

DIGITAL LITERACY AS A PREDICTOR OF UNIVERSITY RANKINGS: A QUANTITATIVE ANALYSIS OF SOUTHWESTERN NIGERIAN UNIVERSITIES

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Abstract

This study investigated the role of digital literacy as a significant predictor of university rankings in Southwestern Nigerian universities. With increasing global competition and reliance on digital tools in higher education, universities must develop and implement robust digital strategies. The research focused on understanding the digital competencies of university lecturers, how these competencies are integrated into academic activities, and their influence on the global rankings of their respective institutions. The study employed a descriptive survey design with a sample size of 927 academic staff across six purposively selected universities. A structured questionnaire was used for data collection, and analysis was done using descriptive and inferential statistics. The findings revealed that lecturers generally possessed moderate to high levels of digital literacy, and institutions had made efforts to integrate digital skills into academic and administrative processes. A significant correlation was found between digital literacy and university rankings. Based on these findings, the study recommended institutional policies and investments that support continuous digital training and infrastructural development to amplify global visibility and competitiveness of universities, therefore enhance ranking capacities.

Keywords: Digital Literacy, University Rankings, Academic Strategy, Digital Skills, ICT Education, Integration.

Introduction

The global landscape of higher education is undergoing a profound transformation, driven by the proliferation of digital technologies and the increasing demand for technologically enhanced academic environments. As universities strive to remain competitive, digitally driven innovation is becoming central to how institutions deliver education, conduct research, and manage their operations. Globally, university rankings now serve as critical benchmarks for institutional prestige, funding allocation, student enrolment, and strategic collaborations (Hazelkorn, 2015). In this digital age, the role of digital literacy, that is, the ability to locate, evaluate, create, and communicate information using digital technologies, is emerging as a key driver of institutional success and visibility.

In many developing countries, including Nigeria, digital transformation in higher education remains uneven. Yet, the imperative for universities to integrate digital literacy into their academic and administrative frameworks has never been stronger. Particularly in Southwestern Nigeria, a region home to some of the nation's premier institutions such as the University of Ibadan, Obafemi Awolowo University, and the University of Lagos, there exists both opportunity and urgency to enhance digital capacity. These universities are expected to compete with global institutions in areas such as research output, web presence, employability, and academic reputation metrics often influenced by digital competencies (Times Higher Education, 2025).

Digital literacy within universities encompasses several domains: the ability of lecturers to use digital tools for pedagogy and research, the competence of students to engage with digital content, and the institution's commitment to digital infrastructure and training. In Southwestern Nigeria, disparities in digital access, inadequate training, and infrastructural limitations persist, impeding the effective deployment of digital tools (Adebayo & Olanrewaju, 2021). These gaps are significant because they directly impact core functions tied to university rankings such as academic publication rates, international collaborations, and online visibility. Despite the increased recognition of digital technologies in education, scholarly attention to the specific role of digital literacy as a predictor of

university rankings remains limited, especially in the Nigerian context. Existing research tends to focus broadly on Information and Communication Technology (ICT) access or general e-learning adoption (Ololube *et al.*, 2016), overlooking how individual and institutional digital competencies correlate with ranking performance. In the light of this, there is a need to examine whether a university's digital literacy landscape can serve as a reliable indicator of its academic standing and visibility.

This study thus set out to investigate the extent to which digital literacy among academic staff, administrative staff, and within institutional systems predicts the performance of universities in Southwestern Nigeria in national and international rankings. It explored how digital skills influence research output, digital publication, global collaborations, and the integration of digital learning strategies. Additionally, the study identified existing gaps in digital training and infrastructure that may hinder the global competitiveness of these institutions.

Literature Review

Digital Literacy

The proliferation of digital technology in education has profoundly altered the traditional landscape of teaching and learning across the world. In higher education, particularly within university systems, the ability to integrate digital tools into pedagogical practices has emerged as a key performance indicator. Digital literacy encompasses the ability to use digital tools to access, manage, evaluate, and create information in an ethical and effective way. Within the university context, this includes the use of learning management systems (LMS), virtual classrooms, digital content creation platforms, data analytic tools, and collaboration technologies (Jenkins, 2017). When academic staff and students possess strong digital literacy, it is believed that they are more equipped to navigate the complexities of modern education. Teaching effectiveness in universities today is increasingly linked to the strategic use of digital tools. Lecturers who leverage technology can deliver content in more engaging, flexible, and student-centered formats. Blended learning models, flipped classrooms, and asynchronous online content allow for personalized learning experiences that accommodate diverse student needs (Ng, 2012; Garrison & Vaughan, 2013).

In Nigeria, particularly in the Southwestern region, efforts to digitize teaching and learning have met with varying degrees of success. While universities such as the University of Lagos and Obafemi Awolowo University have made investments in e-learning platforms, challenges persist in the form of erratic electricity supply, limited internet access, and insufficient digital training for staff and students (Adeyemi & Osinuga, 2020). These infrastructural and capacity-based limitations can impact the level of success achieved in these activities. The digital competency of lecturers has also been shown to influence student outcomes. A study by Yusuf and Balogun (2022) in Nigerian public universities found that students taught by digitally literate instructors demonstrated significantly higher academic achievement and greater engagement with course material. This has implications for university rankings, as metrics such as student satisfaction, graduate employability, and teaching quality are directly shaped by the digital learning experiences of students who become graduates and service the labour market. Beyond teaching, digital literacy plays a pivotal role in research and knowledge dissemination, both of which are heavily weighted in global ranking methodologies. Academic staff with high digital competence are more likely to participate in international research collaborations, publish in high-impact online journals, and enhance their institution's digital visibility through professional networking platforms and open-access repositories (Hazelkorn, 2015).

Also, institutions that integrate digital strategies into their academic and operational frameworks often see improvements in administrative efficiency and institutional visibility. For instance, universities with strong digital presence on global platforms like Google Scholar, Webometrics, and ResearchGate have been found to rank higher than those with weak or non-existent digital presence due to their online footprint and citation

metrics (Annum, 2022; Emmanuel & Okonkoh, 2023; Kasmia & M'hammed, 2023; Zhao, 2024). Despite its significance, digital literacy is often underestimated in institutional strategy documents and national education policies. In many Nigerian universities, digital skill development is neither systematically embedded in professional development programmes nor aligned with institutional quality assurance frameworks (United Nation Educational Scientific and Cultural Organisation [UNESCO], 2021). Bridging this gap is essential for universities in Southwestern Nigeria seeking to improve their ranking status both locally and internationally. It must be noted that, digital literacy is not merely a technical skill; it is a pedagogical and strategic asset that determines how effectively a university can deliver its core functions. From improving teaching methodologies to increasing research output and global engagement, digital competencies are instrumental to institutional advancement. For universities in Southwestern Nigeria, prioritizing digital literacy among all stakeholders (staff and students) is a vital step toward enhancing university effectiveness and ranking.

University Ranking

University ranking systems have become central to the global higher education landscape. They serve as powerful tools for bench-marking institutional performance, attracting students and faculty, securing funding, and shaping public perception of such institutions. As globalization increases competition among higher education institutions, university rankings have gained significant influence in shaping institutional strategies and national education policies. Rankings now play a crucial role in how universities are evaluated and compared on a global scale (Edu, 2025; Jahzeel & Kent, 2025). The concept of ranking universities can be traced back to the twentieth century, but gained prominence in the early 2000s with the emergence of global ranking systems such as the Academic Ranking of World Universities (ARWU) by Shanghai Jiao Tong University in 2003, the QS World University Rankings, and the Times Higher Education (THE) World University Rankings. These ranking systems were developed in response to the demand for comparative data on university performance, especially as institutions expanded international collaborations, student mobility, and academic exchange. Each ranking system uses its own methodology, combining quantitative and qualitative data to assess universities across a wide range of performance indicators. The evolution of these rankings reflects changes in global education priorities, including the shift toward research impact, innovation, and internationalization (Jahzeel & Kent, 2025).

University rankings typically rely on a combination of indicators to evaluate institutional quality. While methodologies differ slightly, most ranking organizations include the following criteria: Academic reputation; Employer reputation; Faculty-to-student ratio; Research output and impact; International faculty and student ratios; Income from industry partnerships; Teaching environment and quality and Global and regional influence. For instance, the QS World University Rankings emphasizes academic reputation (40%), faculty/student ratio (20%), and citations per faculty (20%). In contrast, the Times Higher Education rankings prioritize five areas: teaching (30%), research (30%), citations (30%), international outlook (7.5%), and industry income (2.5%) (Kayyali, 2023; Times Higher Education, 2025).

University rankings serve various stakeholders: students and parents use rankings to make informed decisions about higher education; university administrators rely on rankings for strategic planning, internal quality assurance, and institutional marketing; governments and funding agencies use rankings to guide investments and policies; employers consult rankings to evaluate the reputation of graduates' alma maters; researchers and academics use rankings to identify potential collaborators or institutions for career advancement (Adam, 2021; Ali, 2022; Nguyen *et al.*, 2024). As such, rankings exert considerable influence on decision-making processes across the education ecosystem. In Africa, university rankings have been met with mixed reactions. On one hand, they provide visibility for top institutions and encourage the pursuit of excellence. On the

other, they expose infrastructural and funding gaps that challenge universities' ability to compete globally (Kigotho, 2025). In Nigeria, a country with over 200 universities, global rankings often place even the most prominent institutions below the top 500 globally. Several factors account for this fact: limited research funding, inadequate digital infrastructure, low internationalization, poor data reporting and access to indexed journals (Anyira & Idubor, 2020; Aiyedun, *et al.*, 2021; Ogunode *et al.*, 2021; Oladokun & Ani, 2023). Despite these challenges, Nigerian universities such as the University of Ibadan, Covenant University, and Obafemi Awolowo University have made efforts to improve performance by focusing on research collaboration, digital visibility, and postgraduate education.

The National Universities Commission (NUC) also introduced a local ranking system to promote internal bench marking and competition (NUC, 2024). While useful, this framework still needs to align more closely with international metrics and reporting standards to support global competitiveness.

While rankings can be drivers of progress, they must be balanced with the university's social mission and national developmental goals. University rankings have become an inescapable part of the higher education landscape. They offer important insights into institutional performance, global competitiveness, and academic visibility. However, their methodologies are not without flaws, particularly when applied to diverse contexts such as Africa and Nigeria. Rankings must evolve to reflect the complexity of higher education missions, embracing a more balanced, contextual, and equity-focused approach. For universities in developing countries, the challenge is not only to perform well in global rankings but also to remain true to their local mandate. Investing in research infrastructure, faculty development, digital transformation, and socially responsive education can enhance both performance and purpose. In the end, rankings should serve as tools for improvement, not as ends in themselves.

Digital Literacy and University Ranking

The integration of digital technologies into education has become a cornerstone of institutional performance and competitiveness in the twenty first century. As global university rankings continue to serve as a benchmark for quality, innovation, and academic excellence, scholars have increasingly explored how digital literacy contributes to these rankings. Digital literacy, defined as the ability to effectively use digital tools for communication, learning, and problem-solving, plays a critical role in enhancing teaching quality, research output, administrative efficiency, and student engagement, all of which are key metrics in university evaluations. In this empirical review, we synthesize findings from various studies to establish the link between digital literacy and university rankings, particularly within African and global contexts.

One of the most consistent themes in empirical literature is the relationship between digital literacy and institutional visibility. According to Adeoye and Wentling (2021), universities with digitally literate faculty tend to have higher webometric scores. Their cross-sectional study of 45 African universities demonstrated that institutions with a stronger digital presence, such as active research repositories, blogs, and faculty use of LinkedIn and ResearchGate, ranked higher in national and international evaluations. The researchers employed regression analysis and found that digital literacy among academic staff had a statistically significant impact on university visibility, which is a major factor in global ranking systems like Webometrics and Times Higher Education (THE). In a similar study, Adebayo *et al.* (2022) examined 12 Nigerian federal universities and investigated how digital skills influenced the webometric performance of such universities. Using surveys and institutional audits, the study found a strong positive correlation between lecturers' digital tool proficiency and their universities' ranking performance. Key digital competencies included use of content management systems, online publishing tools, and virtual classroom platforms. Institutions where staff had received structured digital training consistently outperformed those where digital literacy was assumed or

self-taught. Importantly, the study recommended continuous professional development in digital pedagogy as a strategy for improving institutional rankings.

Global research also supports the importance of digital infrastructure and literacy in enhancing university performance. A large-scale quantitative study by Tang and Ng (2019) assessed the digital capabilities of 100 universities in Asia. The study applied cluster analysis to rank institutions based on their investment in digital tools, staff training, and online education strategies. The results indicated that universities that offered digital literacy programmes to both staff and students were more likely to rank in the top 500 globally. The study provided compelling evidence that digital literacy drives productivity, research output, and international collaboration all key criteria in world university rankings. Longitudinal evidence is particularly useful in establishing causal links. Kumar and Singh (2020) conducted a five-year longitudinal study on Indian universities that adopted digital innovation strategies. The study tracked ranking movements of 20 universities from 2015 to 2020 and documented significant improvements among those that invested in smart classrooms, virtual laboratories, and e-libraries. The researchers highlighted that universities that made digital literacy training compulsory for faculty experienced faster upward mobility in rankings. The study concluded that digital literacy was not merely an auxiliary skill but a foundational requirement for academic excellence in the digital age.

While digital literacy has shown positive effects on university performance, several empirical studies have highlighted the digital divide, especially in Sub-Saharan Africa. Ojo and Olatunji (2023) surveyed 30 universities across Nigeria, Ghana, and Kenya, focusing on disparities in internet access, ICT funding, and digital training programs. They found that although faculty in better-funded institutions possessed higher digital literacy, underfunded institutions struggled to meet global standards despite skilled staff. The study argued that digital literacy must be supported by adequate infrastructure and national policies if its potential to elevate rankings is to be realized.

Empirical studies have also linked digital literacy to teaching effectiveness and student outcomes both of which influence ranking metrics related to student satisfaction and employer reputation. Aluko and Olayemi (2020) conducted a mixed-methods study across six Nigerian universities and found that digitally literate lecturers were better able to engage students using blended learning models, online assessments, and interactive media. Students taught by such lecturers reported higher levels of satisfaction, better academic performance, and greater employability skills. These factors are increasingly incorporated into university ranking methodologies, especially in systems that value graduate outcomes and learning environments. Although many studies point to a strong relationship between digital literacy and university rankings, there remain gaps. Few studies have explored the long-term effects of digital transformation on institutional culture and governance. Additionally, cross-country comparative studies are limited, which restricts generalizability. Furthermore, most research have focused on faculty digital skills, often overlooking student digital literacy, administrative ICT competence, and leadership role in fostering a digitally inclusive environment. These gaps point to the need for multi-stakeholder research that includes all university actors.

Gap in the Literature

Despite several studies on digital literacy and ICT usage in Nigerian higher education, there is a paucity of quantitative research linking digital literacy specifically to university rankings. Most existing literature focuses on access and usage without correlating these to institutional performance indicators. This study addresses that gap by examining the predictive relationship between lecturers' digital literacy and their universities' global rankings.

Statement of the Problem

In the twenty first century, digital transformation has fundamentally reshaped the landscape of higher education. Universities are increasingly evaluated not only on their academic output and research strength but also on their adoption of digital technologies that enhance teaching, learning, research dissemination, and institutional visibility. Digital literacy the ability to effectively access, use, evaluate, and create information using digital technologies has thus emerged as a critical competence within higher education institutions. Globally, institutions that have invested in digital infrastructure and digital skill development among staff and students are showing upward mobility in international rankings (Tang & Ng, 2019; Kumar & Singh, 2020).

However, in developing regions like Southwestern Nigeria, it seems that universities are yet to fully harness the transformative power of digital literacy. Despite the growing consensus on the role of digital competence in improving webometric performance, research output, global visibility, and learning outcomes, empirical evidence suggests that many institutions in this region struggle with low digital adoption rates, poor infrastructure, limited training, and inconsistent policy frameworks (Ojo & Olatunji, 2023; Adebayo *et al.*, 2022). Lecturers, students, and even administrative staff have often been accused of lacking the requisite skills to use digital tools effectively for academic or administrative functions, limiting their competitiveness both nationally and internationally (Ayira & Idubor, 2020; Aiyedun *et al.*, 2021; Emiri *et al.*, 2024).

Major global university ranking systems such as Times Higher Education (THE), QS World University Rankings, and Webometrics have introduced digital indicators either directly through web presence, citations from online repositories or indirectly through teaching quality, research impact, and international outlook. These indicators reflect a broader shift toward digital engagement in higher education, which universities in advanced countries have been quick to adopt. In contrast, most public universities in Southwestern Nigeria lag behind in this digital race due to infrastructural deficits, inadequate funding, and minimal strategic planning in digital transformation (Adeoye & Wentling, 2021).

Even though a few Nigerian universities have made strides in adopting learning management systems, digitizing libraries, and training staff in digital teaching methods, such efforts are often isolated and unsustainable. The lack of a systemic approach to integrating digital literacy into institutional strategy significantly hinders progress. Consequently, universities in this region remain underrepresented in both national and global rankings. This not only affects their visibility and attractiveness to international partners and students, but also limits access to grants, collaborative research opportunities, and global recognition. Furthermore, empirical literature underscores a direct correlation between faculty and student digital literacy and institutional performance metrics such as graduate employability, student satisfaction, and research output (Aluko & Olayemi, 2020). Unfortunately, many studies focus on digital literacy as a standalone variable, with little attention paid to its predictive or causal impact on university rankings. There remains a substantial empirical and practical gap in understanding how digital literacy both at individual and institutional levels contribute to ranking criteria in the Nigerian context; hence this study.

This study therefore sought to address the issue of insufficient empirical understanding and practical integration of digital literacy as a strategic component of institutional performance and ranking within universities in Southwestern Nigeria. Without deliberate investment in digital skills development, supportive infrastructure, and policy-driven transformation, these institutions may continue to trail behind their global counterparts in academic excellence, visibility, and innovation. Addressing this gap

is critical for improving educational outcomes and securing competitive positioning in the rapidly evolving global academic environment.

Objectives of the Study

The objectives of this study are basically to:

- i. assess the extent of digital literacy among university lecturers in Southwestern Nigeria, and
- ii. investigate the influence of digital literacy on university ranking in the study area.

Research Questions

To guide the study, one research question and one hypothesis were formulated:

- i. What is the level of digital literacy among university lecturers in Southwestern Nigeria?

Research Hypothesis

Ho₁ : Digital literacy has no significant influence on university rankings in Southwestern Nigeria.

Methodology

This study employed the descriptive survey research design to investigate the perceptions and experiences of academic staff regarding digital literacy and its influence on university rankings in Southwestern Nigeria. The design was appropriate for capturing diverse viewpoints and drawing inferences from a broad population across multiple institutions.

The population for the study consisted of 12,448 academic staff members distributed across 181 Faculties, Colleges, or Schools within 22 Federal and State universities located in the region. These academic units cut across a wide spectrum of disciplines, including Arts, Social Sciences, Law, Education, Engineering, Medicine, Administration, Technology, Agriculture, and the Sciences. This diversity ensured a balanced representation in terms of academic discipline, research engagement, administrative roles, and levels of teaching experience, thereby enhancing generalizability of the findings.

The sample for this study consisted of 1,200 academic staff members, drawn from 30 faculties across three federal and three state government universities located in Southwestern Nigeria. A multi-stage sampling procedure was employed to ensure a balanced and representative selection of participants across institutional types, generations, and disciplines. In the first stage, the purposive sampling technique was used to select six universities: three federal and three state institutions were chosen to reflect the three generational classifications of Nigerian universities. This selection ensured the inclusion of institutions from each major phase of Nigeria's university development. The selected federal universities were: Obafemi Awolowo University (OAU), Ile-Ife, Osun State (First-generation), University of Lagos (UNILAG), Akoka-Yaba, Lagos State (Second-generation), Federal University of Technology, Akure (FUTA), Ondo State (Third-generation). The selected state universities were: Osun State University (UNIOSUN), Osogbo, Osun State, Lagos State University (LASU), Ojo, Lagos State and Adekunle Ajasin University (AAUA), Akungba-Akoko, Ondo State.

This purposive selection ensured that the study captured the diversity of institutional histories, funding structures, policy contexts, and digital resource availability across generational lines. In the second stage, five faculties were selected from each university, making a total of 30 faculties. From these faculties, academic staff were proportionally selected, resulting in a total of 1,200 respondents. The proportional sampling ensured fair representation based on the staff size in each institution and faculty. This robust

sampling approach allowed the study to comprehensively examine patterns, challenges, and institutional differences in digital literacy across universities in Southwestern Nigeria.

Data were collected using a structured instrument. The instrument utilized both 4-point and 5-point Likert scales to capture levels of agreement and perception. Face, content, and construct validity were established through expert review, and a test-retest reliability procedure which yielded a coefficient of 0.861, indicating high consistency. Data were analysed using descriptive statistics such as frequencies, percentages, and means to answer the research question, while regression analysis was employed to test the null hypothesis at a 0.05 level of significance, to determine whether digital literacy significantly predicted university ranking outcomes in the selected institutions.

Results

Research Question One: What is the level of digital literacy among university lecturers in the study area?

To address this research question, data were collected using the 12 items of the instrument

For analysis, responses were grouped into three categories: Scores of one and two were classified as Low level of digital literacy, three as Moderate level, while four and five were considered High levels of digital literacy.

The responses were aggregated and analysed to determine the overall distribution of digital literacy levels among university lecturers in the study area. The summary of these results is presented in Table One, providing a clear view of the dominant literacy category and offering insights into the digital competences of academic staff across the sampled institutions.

Table 1: Descriptive analysis of the level of digital literacy among university lecturers in Southwestern Nigeria.

S/N	Items	Low f (%)	Moderate f (%)	High f (%)	Total
1	I understand the importance of maintaining a professional digital presence as part of my academic responsibilities.	81(8.7)	531(57.3)	315(34.0)	927
2	I actively engage on professional online platforms such as LinkedIn and Twitter to foster collaboration and share research innovations.	101(10.9)	261(28.2)	565(60.9)	927
3	I believe that digital visibility and an institution's online reputation contributes significantly to university rankings.	145(15.6)	520(56.1)	262(28.3)	927
4	I use digital platforms such as YouTube, Twitter, LinkedIn, and Google Sites to disseminate research activities and promote the institution.	292(31.5)	455(49.1)	180(19.4)	927
5	I am confident in leveraging digital literacy skills to develop and carry out innovative research	20(2.2)	389(42.0)	518(55.9)	927
6	The use of digital technologies in teaching contributes to the reputation and ranking of a university.	81(8.7)	531(57.3)	315(34.0)	927
7	I feel confident using digital tools and technologies in my day-to-day academic activities.	3(0.3)	481(51.9)	443(47.8)	927
8	I effectively use digital devices such as laptops or smartphones in my courses to enable flexible and remote student participation.	28(3.0)	688(74.2)	211(22.8)	927

9	I integrate digital tools to improve the learning experiences of my students.	81(8.7)	531(57.3)	315(34.0)	927
10	I prefer face-to-face teaching to online teaching methods.	20(2.2)	389(42.0)	518(55.9)	927
11	Digital literacy has significantly contributed to my professional development as an academic.	180(19.4)	721(77.8)	26(2.8)	927
12	I find it interesting to have all my project students on the online platform such as Google Sites to track their progress	396(42.7)	455(49.1)	76(8.2)	927

Source; Field Survey, 2025

N = 927

The results presented in Table One indicate that a majority of lecturers actively maintained professional digital profiles (91.3%), moderate to high levels of engagement, particularly through platforms such as LinkedIn and Twitter for enhancing research visibility and collaboration (89.1%). The Academic staff also exhibited strong digital self-efficacy, with nearly all respondents expressing confidence in using digital tools for day-to-day academic functions (99.7%) and conducting innovative research (97.9%). However, adoption of more specialized digital tools, such as Google Sites for tracking student progress, was low, with only 8.2% showing high interest. Although 91.3% agreed that digital technologies positively influence teaching quality and institutional image, only 2.8% rated their level of use as highly significant. Additionally, while a slight preference for online instruction was observed, a substantial number of respondents (42%), indicated only moderate inclination to the use of digital tools, revealing some reluctance to fully transition from traditional face-to-face teaching methods.

Overall, the data suggested that digital literacy among lecturers in Southwestern Nigeria is generally high, especially in areas related to professional networking and research collaboration (60.9%). Lecturers demonstrated confidence in applying digital tools for innovative academic tasks and showed a moderate preference for in-person teaching over online alternatives (55.9%). Furthermore, 77.8% of lecturers acknowledged that their moderate level of digital literacy has significantly enhanced their professional development, and 74.2% reported effectively using digital devices such as laptops and smartphones to support flexible, remote student engagement in their courses.

H₀₁: There is no significant influence of digital literacy on university ranking in the study area. To examine this hypothesis, the data obtained on digital literacy and university ranking within the study area were analysed using regression analysis. The outcome of this statistical test is displayed in Table Two.

Table 2: Regression Analysis of the Influence of Digital Literacy on University Ranking in the Study Area

R = 0.776 ^a	Unstandardized		Standardized		
R ² = 0.602	Coefficients		Coefficients		
Adj. R ² = 0.026					
F = 3.515	B	Std. Error	Beta	t	Sig.
(Constant)	74.632	6.172		25.357	.000
Digital Literacy	5.335	1.959	0.750	1.520	.001

(F = 3.515; p < 0.05)

Results presented in Table Two indicate a significant influence of digital literacy on university ranking in the study area (F = 3.515; p < 0.05). Consequently, the null hypothesis, which states that digital literacy has no significant influence on university ranking, was rejected. This finding implies that the proportion of the variance R² value of 0.602 explained that 60.2% of the variance in university ranking was attributed to digital literacy in the study area.

Discussion

This study set out to examine the influence of digital literacy on university ranking among academic staff in six selected federal and state universities in Southwestern Nigeria. The findings offer significant insights into the current state of digital literacy among lecturers and how it translates into institutional visibility and performance indicators often associated with university rankings.

The descriptive analysis of lecturers' digital literacy levels revealed a generally moderate to high level of proficiency, particularly in terms of maintaining professional digital profiles and engaging in online academic collaborations. A considerable proportion of respondents demonstrated competence in using platforms such as LinkedIn and Twitter to enhance visibility, connect with peers, and share research outputs. This finding corroborates that of Ogunbodede *et al.* (2023), that found lecturers in universities in south southern region of Nigeria, possessed high levels of fundamental and multidimensional digital competence, while it is contrary to that of Emiri *et al* (2024), which found that lecturers of a Federal University in Delta State, Nigeria only possessed digital literacy that was slightly above average but showed a low level of actual use of digital tools, with the work of Ng (2012) and Garrison and Vaughan (2013), who emphasized the growing relevance of social and collaborative tools in academia, not only for personal branding but also for institutional recognition.

The study also revealed that 99.7% of lecturers displayed confidence in their digital self-efficacy, suggesting a near-universal ability to navigate essential digital tools used in teaching, research, and academic management. This supports findings by Tang and Ng (2019), also Kumar and Singh (2020), who observed that self-efficacy in digital competence is a strong predictor of how effectively academics integrate technology into their professional responsibilities.

However, the findings also pointed out areas of reluctance and underutilization, especially regarding tools like Google Sites for tracking student progress. This suggests that while digital fluency is relatively high in commonly used platforms, integration of more pedagogically-oriented tools remains limited. The preference for face-to-face instruction over online delivery by a significant portion of lecturers indicates a lingering attachment to traditional teaching methods, despite increasing digital adoption. This is in line with Kirkwood and Price (2014), who noted that the shift toward digital pedagogy is often moderated by personal attitudes, institutional support, and infrastructural realities.

Moreover, the regression analysis revealed a statistically significant relationship between digital literacy and university ranking, with a notable R^2 value of 0.602, indicating that digital literacy accounts for approximately 60.2% of the variation in university rankings. This is a profound implication: it underscores that digital literacy is not only a skill set for personal development but a strategic asset for institutional competitiveness. Universities that equip their academic staff with digital competencies are more likely to benefit from increased research output, global visibility, and academic impact all factors that feed into most international and local ranking metrics.

These findings mirror earlier research by Adeoye and Wentling (2021); Adebayo *et al.* (2020), who found that digital skills influenced both individual performance and broader institutional outcomes. Similarly, UNESCO (2018) has stressed the role of digital literacy in enabling higher education institutions to participate effectively in the global knowledge economy.

In the context of Southwestern Nigeria, this study's findings provide a contextual understanding of how historical timelines, resource allocation, and the generational status of universities impact their digital infrastructure and the literacy levels of their staff. The generational spread covering first-, second-, and third-generation institutions ensured a balanced representation and showed that although generational

differences exist, digital literacy remains a cross-cutting enabler of institutional advancement, regardless of age or founding philosophy.

The findings therefore suggest that increasing digital literacy among academic staff is pivotal to enhancing teaching quality, expanding research dissemination, and ultimately improving the universities' public image and rank. To harness this potential, universities must go beyond basic digital training and invest in the integration of digital tools within academic strategies, reward systems for online academic engagement, and infrastructure upgrades to support emerging technologies.

Conclusion

The study concluded that digital literacy among academic staff plays a crucial role in improving university rankings in Southwestern Nigeria. Universities with staff that are more digitally competent tend to perform better in teaching, research output, and global visibility, all of which influence ranking indices. The study's most significant contribution lies in establishing a clear positive correlation between institutional digital literacy levels and university ranking performance. Universities with higher aggregate digital literacy scores among their academic staff consistently achieved better positions in both national and international ranking systems. Digital literacy is a vital determinant of university ranking, especially in a digitally-driven academic landscape. The study concludes that Nigerian universities, particularly in the Southwestern region, must invest in human capital development and digital infrastructure to remain globally competitive. Enhancing lecturers' digital competencies will not only improve teaching and research quality but also bolster institutional visibility and ranking.

Recommendations

Arising from the findings of this study, it is therefore recommended that universities:

- i. **Develop and Implement Institutional Digital Literacy Policies:** Universities in Southwestern Nigeria should formulate comprehensive policies that prioritize digital literacy development among academic staff, students, and administrators. These policies should be embedded in strategic plans and reviewed regularly to align with global digital transformation trends in education.
- ii. **Train Faculty and Staff in Digital Competencies:** Regular, institutionally-supported training programs should be established to build digital teaching, research, and administrative capacities among lecturers and staff. Special emphasis should be placed on the use of digital learning platforms, data analysis tools, and academic publishing technologies.
- iii. **Leverage Digital Platforms to Improve Global Visibility and Ranking:** Universities should actively manage and optimize their web presence, including through institutional websites, open-access repositories, and social media platforms. Enhancing digital visibility through research dissemination and online engagement directly contributes to improved global ranking metrics such as Webometrics and citation indices.

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