevant comparison can be made with Sunoma and Adamu (2026), who found that digital competence and entrepreneurship education alone were not sufficient to produce strong digital entrepreneurial intentions; rather, entrepreneurial self-efficacy strengthened their effects.

Furthermore, the study revealed that the challenges hindering the utilisation of infopreneurship opportunities for job creation among undergraduate students in Adamawa State universities were generally high**.** The finding indicates that, although students have considerable awareness of infopreneurship opportunities, they face substantial barriers in converting such awareness into practical entrepreneurial activities. The most serious challenges were a lack of adequate digital skills and limited knowledge of business. Other important constraints included lack of start-up capital, poor internet connectivity, inadequate ICT facilities, lack of mentorship, insufficient awareness, and inadequate university support. The result therefore suggests that the low utilisation of infopreneurship opportunities is not necessarily due to students' unwillingness to become infopreneurs, but rather to a combination of skills, financial, infrastructural and institutional constraints**.** The finding is strongly supported by Akidi and Udoh (2021)**,** who found that inadequate skills constitute a major obstacle to exploiting information as an economic resource. The result is also consistent with Enang (2023), who argued that inadequate digital entrepreneurial

competencies reduce students' effectiveness in business activities and their competitiveness in the digital economy.

The hypothesis tested revealed that there is a statistically significant relationship between awareness of infopreneurship opportunities and their utilisation for job creation among undergraduate students in Adamawa State universities, Nigeria. The finding indicates that students' awareness of available infopreneurship opportunities is significantly associated with their utilisation of such opportunities. This suggests that students who possessed greater awareness of infopreneurship opportunities may be more likely to recognise and engage in information-based entrepreneurial activities that can provide employment and income-generating opportunities. The finding is consistent with Oloniruha et al. (2023), who reported a considerable level of awareness of infopreneurship opportunities among students and identified activities such as printing, photocopying, and other information-related business services as areas through which students could engage in entrepreneurial activities. The finding also agrees with Okolie et al. (2021), who found that entrepreneurship education was positively associated with important entrepreneurial competencies, including opportunity recognition, opportunity assessment, creative problem-solving, self-efficacy, and networking. Similarly, Pham et al. (2024) found that digital entrepreneurial knowledge was positively related to entrepreneurial self-efficacy and attitudes among university students, while self-efficacy and attitudes were associated with digital entrepreneurial intention.

Conclusion

Based on the findings of the study, it can be concluded that undergraduate students in Adamawa State universities possessed a high level of awareness of infopreneurship opportunities, indicating that they have considerable knowledge of the potential of information-related activities as avenues for income generation and job creation. However, despite this high level of awareness, the students' level of utilisation of infopreneurship opportunities was to a low extent. This suggests that awareness of available opportunities does not necessarily translate into actual participation or entrepreneurial practice. The study further concludes that challenges hindering the utilisation of infopreneurship opportunities were generally high among undergraduate students. These challenges may limit students' ability to transform their awareness and interest into viable information-based entrepreneurial activities.

The study established a significant relationship between awareness of infopreneurship opportunities and their utilisation for job creation among undergraduate students in Adamawa State universities. This finding implies that increased awareness is associated with students' utilisation of infopreneurship opportunities. The study concludes that infopreneurship has considerable potential as an avenue for addressing graduate unemployment and promoting job creation among undergraduate students in Adamawa State universities. However, this potential cannot be fully realised through awareness alone. There is a need for universities and relevant stakeholders to complement awareness programmes with practical training, adequate infrastructure, access to funding, reliable internet services, and supportive entrepreneurial environments that enable students to convert identified infopreneurship opportunities into sustainable income-generating ventures.

Recommendations

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

1. Universities in Adamawa State should incorporate practical infopreneurship training into entrepreneurship and relevant academic programmes. The training should expose students to practical opportunities such as digital publishing, printing, photocopying, scanning, online information services, information consultancy, content creation, and other information-based businesses.
2. Universities in Adamawa State should establish and strengthen entrepreneurship support centres for students. Such centres should provide students with practical training, mentoring, business advisory services, access to relevant ICT facilities and opportunities to acquire hands-on experience in infopreneurship.
3. Government, universities and other relevant stakeholders should address the challenges hindering students' utilisation of infopreneurship opportunities by improving access to reliable electricity, internet connectivity, ICT infrastructure, modern equipment and affordable digital services.
4. Universities in Adamawa State should regularly organise entrepreneurship seminars, workshops, exhibitions, business competitions and innovation programmes that encourage students to apply their knowledge in real-life situations.

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