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Enhancing Professional Identitiy And Ethics Through Technology Literacy Among Nigerian University Arabic Lecturers

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Keywords

1. Technology Literacy
2. Arabic Language Education
3. Professional Identity
4. Arabic Lecturers
5. Professional ethics
6. Nigerian Universities

Abstract:

This study is aimed at investigating the impact of technology literacy on Arabic lecturers' professional identity, ethics, and instructional effectiveness at Nigerian universities. It assesses the lecturers' overall level of technology literacy and investigates whether it influences their ethical teaching practices as well as the educational technology-related challenges that may hinder effective instruction on Arabic language at the university level. The study employs a descriptive survey design and uses a stratified random sampling technique in the distribution of 200 questionnaires, with emphasis on lecturers across Nigeria's six geopolitical zones. Results reveal that the overall level of technology literacy among the study population is positive (M = 3.09), thus influencing professional identity (M = 3.20) and ethical behavior (M = 3.15). The results also show that there are a number of problems facing the Arabic lecturers, including limited access to resources, poor internet connectivity, insufficient training, and reluctance on the part of the lecturers themselves towards the use of digital models. Additionally, there appears to be a statistically significant difference between low-experienced and high-experienced lecturers (p = 0.002), with younger lecturers possessing higher technology literacy. In summary, technology literacy has profound impacts on teaching quality and ethics and is likely to be hindered by infrastructural and pedagogical problems that need to be addressed en masse. The study, therefore, recommends the development of more advanced digital infrastructure, continuous teacher training, and the integration of digital literacy into teacher education courses at the Nigerian universities.

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تعزيز الهوية المهنية واخلاقياتها من خلال تنمية المهارة التكنولوجية لدى محاضري اللغة العربية في الجامعات النيجيرية

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الكلمات المفتاحية

1. المهارة التكنولوجيية
2. التعليم اللغوي العربي
3. الهوية المهنية
4. *الأخلاقية المهنية*
5. محاضرو اللغة العربية
6. *الجامعات النيجيرية*

الملخص:

بحثت هذه الدراسة في تأثير محو الأمية التكنولوجية على هوية وأخلاقيات وفعالية التدريس لدى أساتذة اللغة العربية الجامعيين في نيجيريا. قيّمت الدراسة المستوى العام لمحو الأمية التكنولوجية لدى أساتذة اللغة العربية في الجامعات. وتحديدًا، قيّمت المستوى العام لمحو الأمية التكنولوجية لدى أساتذة اللغة العربية في الجامعات؛ وحددت أثر محو الأمية التكنولوجية على هوياتهم المهنية؛ وبحثت فيما إذا كان محو الأمية التكنولوجية يؤثر على ممارساتهم التدريسية الأخلاقية؛ وحددت التحديات المتعلقة بالتكنولوجيا التعليمية التي تعيق التدريس الفعال للغة العربية في الجامعات. استخدم الباحثون أسلوب البحث الوصفي المسحي مع التركيز على الأساتذة في المناطق الجيوسياسية الست في نيجيريا. وطبقوا أسلوب العينة العشوائية الطبقية في توزيع 200 استبيان، وتلقوا 187 إجابة صحيحة (معدل استجابة 93.5%). جُمعت البيانات من خلال استبيان منظم عالي الموثوقية الداخلية ومعتمد من قبل خبراء، وتم تحليلها باستخدام الحزمة الإحصائية للعلوم الاجتماعية (SPSS). كما استُخدمت الإحصاءات الوصفية واختبار t للعينات المستقلة. تم تقييم الإلمام التكنولوجي العام بين أساتذة اللغة العربية بأنه إيجابي (م = 3.09)؛ مما أثر على الهوية المهنية (م = 3.20) والسلوك الأخلاقي (م = 3.15). وشملت المشكلات التي واجهت الأساتذة الآتي: محدودية الوصول إلى الموارد، وضعف الاتصال بالإنترنت، ونقص التدريب، وتردد الأساتذة تجاه استخدام النماذج الرقمية. كان هناك فرق ذو دلالة إحصائية بين المحاضرين ذوي الخبرة المنخفضة والمحاضرين ذوي الخبرة العالية (ص = 0.002)، حيث تميز المحاضرون الأصغر سنًا بمستوى معرفة تكنولوجية أعلى. باختصار، المعرفة التكنولوجية لها آثار عميقة على جودة التدريس وأخلاقياته، ولكن يعوقها مشاكل البنية التحتية والتربوية التي يجب تبنيها بشكل جماعي. تشمل توصيات الدراسة تطوير بنية تحتية رقمية أكثر تقدمًا، والتدريب المستمر، ودمج الإلمام الرقمي في دورات إعداد أساتذة الجامعات.

Introduction:

Teaching is a basic social activity that promotes knowledge, skill, culture, and intellectual development. At the heart of this process is the educator, who is responsible not only for facilitating instruction and assessing learning outcomes but also for interpreting and implementing curricula in ways that resonate with contemporary realities. In today's increasingly digital world, technological literacy has become a fundamental skill for university teachers. In this context, technology literacy is viewed as the knowledge and ability to use various technological tools to enhance and facilitate the process of teaching and learning at the university level. Technological literacy is thus indispensable for effective higher education across the globe. In Nigeria, the need for digital literacy has clearly been emphasized by the National Information Technology Development Agency (NITDA, 2023). This agency proposed a national strategy involving digital literacy certification for teachers; integration of digital skills into school curricula; and investments in IT infrastructure. These initiatives are designed to ensure that both students and instructors at Nigerian universities are properly informed of technology skills and prepared to meet the demands of the global digital economy and social activities. As Ghimire and Edwards (2024) note, technology integration in higher education not only enhances learning but also influences lecturers' professional identities and ethical practices. Lecturers must be literate at using digital tools to foster more interactive, and student-centered learning environments in relevance to the expectations of 21st-century education.

Technological literacy and the use of digital tools have a transformative influence on the professional identify of the university lecturer, which is in turn shaped by both personal and institutional factors. Technological innovations are the resultant of a gradual shift from traditional didactic instruction to digital, collaborative, and learner-centered pedagogies which are reshaping the role of the university lecturers (Ghimire & Edwards, 2024). Frameworks such as the Technological Pedagogical Content Knowledge (TPACK) model have proved that the integration of technology with pedagogical and curriculum content instruction is likely to improve education activities. This shift is especially pertinent in Nigeria, where adoption of educational technology has been comparatively slow, and many senior lecturers face challenges in adapting to new digital pedagogies due to lack of training, infrastructure, and support (Aina and Azee, 2023). The significance of the use of digital tools such as Learning Management Systems (LMS), multimedia resources and real-time feedback platforms are widely acknowledged for facilitating learner-centered teaching strategies. However, for many lecturers with long-standing experience in traditional methods, the digital transition may create problems due to lack of adequate information on new technology tools (Chinta et al., 2024).

Furthermore, the ethical implications of the application of educational technology require serious attention. Issues of academic integrity, such as increased risks of plagiarism, are exacerbated by easy access to online content. Although software like Turnitin can help address such issues, concerns about accuracy and fairness persist (Chinta et al., 2024). Equally significant is the ethical management of student data. Many educational platforms collect extensive personal information, raising concerns about data security and privacy (Abah & Olohiliye, 2022). The increasing reliance on AI-driven assessment tools further complicates matters, as such systems may overlook critical dimensions of learning like creativity and contextual understanding. These ethical considerations must be addressed to ensure that technology enhances rather than undermines educational quality.

In the context of Arabic Language Education, the use of technological tools has been shown to involve both opportunities and challenges. It has proven effective in increasing students' participation, enabling multimedia instruction, and

fostering the professional development of teachers and lecturers (Muhammad Soliu Ibrahim, et al. 2024). Nevertheless, many Arabic language professors in Nigeria still grapple with infrastructural deficits, limited training opportunities, and resistance to digital methodologies (Abdullhumaid, 2023; Alzahrani & Al-Dossary, 2022). These challenges impede the effective integration of technology with other content items of the syllabus, despite the proven benefits of digital learning tools in language education. Studies by Al-Rahman (2023) and Alghamdi (2022) opine that teachers proficient in digital tools tend to adopt more effective teaching strategies, show greater professional confidence, and better align with the pedagogical demands of modern educational environments. Alqurashi (2021) argues that technology literacy enhances both instructional quality and professional identity, fostering innovative and ethical teaching practices. However, challenges such as poor connectivity, inadequate institutional support, and insufficient access to continuous professional training persist in many Nigerian universities (Alqahtani, 2022; Alabdulkareem, 2022).

Within Nigerian university education system, the National Universities Commission (NUC) adopts Arabic as part of The Core Curriculum Minimum Academic Standards (CCMAS) that serve as a benchmark for measuring the overall level of graduates' proficiency in terms of Arabic language skills, literature and culture through and for teaching, research, translation, and administrative activities. This is because universities in Nigeria offer a course on Arabic language in two important degree programmes: the Bachelor of Arts (B.A. Hons) in Arabic and the Bachelor of Arts in Education (B.A. Ed) in Arabic. Whereas the B.A. Hons programme focuses on language and literary competence, the B.A.Ed programme incorporates pedagogical training to equip students for teaching at schools and tertiary institutions. The two programmes seek to produce graduates capable of undertaking Arabic-related tasks in terms of teaching, research, translation, interpretation, and administration.

A distinctive feature of the Arabic Education programme offered by Nigerian universities is its focus on preparing effective Arabic language teachers who are not only linguistically qualified but also communicatively competent facilitators in the process of their students' learning. The programme curriculum also includes special courses in teaching methodology, curriculum planning, assessment, and the use of ICT in teaching languages in keeping with contemporary education practice.

By aligning Arabic learning with national standards via the CCMAS, Nigerian universities are in a position to address both local and global demands for Arabic language proficiency. The formal curriculum, enhanced by skill development, critical thinking, and cultural competence, seeks to enable graduates to excel both in their professional life and in their contributions to the development of community.

Problem of the Study

Despite the global development of and an increasing tendency toward technology-enhanced education, Arabic language lecturers in Nigerian universities continue to face serious problems in terms of adopting and using digital tools. Technology literacy has been shown to improve effectiveness of teaching, professional identity, and ethical practices (see e.g. Alghamdi & Shuqair, 2021; Alhumaid, 2023). Yet, studies on technology literacy among Arabic language lecturers in Nigeria and its impact on such professional issues are still very limited. Problems such as poor internet access, lack or insufficiency of institutional support, training and resistance to technology adoption can impede the progress towards technology-enhanced education (Alqahtani, 2022; Alabdulkareem, 2022). Furthermore, years of teaching experience may affect lecturers' technology literacy, with recently-appointed lecturers being more adaptable than their more experienced colleagues. Therefore, this study is aimed at investigating the level of technology literacy among lecturers of Arabic language at Nigerian universities, its impact on their teaching identity and ethical practices, the challenges they face and the differences across

experience levels. Thus, the present study can, hopefully, help address the gaps in technology-related shortcomings of Arabic Language Education programmes offered by universities in Nigeria.

Purpose of the Study

This study aims to examine how technology literacy can enhance Arabic lecturers' identities and ethical responsibilities for improved instructional practices at Nigerian universities. Specifically, the study seeks to:

1. assess the overall level of technology literacy among lecturers teaching Arabic at universities in Nigeria.
2. determine the impact of technology literacy on Arabic lecturers' professional identities at Nigerian universities.
3. investigate whether technology literacy of university Arabic lecturers in Nigeria influences ethical teaching practices.
4. identify challenges related to educational technology that hinder effective instruction on Arabic Language at the universities in Nigeria.
5. find out whether there is any significant difference in terms of the level of technology literacy between low-experience and high-experience lecturers in Nigerian universities.

Research Questions

1. What is the overall level of technology literacy among Arabic lecturers at Nigerian universities?
2. To what extent does the level of technology literacy among Arabic lecturers enhance their professional identities?
3. In what ways does technology literacy influence Arabic lecturers' ethical practices?
4. What are the potential challenges associated with educational technology that may hinder effective instruction on Arabic language at Nigerian universities?

Research Hypothesis

Null Hypothesis (H_o): There is no significant difference in terms of the overall level of technology literacy between low-experience and high-experience lecturers at Nigerian universities.

Limitations of the Study

While this study provides valuable insights into how technology literacy influences teaching professional identities, ethics, and practices among Arabic lecturers at Nigerian universities, certain limitations should be acknowledged. First, although efforts were made to include respondents from all six geopolitical zones, not every university offering Arabic Studies could be reached. As a result, the findings may not fully capture the diversity of institutional contexts across the country. The sample of 187 respondents, although substantial, may not perfectly reflect the actual demographic spread of Arabic lecturers nationwide.

Additionally, the study relied on self-reported data, which is susceptible to social desirability bias; respondents may have overstated their competency or minimised challenges. The cross-sectional design also limits the ability to observe changes over time, particularly as digital competencies and institutional support evolve. Furthermore, the study excluded the student perspective, which could have offered a more comprehensive view of how lecturers' technology literacy affects teaching and learning. Lastly, the study did not account for both gender and institutional disparities in infrastructure and access to digital resources, which may have influenced lecturers' experiences with technology integration.

Methodology

The study employed a descriptive survey design to examine the influence of technology literacy on professional identity, ethical behavior, and instructional efficiency of Arabic lecturers at Nigerian universities. The study also examined the challenges the target subjects faced when applying educational technology and compared the varying levels of technology literacy among the informants based on their teaching experience. Arabic language lecturers across Nigeria's six geopolitical zones were the target population of the study. Through stratified random sampling, 200 questionnaires were distributed, of which 187 (93.5% return rate) were duly returned and comprised 179 men and 8 women.

Data were collected through a standardized questionnaire, divided into demographic and thematic sections, made up of questions measuring technology literacy, its impact on teaching identity and ethical practice, and the challenges which informants faced. Responses were rated using a 5-point Likert scale. The questionnaire's face validity, content validity, and relevance were evaluated by three experts in educational technology, leading to refinements that have improved clarity and precision. The instrument's reliability was confirmed using Cronbach's Alpha Coefficient, yielding an overall reliability value of $\alpha = 0.72$, indicating high internal consistency. Questionnaire was administered through both physical distribution and online platforms (via Google Forms) to ensure widespread accessibility across all geopolitical zones. Data were analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics (Mean and Standard Deviation) were used to summarise subject's responses. An independent-samples t-test was conducted to determine whether there were statistically significant differences between low-experience and high-experience lecturers in terms of their technological proficiency.

Results:

Demographic Information of the Respondent

Table 1: Distribution of the Participants Based on Gender

Gender	Frequency	Percentage	Cumulative Percentage
Male	179	91.4	91.4
Female	08	8.5	100.0
Total	187	100.0	

The table shows that the number of respondents to the administered questionnaire is 187 in total, 179 (91.4%) of which are males while 8 (8.5%) are females. This shows that the number of male instructors who participated in the study is by far much higher than that of females.

Table 2: Distribution of the Participants Based on Teaching Experience

Teaching Experience	Frequency	Percentage	Cumulative Percentage
1–5 years (Low Experience)	79	42.2	42.2
6– years and above (High Experience)	108	57.8	100.0
Total	187	100.0	

Table 2 presents respondents' demographics based on teaching experience. As can be seen from the table, participants with a 1-to-5-year teaching experience (i.e. Low Experience) constitute 42.2% (79 in number) of the study population, and those with a 6-year-and-more teaching experience (i.e. High Experience) make up 57.8% (108 in number). In other words, the proportion of respondents with High Experience is fairly higher than that of those with Low

Experience, indicating a greater representation of more experienced lecturers in the study sample.

Answers to the research questions

Question One: What is the overall level of technology literacy among Arabic lecturers at Nigerian universities?

Table 3: Frequency, Mean and Standard Deviation Output for: Question One

S/N	Item	Mean	Std. Deviation	Remark
1-	I am proficient in using technology for teaching.	3.14	1.022	Positive
2-	I frequently use Learning Management Systems (LMS) for instruction.	3.14	.863	Positive
3-	I integrate multimedia tools (videos, slides, simulations) in my lectures.	3.26	.848	Positive
4-	I utilize online platforms for student assessments and feedback.	2.92	1.036	Positive
5-	I continuously seek to improve my technology literacy through training and workshops.	3.03	.967	Positive
	Total	3.09	4.74	Positive

Table 3 shows that most of the mean values of the items scaled with (Strongly Agree through Strongly Disagree) are greater than the criterion value of 2.5, and therefore it can be deduced that technology literacy among university Arabic lecturers is positive.

Question Two: How does the level of technology literacy among Arabic lecturer enhances their professional identities?

Table 4: Frequency, Mean and Standard Deviation Output for Question Two

S/N	Item	Mean	Std. Deviation	Positive
[1]	Technology has improved my teaching effectiveness.	3.19	.852	Positive
[2]	I feel more confident in my teaching role due to technology.	3.25	.825	Positive
[3]	My ability to engage students has improved with digital tools.	3.29	.881	Positive
[4]	Technology has positively influenced my professional identity.	3.19	.858	Positive
[5]	I adapt my teaching methods based on technological advancements.	3.11	.894	Positive
`	**Total**	3.20	4.31	Positive

As evident from Table 4 above, most of the mean values of the items (scaled with Strongly agree through strongly disagree), are greater than the criterion value of 2.5, and therefore it can be deduced that technology literacy does enhance Arabic lecturers' professional identities.

Question Three: In what ways does technology literacy influence Arabic lecturers' ethical practices?

Table 5: Frequency, Mean and Standard Deviation Output for Question Three

Item	Mean	Std. Deviation	Remark
I use plagiarism detection tools to ensure academic integrity.	3.03	.967	Positive
I respect digital privacy and confidentiality in my teaching.	3.09	.894	Positive
I ensure fairness and transparency in technology-based assessments.	3.29	.881	Positive
I educate students on ethical use of technology in learning.	3.19	.858	Positive

I uphold professional ethics in online and digital teaching environments.	3.19	.929	Positive
Total	3.15	3.75	Positive

The data in table 5 reveal that most of the mean values of the items (scaled with Strongly Agree through Strongly Disagree) are greater than the criterion value of 2.5 and therefore, it's deduced that technology literacy does enhance Arabic lecturers' ethical practices.

Question Four: What are the challenges associated with educational technology that hinder effective instruction on Arabic Language at Nigerian universities?

Table 6: Frequency, Mean and Standard Deviation Output for Question Four

S/N	Item	Mean	Std. Deviation	Remark
1-	Limited access to technology and digital resources.	3.19	.929	Positive
2-	Poor internet connectivity affects online teaching.	3.06	.979	Positive
3-	Lack of institutional support for digital teaching tools.	3.13	.944	Positive
4-	Insufficient training in the use of educational technology.	3.25	.825	Positive
5-	Resistance to technology adoption among lecturers.	3.11	.894	Positive
	Total	3.148	.9142	Positive

Obviously, most of the mean values of the items in Table 6, scaled with Strongly Agree through Strongly Disagree, are greater than the value of 2.5. It can, therefore, be concluded that University Arabic lecturers in Nigeria do encounter challenges that can seriously hinder the effective integration of technology and instructional materials.

Research Hypothesis

Null Hypothesis (H_o): There is no significant difference in terms of the level of technology literacy between low-experience and high-experience lecturers at Nigerian universities.

Table 7: Independent Samples T-test analysis of differences between low-experienced and high-experienced Arabic lecturers in terms technology literacy

	Year of Teaching Experience	N	Mean	Std. Deviation	Std. Error Mean	T	Df	Sig. (2-Tailed)
	1–5 years (Low Experience)	79	3.17	0.923	0.105	5.056	117	0.002
	11 years and above (High Experience)	40	2.37	1.052	0.142			
	Total	119	6.24	1.975				

As can be noticed from data in Table 7, the Sig. (2-Tailed) value is 0.002, a value that is less that is less than the 0.05 significance level. Therefore, the null hypothesis is rejected. This result indicates that there is a statistically significant difference in terms of technology literacy between low-experienced and high-experienced Arabic lecturers in Nigerian universities. Specifically, lecturers with 1–5 years of teaching experience (Mean = 3.17) demonstrate significantly higher technology literacy compared to those with 11 years and above (Mean = 2.37). This suggests that less experienced lecturers are more technologically proficient. It is very likely that this difference in favor of low experience lecturers is due to ever-increasing exposure to digital tools and technological integration in more recent educational programmes and training courses.

Discussion

As far as the purpose of the study is concerned, the findings reveal some crucial points about the overall level of technology literacy among Arabic language lecturers at Nigerian universities, as well as about the impact of that on the instructors' professional identities and ethical practice.

Firstly, as for the overall level of technology literacy, the results of data analysis reveal positive reactions on the part of the respondents. That is, the overall mean score is 3.09, which is above the benchmark of 2.5. This shows that Arabic lecturers are generally technologically literate. They reported frequent use of Learning Management Systems (LMS), integration of multimedia tools, and commitment to improving their digital skills through continuous training. This is in line with the findings of some recent studies like Alghamdi and Shuqair (2021) and Alhumaid (2023) who emphasise the growing trend among educators to adopt educational technologies for effective teaching.

Secondly, as far as the impact of technology literacy on Arabic lecturers' professional identities is concerned, the findings of the study indicate that technology literacy has a positive impact on the professional identities of the target subjects with a mean score of 3.20, which is also above the benchmark of 2.5. This indicates that the majority of the respondents agree that educational technology has improved their teaching, boosted their confidence and enabled them to engage students in active learning. All this confirms Alqahtani's (2022) finding that digital tools not only refine teaching practices but also help form stronger professional identities among educators in the modern classroom.

Thirdly, as for the influence that technology literacy of university Arabic lecturers may have on their ethical teaching practices, the findings of the study reveal a mean score of 3.15, which is above the benchmark of 2.5. This shows that the level of technology literacy has a positive influence on lecturers' teaching ethics. In other words, the lecturers with a high level of technological proficiency made use of plagiarism detection tools, promoted digital privacy, were careful about the issue of fairness in online assessments, and upheld professional ethics in virtual classrooms. This is in line with recent research (e.g. Alabdulkareem, 2022; Al-Senaidi, 2023) that emphasised technology literacy enhances the practice of model teaching.

Fourth, the data of the study reveal that there are some major challenges to the effective and efficient integration of technology-aided instruction on Arabic at Nigerian universities. Depending on the respondents' answers, the challenges include the following: limited access to digital resources, poor internet connection, lack of institutional support, and reluctance on the part of some professors to utilize educational technology when teaching Arabic to their students. This finding is in support of research done by Alqahtani (2022) and Alghamdi (2021), who noted that infrastructural and attitudinal problems have been longstanding hindrances to effective adoption of technology-aided learning in the developing countries.

Finally, the research hypothesis test showed a significant difference between low-experienced and high-experienced lecturers in terms of technology literacy. The result of the independent samples t-test result ($p = 0.002 < 0.05$) confirmed that lecturers with 1–5 years of experience in tertiary learning scored higher in technology literacy (Mean = 3.17) compared to those more experienced colleagues (Mean = 2.37). This means that newcomers to the field of academia tend to be more technologically sophisticated, which most likely shows the incorporation of training courses on technology in newer education curricula (Alhumaid, 2023; Alabdulkareem, 2022).

Conclusion

The findings of the present research highlight the central role of technology literacy in

enhancing the quality of teaching, professional profiles, and ethics of Nigerian Arabic lecturers. Although a satisfactory overall level of technology literacy among the lecturers is to be encouraged, there are significant challenges to adopting digital tools successfully, primarily due to infrastructural deficits, inadequate training, and resistance to educational technology on the part of some of the senior lecturers. Surprisingly, junior lecturers were more technology-literate compared to their senior colleagues, which suggests that younger generations, being well-versed with digital tools throughout the course of their studies, are in a better position to leverage these instruments.

The study also points out that technology literacy can positively influence lecturers' professional identity by enhancing confidence, improving student engagement, and facilitating the change in teaching methods to adapt to today's pedagogic demands. Ethical practice (e.g. academic integrity and digital privacy management) is also influenced by the overall level of technology literacy. The study, therefore, emphasizes the need for the provision of increased institutional support, continuous professional development, and the resolution of challenges such as poor internet connectivity and the lack of sufficient digital infrastructure to enable the successful integration of educational technology in the teaching of the Arabic language.

This research is an urgent call for action on the part of Nigerian educational policymakers and universities to prioritize lecturers' digital literacy, invest in IT facilities, and regularly provide training in the various applications of educational technology. Such measures are crucial not only to improve the quality of teaching Arabic language but also to position academic institutions in Nigeria on the same educational standard as those in other countries.

Recommendations

Based on the findings of this study, the following are recommended to enhance the use of educational technology in the context of teaching Arabic language at Nigerian universities:

1. Strengthening Capacities of Higher Institutions for Digital Solutions: The National University Commission (NUC) should invest in high-speed network infrastructure, new computer hardware, and software bundles, and instructor training to effectively use digital tools in the State and Federal universities. Private universities should also be mandated to invest in digital, integrated education and establish specialised IT service centers to support lecturers.
2. Provision of Continuous\Development Programmes: Workshops and training courses should be regularly organized to develop lecturers' technological proficiency with special attention to less technologically literate instructors.
3. Adoption of Learning Management Systems (LMS): Universities should promote the use of Learning Management Systems (LMS) and other web-based learning systems to facilitate the process of teaching; and assessment.
4. Promotion of Digital Literacy as a Part of Teacher Education Programme: Digital literacy should become an integral part of the Teacher Education programmes at the faculties of education so as to equip university instructors, particularly the Arabic lecturers, with technology skills that enable them to deal with the current challenges of the digital world.
5. Empowering Ethical Considerations in Online Pedagogy: Universities must create codes of conduct to regulate online pedagogy in terms of proper use of digital tools in such a way that ensures academic integrity, privacy, and transparency in examination procedures. Lecturers need to be aware of these ethical norms to prevent such issues as plagiarism, privacy, and lack of fairness in online education settings.

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