Volume 6 Nomor 2 (2024) Pages 87 – 97
Edulead : Journal of Education Management
Email Journal : edulead.bbc@gmail.com
Web Journal : https://jurnal.uibbc.ac.id/index.php/edulead

Evaluation of ICT Competence as a Determinant of Job Efficacy among University Lecturers in Kwara State

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Received: 2024-10-02; Accepted: 2024-12-07; Published: 2024-12-10

Keywords:

ICT Competence, Job Efficacy, University Lecturers, Higher Education

Abstrak : The rapid advancement of information and communication technologies (ICT) has transformed higher education globally, making digital competence an essential requirement for effective teaching, research, and service delivery. In Nigeria, however, limited infrastructure, inadequate training, and inconsistent utilisation of ICT tools continue to raise concerns about lecturers' ability to perform their academic duties effectively. This study evaluated ICT competence as a determinant of job efficacy among university lecturers in Kwara State. The study adopted a descriptive survey research design. The population comprised 2,219 lecturers drawn from the University of Ilorin, Kwara State University, and Al-Hikmah University. Using proportional sampling techniques and Krejcie and Morgan's table, a sample of 327 lecturers was selected. Data were collected through a structured questionnaire titled Evaluation of ICT Competence Skills and University Lecturers' Job Efficacy Questionnaire (EICTCSULJEQ). Experts validated the instrument, and reliability was established at 0.78 using the Spearman-Brown coefficient. Descriptive statistics (mean, frequency, percentage) were used to answer the research questions, while Pearson Product-Moment Correlation (PPMC) tested the hypothesis at 0.05 significance level. Findings revealed that lecturers demonstrated low ICT competence overall, with strength only in word processing and web browsing. ICT resources were only occasionally utilised, with smartphones, email, and social networking being the most frequently used, while advanced technologies such as multimedia projectors and online publishing platforms were rarely applied. Furthermore, ICT competence significantly predicted lecturers' job efficacy. The study concludes that ICT competence is a critical determinant of lecturers' effectiveness in higher education. It recommends continuous professional development, improved ICT infrastructure, and institutional policies that promote digital integration as strategies to enhance academic productivity and global competitiveness

INTRODUCTION

Universities play a central role in advancing knowledge, driving innovation, and producing the skilled manpower necessary for societal development. As Ruben et al. (2023) observe, universities are dynamic communities composed of administrators, academic staff, and students, with lecturers performing the pivotal task of ensuring that the institution fulfils its mission of teaching, research, and community service. In the 21st century, the ability of lecturers to perform these responsibilities effectively is increasingly linked to their proficiency in information and communication technologies (ICT). Globally, ICT has revolutionised the landscape of education. From the 1980s onwards, the spread of personal computers and the internet gradually transformed higher education, shifting emphasis from rote knowledge transmission to technology-enhanced teaching, research collaboration, and digital scholarship. Today, universities worldwide leverage ICT not only for teaching and learning but also for administration, research dissemination, and global networking. UNESCO and the OECD have consistently emphasised that ICT competence is a core component of 21st-century skills, positioning higher education institutions as drivers of digital literacy and innovation.

In Africa, ICT adoption in higher education has accelerated over the past two decades, although at uneven rates. Nigeria, the most populous country in Africa, has equally recognised ICT as a driver of educational development, embedding digital literacy goals into its National Policy on Education (Bello & Ajao, 2024). Yet, the gap between policy ambitions and institutional realities remains wide, with challenges of funding, infrastructure, and capacity development constraining effective implementation. The concept of ICT competence has evolved significantly over time. Earlier discussions framed it narrowly as computer literacy, referring to the ability to perform basic operations such as typing documents, saving files, or sending emails. However, contemporary scholarship conceives ICT competence more broadly as the integration of technical, cognitive, and ethical skills required to use digital tools effectively in professional and academic contexts (Olaifa et al., 2024; Patrick & Benwari, 2014). For lecturers, this competence extends beyond familiarity with Microsoft Word or PowerPoint to include the use of e-learning platforms, digital libraries, online collaboration tools, statistical software, and multimedia applications.

Job efficacy, on the other hand, relates to the ability of lecturers to perform their duties with effectiveness, efficiency, and confidence. Rooted in Bandura's self-efficacy theory, job efficacy reflects the belief that individuals can successfully execute tasks and achieve desired outcomes (Bandura, 2014). In academia, it encompasses multiple dimensions: instructional delivery, curriculum design, research productivity, mentoring of students, administrative efficiency, and community engagement (Aleru, 2023; Kayyali, 2024). A lecturer with high job efficacy not only meets institutional expectations but also demonstrates initiative, innovation, and resilience in the face of challenges. The intersection of these two concepts—ICT competence and job efficacy—is critical. Scholars argue that lecturers proficient in ICT are more likely to adopt innovative pedagogies, increase research productivity, and communicate effectively with peers and students (Babate & Bege, 2019; Idhalama et al., 2023). Conversely, limited ICT competence

restricts lecturers to traditional teaching methods, diminishes their global competitiveness, and undermines institutional quality assurance mechanisms.

Several studies across different contexts have explored the relationship between ICT competence and academic job performance. Research consistently shows that ICT integration enhances student engagement, promotes collaborative learning, and improves lecturers' productivity (Abubakar et al., 2024; Okeke, 2025). Asubiojo and Ajayi (2017) reported that the majority of teachers utilise ICT for lesson planning and collaboration, resulting in improved teaching efficiency. In the Nigerian context, findings are more mixed. Yong and Ling (2023) found that ICT competence was ranked second only to communication skills as the most essential employability skill for graduates, highlighting its relevance to the academic labour market. Daramola et al. (2015) reported that student-teachers with higher ICT competence performed better during teaching practice, demonstrating stronger pedagogical creativity. Similarly, Akinnubi and Yisa (2016) observed that computer literacy positively influenced teachers' job performance in Kwara State secondary schools, while Omosekejimi et al. (2018) linked ICT competence among lecturers to enhanced teaching efficiency.

However, studies also reveal persistent gaps. Nwafor et al. (2023) reported that lecturers' ICT competence remained below expectations, with limited access to digital tools. Oyefara et al. (2021) observed that many academic staff use computers primarily for typing and internet browsing, with little engagement in advanced ICT applications for research or pedagogy. Olaifa et al. (2024) similarly found that lecturers' ICT use was confined largely to word processing and email communication, with insufficient integration of digital resources in teaching and research. These findings suggest that while lecturers recognise the importance of ICT, their practical competence remains limited. Despite the recognised importance of ICT competence, Nigerian higher education institutions face systemic challenges that hinder effective digital adoption. Okunoye and Okunoye (2022) identified inadequate funding as a primary barrier, limiting the availability of computers, projectors, and reliable internet services. Erratic electricity supply further compounds the problem, making consistent ICT use difficult. Beyond infrastructure, the lack of training opportunities and professional development programs constrains lecturers from upgrading their digital skills.

Moreover, cultural and attitudinal barriers persist. Some lecturers perceive ICT as a threat to traditional academic authority, while others are reluctant to adopt unfamiliar technologies due to fear or lack of confidence (Olaifa et al., 2024). This resistance creates a digital divide between lecturers who embrace technology and those who remain dependent on conventional methods. The result is uneven ICT integration across faculties and institutions, undermining the goal of holistic digital transformation. In Kwara State, where the University of Ilorin, Kwara State University, and Al-Hikmah University collectively educate thousands of students, these challenges are particularly salient. While anecdotal evidence suggests that many lecturers are comfortable with smartphones, email, and social media platforms, advanced ICT applications such as e-conferencing, online publishing, and data analysis software remain underutilised. This creates a paradox: lecturers operate in a digital age yet remain confined to basic ICT use, raising concerns about their job

efficacy in a globally competitive academic environment. The foregoing discussion underscores a critical gap. While ICT has become central to academic practice, there is insufficient empirical evidence on the extent of ICT competence among lecturers in Kwara State and its influence on job efficacy.

This study addresses this gap by systematically evaluating ICT competence as a determinant of job efficacy among university lecturers in Kwara State. It contributes to the literature by offering empirical evidence on the skills lecturers possess, the resources they use, and the extent to which these factors influence their academic performance. The findings are expected to inform policy and practice, guiding universities in Kwara State and beyond to design targeted professional development programs, allocate resources effectively, and foster a culture of digital innovation in higher education.

Purpose of the Study

The major purpose of this study was to evaluate ICT competence as a determinant of job efficacy among university lecturers in Kwara State. Specifically, the study sought to:

1. Determine the ICT competence skills possessed by university lecturers in Kwara State.
2. Identify the types of ICT resources utilised by university lecturers in their onsite and online teaching.
3. Examine the influence of ICT competence on the job efficacy of university lecturers in Kwara State.

Research Questions

Based on the objectives, the following research questions were raised:

1. What ICT competence skills are possessed by university lecturers in Kwara State?
2. What types of ICT resources are utilised by university lecturers in Kwara State?
3. How does ICT competence influence the job efficacy of university lecturers in Kwara State?

Research Hypothesis

H0: There is no significant relationship between university lecturers' ICT competence and their job efficacy in Kwara State.

RESEARCH METHOD

The study adopted a descriptive survey research design. The population comprised 2,219 academic staff from the University of Ilorin (1,534), Kwara State University, Malete (506), and Al-Hikmah University, Ilorin (179). Using Krejcie and Morgan's sample size determination table, a total of 327 lecturers were selected through proportional sampling techniques. Data were collected using a self-designed structured questionnaire titled Evaluation of ICT Competence Skills and University Lecturers' Job Efficacy Questionnaire (EICTCSULJEQ). The instrument consisted of three sections: (i) ICT competence skills possessed by lecturers, (ii) ICT resources used, and (iii) lecturers' job efficacy. A four-point Likert scale (Strongly Agree, Agree, Disagree,

Strongly Disagree) was employed. The instrument was subjected to face and content validity by experts in Measurement and Evaluation at the University of Ilorin. Based on expert feedback, necessary modifications were made before administration. Reliability was established through a pilot test involving 20 lecturers outside the study population. The Spearman-Brown coefficient obtained was 0.78, indicating acceptable reliability. Two trained research assistants were engaged to administer and retrieve the questionnaires. The data collected were analysed using descriptive statistics (frequency counts, percentages, and mean scores) to answer the research questions, while the null hypothesis was tested using the Pearson Product-Moment Correlation Coefficient (PPMC) at 0.05 significance level.

RESULTS AND DISCUSSION

Research Question One: *What ICT competence skills are possessed by university lecturers in Kwara State?*

Table. 1
ICT Competence Skills Possessed by University Lecturers

S/N	ICT Competence Skills	Mean ($\bar{X}$)	Remark
1	Word Processing	2.58	Moderate
2	Microsoft Excel/Corel Draw	2.06	Low
3	PowerPoint Presentation	1.93	Low
4	Internet Connection Setup	2.04	Low
5	Web Browsing	2.65	Moderate
6	Electronic Conferencing (Zoom, etc.)	2.09	Low
7	E-Services (e-library, e-learning, e-payment, etc.)	2.29	Low
8	Multimedia Presentations	2.31	Low
9	Networking	1.99	Low
10	Data Analysis	1.55	No Skills
	Grand Mean	2.15	Low

The results in Table 1 indicate that lecturers in Kwara State demonstrated only moderate competence in a few basic ICT skills, namely Word Processing (Mean = 2.58) and Web Browsing (Mean = 2.65). By contrast, competence in core productivity tools such as Microsoft Excel (2.06) and PowerPoint (1.93) was low, and Data Analysis skills were virtually absent (1.55). This pattern reveals that lecturers' ICT use is largely confined to routine, low-level applications rather than advanced academic or research-related functions. With a grand mean of 2.15 (below the 2.50 benchmark), it is evident that lecturers generally lack adequate ICT competence. This deficiency suggests that while they may cope with basic digital tasks, their ability to harness ICT for teaching innovation, research productivity, and global academic competitiveness remains limited.

Research Question Two: *What ICT resources are used by university lecturers in Kwara State?*

Table 2.
ICT Resources Used by University Lecturers

S/N	ICT Resources Used	Mean ($\bar{X}$)	Remark
1	Computer	3.10	Occasionally Used
2	Internet	2.89	Occasionally Used
3	Projector	2.47	Rarely Used
4	Multimedia Projector	1.72	Never Used
5	Smartphone/Android	3.56	Always Used
6	Online Tutorials	2.32	Rarely Used
7	Satellite TV	1.85	Rarely Used
8	Electronic Mail	3.51	Always Used
9	E-News/E-Magazines	2.03	Rarely Used
10	World Wide Web	2.92	Occasionally Used
11	OPAC (Library Catalogue)	3.06	Occasionally Used
12	E-Books	2.34	Rarely Used
13	E-Journals	3.46	Occasionally Used
14	E-Reference Materials	3.21	Occasionally Used
15	Social Networking	3.50	Always Used
16	E-Conferencing	2.29	Rarely Used
17	Online Reviewing	1.73	Never Used
18	Archives	2.87	Occasionally Used
19	Online Databases/CD-ROM	2.34	Rarely Used
20	Online Publishing	1.73	Never Used
	Grand Mean	2.67	Occasionally Used

As shown in Table 2, lecturers reported always using highly accessible tools such as Smartphones (3.56), Electronic Mail (3.51), and Social Networking Platforms (3.50). These tools are widely available, require minimal training, and align with daily communication needs. However, more specialised academic technologies, such as Multimedia Projectors (1.72), Online Reviewing Systems (1.73), and Online Publishing Platforms (1.73), were rarely or never used. Even where moderately used resources were available—such as OPAC (3.06), E-Journals (3.46), and E-Reference Materials (3.21)—their application was only occasional. The overall grand mean of 2.67 indicates that ICT resources are not fully integrated into teaching and research practices

but are instead used sporadically. This reflects a gap between availability and effective utilisation, suggesting that access alone does not guarantee meaningful academic application.

Hypothesis Testing

Table 3.
Pearson Product-Moment Correlation on ICT Competence and Job Efficacy
Pearson Product-Moment Correlation Coefficient on the Universities' Lecturers' ICT competence skills and their job efficacy in Kwara state

Variable	N	Mean	SD	df	r.cal	p-value	Decision
Lecturers' ICT Competence Skills	309	2.86	1.05	307	.581	.039	Significant
Lecturer's Job Efficacy	309	2.63	1.27	307			

The correlation results in Table 3 show a statistically significant positive relationship between ICT competence and job efficacy ($r = 0.581$, $p = 0.039$). This finding implies that lecturers with higher ICT competence are more effective in carrying out their academic duties, including teaching, research, and community service. The rejection of the null hypothesis underscores the central role of ICT skills in enhancing job performance. Put simply, the more proficient lecturers are in ICT, the greater their capacity to deliver quality academic outputs.

Discussion

This study examined ICT competence as a determinant of job efficacy among university lecturers in Kwara State. The analysis produced three notable findings. First, lecturers displayed generally low levels of ICT competence, with proficiency limited mainly to basic applications such as word processing and web browsing. Second, ICT resources were only occasionally utilised, with lecturers relying heavily on readily accessible tools such as smartphones, email, and social networking platforms, while advanced academic technologies remained underused. Third, ICT competence was found to be a significant predictor of job efficacy, indicating that lecturers with higher digital skills performed their academic responsibilities more effectively. These findings are interpreted and compared with existing literature in the subsequent discussion.

The results revealed that lecturers in Kwara State demonstrated only moderate competence in word processing and web browsing, while competence in advanced applications such as Microsoft Excel, PowerPoint, multimedia tools, and data analysis was low. This aligns with the findings of Nwafor et al. (2023), who reported low ICT competence among lecturers in Cross River State, and Emeka and Nyeche (2016), who noted that most academic staff used computers mainly for typing and internet surfing. The present study reinforces the view that while lecturers are familiar with basic ICT tasks, they struggle with specialised applications that are critical for academic research, instructional innovation, and data-driven decision-making. This result also resonates with Magaji (2018), who emphasised that ICT competence is essential for accessing and applying information in a rapidly changing world. The low competence observed suggests that

many lecturers remain ill-equipped to maximise the potential of ICT for effective teaching, research, and service delivery. It highlights the need for continuous capacity-building initiatives targeted at developing advanced digital skills among academic staff.

The study further established that lecturers relied heavily on widely available ICT resources such as smartphones, email, and social networking platforms, while advanced academic tools like multimedia projectors, online reviewing systems, and digital publishing platforms were rarely or never used. This uneven utilisation pattern reflects the findings of Oyefara et al. (2021), who observed that lecturers often restrict ICT use to basic communication and lesson planning, leaving more sophisticated applications underutilised. The occasional use of electronic journals, e-reference materials, and OPAC indicates some engagement with academic databases, but the infrequency of use suggests barriers such as poor internet connectivity, inadequate infrastructure, or lack of training. Eze et al. (2018) have previously identified these constraints as major impediments to ICT integration in Nigerian universities. The current findings confirm that access to ICT resources alone does not guarantee effective utilisation; competence, confidence, and institutional support are equally crucial.

The hypothesis test confirmed a significant positive relationship between ICT competence and job efficacy among lecturers. This finding corroborates earlier studies by Akinnubi and Yisa (2016), which established that ICT competence enhances teachers' job effectiveness. Similarly, Lawrence and Tar (2018) argued that ICT adoption enables lecturers to solve teaching and learning problems more efficiently. The present study extends this evidence by demonstrating empirically that ICT competence is not merely desirable but is directly linked to lecturers' ability to deliver quality academic outputs in Kwara State universities. From a theoretical perspective, the result aligns with Bandura's self-efficacy theory, which posits that individuals with higher confidence in their abilities are more likely to perform tasks effectively. Lecturers who perceive themselves as competent in ICT are thus more likely to integrate technology into their teaching and research, thereby enhancing their overall job performance.

The findings carry important implications for higher education policy and practice in Nigeria. First, the low ICT competence of lecturers underscores the need for targeted professional development programs that go beyond basic computer literacy to include advanced skills such as statistical analysis, digital content creation, and e-learning pedagogy. Second, universities must address infrastructural challenges by investing in reliable internet services, stable electricity supply, and adequate ICT facilities. Third, institutional policies should incentivise ICT integration by linking competence development to promotion criteria, research funding, and teaching evaluations. Finally, the significant relationship between ICT competence and job efficacy suggests that enhancing lecturers' digital skills is not only a matter of personal development but also a strategic institutional priority. Universities seeking to improve academic quality, global competitiveness, and graduate employability must prioritise digital transformation through both infrastructural investment and capacity building.

CONCLUSION

This study evaluated ICT competence as a determinant of job efficacy among university lecturers in Kwara State. The findings revealed that lecturers possessed limited ICT competence, with strength only in basic applications such as word processing and web browsing. Utilisation of ICT resources was also limited, as lecturers relied mainly on easily accessible tools like smartphones, email, and social networking platforms, while advanced academic technologies were underutilised. Importantly, ICT competence was found to be a significant predictor of job efficacy, confirming that lecturers with higher levels of ICT skills performed their academic responsibilities more effectively. Taken together, these findings underscore that ICT competence is not merely an additional skill but a core determinant of academic productivity and professional effectiveness. The results highlight both progress in basic ICT adoption and persistent gaps in advanced digital skills that are crucial for teaching innovation, research excellence, and global academic competitiveness. Based on the findings of this study, the following recommendations are made:

1. Universities should organise regular, structured professional development programs focused on advanced ICT applications such as statistical software, e-learning platforms, and digital publishing tools, rather than limiting training to basic computer literacy.
2. University management and government agencies should prioritise investment in ICT infrastructure, including reliable internet access, stable electricity supply, multimedia projectors, and well-equipped computer laboratories, to facilitate effective integration of technology into teaching and research.
3. Institutional policies should link ICT competence to academic appraisal and promotion criteria, thereby motivating lecturers to improve their digital skills. Incentives such as ICT certification, research grants, or teaching awards can further encourage competence development.
4. Universities in Kwara State should collaborate with ICT companies, government agencies, and international organisations to provide access to cutting-edge technologies, training opportunities, and technical support that can bridge the digital divide.

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