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Information Literacy on Fake-News Detection among Postgraduate Students across Selected Universities in Ekiti State, Nigeria.

Abstract

This study examined how information literacy skills influence the ability of postgraduate students across selected universities in Ekiti-State, Nigeria, to detect fake news. In the light of the increasing spread of misinformation online, the study assessed how postgraduate students engage with digital literacy. The study adopted a survey research design, collecting data from 363 postgraduate students through structured questionnaires which were analyzed using frequency counts, percentage, mean scores, and inferential statistical techniques. Findings revealed a high level of fake news detection among the respondents, indicating their competence in identifying misleading or false information across digital. Postgraduate Students demonstrated strong ability to cross-check sources, use fact-checking tools, apply critical thinking, and recognize the societal impact of fake news. The study revealed there is a significant positive relationship between information literacy and fake news detection literacy (r = 0.399**, P < 0.05) digital literacy digital skills (r = 0.149**, P < 0.05), the study also revealed a significant positive relationship between digital skills and fake news detection, thereby indicating that information literacy and digital skills enhances the ability to identify misinformation. The study concludes that information literacy, digital skills and fake news detection recommends embedding structured media programs into postgraduate curricula.

Elijah Babatunde AJAYI
orcid.org/0009-0004-6785-5019
ajayielijah1234@gmail.com

Samson Olaoluwa AMOSU[1]
orcid.org/0009-0006-6701-795X
samson.amosu@fuoye.edu.ng

Temitope Olalekan AJILA
ajilatemitopeworld@gmail.com

Benjamin Kwabena OSEI[2]
oseibk@abuad.edu.ng

[1]University Library,
Federal University Oye-Ekiti,
Ekiti State.

[2]University Library,
Afe Babalola University,
Ekiti State.

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Introduction

The advancement of the digital age has revolutionized the way people access and share information. While digital technologies and the internet have expanded access to knowledge, they have also intensified the spread of misinformation and fake news, which may have far-reaching consequences on individuals, communities, and society at large. Fake news characterized by sharing false or misleading information presented as factual is particularly dangerous, as it can manipulate public opinion, create confusion, and cause harm. Educational interventions aimed at enhancing digital literacy have been shown to improve individuals' abilities to detect fake news. Robertson et al. (2024) evaluated the effectiveness of different digital literacy interventions, including critical thinking exercises and training modules. Digital literacy encompasses not only the proficient use of digital tools but also a critical understanding of how information is disseminated online and the various techniques employed to manipulate public opinion.

Digital technologies have made information literacy more critical in the context of fake news, as people must not only be able to locate information but also evaluate its credibility and relevance to avoid misinformation and disinformation (Osborne, 2018; Tiernan et al., 2023). According to Osborne (2018), information literacy goes beyond knowing how to search for information; it involves the ability to critically analyze sources, recognize biases, and understand the methods used to create content. The rise of artificial intelligence (AI) has added further complexity, with AI-generated misinformation, such as fabricated news stories and deepfake videos, posing significant challenges to verification and security (Tiernan et al., 2023).

Olanrewaju and Obot (2021) in their studies confirmed that social media platforms often prioritize user engagement over content accuracy, allowing fake news to spread more rapidly than verified information .There is a growing need for higher levels of digital literacy and critical thinking skills to navigate social media complexities and address the challenges of misinformation. Eze and Madueke (2021) found that individuals with low information literacy are significantly more vulnerable to believing and spreading misinformation, particularly on social media platforms. Orphan (2023) emphasized that the absence of

critical thinking and fact-checking skills increases the likelihood of sharing fake news in universities and society at large. Agina-Obu and Okwu (2023) further highlight that digital literacy enables university students to critically assess and engage with digital content. Postgraduate students, as both consumers and producers of academic information, must possess these digital skills to discern credibility and avoid spreading misinformation.

Fake news refers to fabricated information often presented as genuine or factual, intended to mislead, confuse, or manipulate information seekers. The rapid expansion of the internet and social media has accelerated the dissemination of fake news, posing substantial challenges to society and democratic processes (Surjatmodjo et al., 2024). Fake news can be propagated by various individuals, groups, or state entities using content designed to attract attention, influence public opinion, or advance political, social, or financial objectives (Adeyemi & Okoro, 2022).

Information literacy is critical in combating misinformation. According to the Association of College and Research Libraries (ACRL, 2022), it includes "the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge." The International Federation of Library Associations and Institutions (IFLA, 2021) similarly emphasizes that information literacy equips individuals with the skills to assess the credibility and quality of sources. However, studies such as Adewale and Olowu (2021) revealed that many university students, particularly in developing countries, still lack adequate information literacy competencies. Research by Olajire (2022) shows that many Nigerian postgraduate students struggle to retrieve information and critically evaluate sources, leaving them vulnerable to misinformation and fake news.

Digital skills are equally important for navigating the online environment and detecting fake news. Ng (2023) notes that these skills are essential for evaluating online information, identifying manipulative content, and making informed decisions. Van Laar et al. (2020) emphasized that digital competence which includes evaluating digital information and applying technology for critical thinking is crucial in combating misinformation. Vraga and Truly (2021) highlight that using digital tools for fact-checking and source evaluation is

a critical factor in identifying fake news. However, Bello and Aliyu (2022) indicate that students' digital skills remain underdeveloped in developing countries such as Nigeria. For postgraduate students in Ekiti State, assessing their digital competence is vital, as these skills directly affect their ability to detect misinformation in an increasingly digital information environment.

Despite extensive research on information literacy and fake news detection, there is a gap regarding studies focusing specifically on postgraduate students in Ekiti State, Nigeria. Therefore, investigating the relationship between information literacy and fake news detection in this context is critical. This study aims to provide insights that can inform digital and media literacy education, equipping students with the skills necessary to discern fake news and engage responsibly in the digital age.

Methodology

This study adopted survey research design as the instrument for data collection. A semi structured questionnaire was used for data collection with 363 postgraduate students in three universities in ekiti state, Federal University Oye-Ekiti (FUOYE), Ekiti State University (EKSU) and Afe Babalola University (ABUAD). A total of 328 copies were retrieved and valid for analysis with a response rate of 90.4%.

$$\text{Response Rate (\%)} = \frac{\text{Number of Questionnaire retrieved}}{\text{Number of Questionnaire Distributed}} \; x \; 100 \; = \frac{328}{363} \; x \; 100 = 90.36\% = 90.4$$

The reliability of the research instrument was assessed using Cronbach's alpha which yielded a coefficient of 0.78, indicating acceptable internal consistency. Data collected were analyzed using descriptive statistics, including frequency counts and percentages, to summarize demographic and response characteristics A frequency of occurrence were established using SPSS (Statistical Package for and Social Science) version 24.0. Furthermore, the hypotheses formulated in the introductory chapter of the study were tested using Pearson correlation coefficient analysis at 0.05 level of significance. The Pearson correlation coefficient were based on the scale value for each variable, rather than the raw data, ensuring accurate measurement of the relationships.

Result of the findings

Table 1 shows the Distribution of the Respondents by Demographic Variables in Universities in Ekiti State, Nigeria.

Table 1: Distribution of the Respondents by Demographic Variables

Institution	Frequency	Percentage
Afe Babalola University (ABUAD)	38	11.6
Ekiti State University (EKSU)	203	61.9
Federal University Oye-Ekiti (FUOYE)	87	26.5
Gender	**Frequency**	**Percentage**
Male	160	48.8
Female	168	51.2
Age	**Frequency**	**Percentage**
16 – 20	23	7.0
21 – 25	113	34.5
26 – 30	117	35.7
31 – 35	53	16.2
36 – 40	16	4.9
41 and above	6	1.8
Level of Study	**Frequency**	**Percentage**
PGD	64	19.5
M.Sc	149	45.4
Phil	73	22.3
Ph.D	42	12.8
Total	**328**	**100.0**

Source: Author's Field Work, 2025

Table 1 shows that the highest respondents were from Ekiti State University 203 (61.9%), while lowest were from Afe Babalola University 38 (11.6%). In terms of gender, females 168 (51.2%) and 160 (48.8%) respondents were male. Analysis of age distribution of respondents showed that majority 117(35.7%) was between 26-30years while the least age range is 6 0r 1.8% for 41years and above. Also, majority of respondents by level of study were M.Sc. students, 149 (45.4%), followed by M.Phil. at 73 (22.3%), PGD at 64 (19.5%), and Ph.D. at 42 (12.8%).

Table 2: Extent of Fake-News Detection among Postgraduate Students

S/N	Extent of fake-news detection	VH (%)	H (%)	L (%)	VL (%)	Mean	SD
1	I am able to easily detect fake news on social media platforms	289 (88.1)	37 (11.3)	-	2 (0.6)	3.87	0.389

2	I am confident in my ability to identify unreliable sources of information on the internet	134 (40.9)	188 (57.3)	2 (0.6)	4 (1.2)	3.39	0.567
3	I often check multiples sources to verify the authenticity of news I come across on social media	149 (45.4)	166 (50.6)	9 (2.7)	4 (1.2)	3.40	0.608
4	I feel that I have the necessary skills to differentiate between real and fake news	89 (27.1)	212 (64.6)	14 (4.3)	13 (4.0)	3.15	0.672
5	I rely on fact-checking websites to help me detect fake news before sharing	115 (35.1)	148 (45.1)	51 (15.5)	14 (4.3)	3.11	0.817
6	I believe that fake news has a significant influence on public opinion and decision making	234 (71.3)	78 (23.8)	10 (3.0)	6 (1.8)	3.65	0.633
7	I am aware of common tactics used to spread fake news online.	115 (35.1)	191 (58.2)	16 (4.9)	6 (1.8)	3.27	0.635
8	I believe that critical thinking is essential in evaluating news credibility	138 (42.1)	162 (49.4)	22 (6.7)	6 (1.8)	3.32	0.680
9	I actively seek out reputable news sources to stay informed.	85 (25.9)	200 (61.0)	33 (10.1)	10 (3.0)	3.10	0.688
10	I feel equipped to educate others about recognizing fake news.	143 (43.6)	140 (42.7)	26 (7.9)	19 (5.8)	3.24	0.831

Table 2 indicates a high extent of fake-news detection among the postgraduate students. The highest mean was for the ability to detect fake news on social media (mean= 3.87, SD= 0.389), while the lowest mean was for actively seeking reputable sources (mean = 3.10, SD= 0.688), indicating overall strong awareness and engagement in verifying information

Table 3 Level of Information Literacy among Postgraduate Students

S/N	Level of information literacy	VH (%)	H (%)	L (%)	VL (%)	Mean	SD
1	I know how to search for reliable academic sources and research articles online	173 (52.7)	122 (37.2)	4 (1.2)	29 (8.8)	3.34	0.854
2	I can evaluate the credibility of online sources effectively	70 (21.3)	226 (68.9)	19 (5.8)	13 (4.0)	2.99	0.645
3	I am able to distinguish between biased and unbiased information available online	128 (39.0)	153 (46.6)	30 (9.1)	17 (5.2)	3.20	0.802
4	I regularly use online libraries, academic databases, and journals for research	112 (34.1)	170 (51.8)	24 (7.3)	22 (6.7)	3.14	0.792
5	I have attended workshops/seminars to improve my information literacy skills	131 (39.9)	148 (45.1)	45 (13.7)	4 (1.2)	3.23	0.734
6	I understand the importance of citing sources to avoid plagiarism.	133 (40.5)	140 (42.7)	31 (9.5)	24 (7.3)	3.17	0.870

7	I believe that information literacy is crucial for academic success.	146 (44.5)	129 (39.3)	31 (9.5)	22 (6.7)	3.22	0.859
8	I feel confident in teaching others about proper information usage and ethics.	110 (33.5)	159 (48.5)	49 (14.9)	10 (3.0)	3.02	0.775
9	I am aware of ethical issues related to information use and sharing.	142 (43.3)	126 (38.4)	47 (14.3)	13 (4.0)	3.21	0.830
10	I can synthesize information from various sources to support my research.	119 (36.3)	117 (35.7)	54 (16.5)	38 (11.6)	2.97	0.980

Table 3 shows a high level of information literacy among postgraduate students. The highest mean was for attendance at workshops and seminars (mean = 3.23, SD= 0.734), while the lowest mean was for synthesizing information from multiple sources (mean = 2.97, SD = 0.980), reflecting overall strong competencies in sourcing, evaluating and ethically using information.

Hypothesis: There is no significant relationship between information literacy and fake news detection among postgraduate students in universities in Ekiti State, Nigeria.

Table 4: Test of Relationship between the Information Literacy and Fake News Detection among Postgraduate Students in Universities in Ekiti State, Nigeria

Variable	N	Mean	SD	r-value	P	Decision
Fake News Detection	328	3.45	0.303	0.399**	0.000	Rejected
Information Literacy	328	3.17	0.411			

*1** Correlation is Significant at the 0.05 level (2 tailed)*

Table 4 shows the significant relationship between the information literacy and fake news detection among postgraduate students in universities in Ekiti State, Nigeria. The mean score of information literacy is Mean = 3.17, SD = 0.411 while the mean score of fake news detection (Mean = 3.45, SD = 0.303) of postgraduate students in universities in Ekiti State, Nigeria is found to be significant at P < 0.05. Thus, the means of information literacy (r = 0.399**, N = 328, P < 0.05) has significant influence on fake news detection. Therefore, the null hypothesis is rejected.

Discussion of Findings

Research question one examined the extent to which postgraduate students in universities across Ekiti State are able to detect fake news. The findings show a consistently high extent of fake-news detection which underscores that postgraduate student exhibit a high level of awareness and competence in identifying misinformation across digital platforms. Majority of respondents possess well-developed digital literacy and media evaluation skills, which enable them to critically analyse and question the credibility of information encountered online. According to Orhan (2023) found that students with strong digital literacy and new media literacy skills demonstrated significantly higher abilities in detecting fake news.

Research question two findings reveal that a high level of information literacy among postgraduate students in universities across Ekiti State. Information literacy has been widely recognized as a foundational skill that enables students to navigate the increasingly complex and digitally mediated landscape of knowledge acquisition. This suggests that they are actively engaging in opportunities to enhance their research and information-handling skills. The findings of this study indicate that formal information literacy training plays a critical role in enhancing postgraduate students' abilities to locate, access, and evaluate information effectively. This is substantiated with the findings by Adewale and Olowu (2021) which reported that many university students, particularly in developing countries, still lack adequate information literacy competencies.

This is further supported by Anunobi and Udem (2023), who studied postgraduate students in southeast Nigeria and found moderate levels of information literacy skills, particularly in evaluating and using information effectively. Similarly, Olajire (2022) reported that many Nigerian postgraduate students struggle with retrieving information and critically evaluate sources, leaving them vulnerable to misinformation and fake news. Chukwusa (2021) also found that although some Nigerian university students demonstrate basic information literacy, overall instruction remain inadequate, especially when measured against the deeper evaluative competencies required for academic research and online information assessment.

The importance of information and digital literacy in combating misinformation has been emphasized in several studies. Guess, et al. (2020) demonstrated that a digital literacy intervention significantly increased participants' ability to discriminate between mainstream and false news. Ng (2023) highlighted that digital skills are essential for evaluating the credibility of online information, identifying manipulative content, making informed decisions in the digital environment. Similarly, Van et al. (2020) emphasized that digital competence, including skills such as evaluating digital information and using technology for critical thinking, is essential for combating misinformation. Studies continue to underscore the role of digital skills in fake news detection as, Luo et al. (2022) showed that new media literacy including information evaluation and fact-checking habits is significantly related to students' performance in detecting fake news. Vraga & Truly (2021) further highlighted that the ability to use digital tools for fact-checking and source evaluation remains a critical factor in identifying misinformation.

However, recent research by Bello & Aliyu (2022) indicates that students' digital skills are still underdeveloped, especially in developing countries such as Nigeria. Pennycook and Rand (2021) argue that digital literacy particularly the ability to scrutinize online content, detect misleading claims, and assess source credibility has become an essential skill in protecting individuals from the widespread influence of misinformation.

Conclusion

The study highlighted the significant relationship between information literacy and fake news detection among postgraduate students in universities in Ekiti State, Nigeria. The findings offer a proper understanding of the relationship between students' level of information literacy and their capacity to detect fake news in the digital age. Firstly, with regard to the extent of fake news encountered, the study revealed that postgraduate students are frequently exposed to fake news. Regarding the level of information literacy, the study showed varying degrees of competence among students. While a number of them demonstrated the ability to evaluate sources, identify credible information, and cross-check facts, many lacked the structured knowledge to apply these skills consistently. This suggests a gap in formal media and information literacy training in higher education institutions. This

shows a disconnection between having digital tools and knowing when and how to use them for verification purposes. By integrating digital literacy and fake news detection skills into postgraduate education, institutions can enhance students' critical thinking, protect academic integrity, and promote a more informed society.

Recommendations

Based on the findings and challenges revealed in this study, the researcher recommend that the following recommendations should be made to provide a lasting solution to the issue of fake news:

i.   Library and ICT departments should collaborate to organize regular training on fake news detection, digital skills.

ii. Universities should establish clear policies and guidelines addressing misinformation and digital ethics.

iii. Academic institutions should promote the use of trusted databases, scholarly journals, and fact-checking websites. Librarians can play a key role in guiding students toward reliable sources of information.

iv. Provision of access to digital tools such as plagiarism checkers, news verification platforms, and research software will support students in identifying false content and enhance their research productivity.

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