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Research Article

Awareness, Knowledge, and Implementation of Innovative Educational Assessment Methods: A Comparative Study of Students and Lecturers

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Abstract

Objective: This study aimed to examine the levels of awareness, knowledge, and implementation of innovative educational assessment methods (IEAM) among students and lecturers at Nnamdi Azikiwe University (UNIZIK), Awka. It further assessed how demographic and professional variables influence these factors.

Methods: A descriptive survey design was adopted, using a structured questionnaire distributed to 80 students and 32 lecturers from the Faculty of Education. Items were based on a five-point Likert scale and focused on digital assessments, peer evaluations, e-portfolios, and collaborative projects. Data were analyzed using descriptive statistics (means, SD) and inferential statistics, including t-tests, Analysis of Variance (ANOVA), correlation, and multinomial regression to test four hypotheses.

Results: The findings indicate moderate to high levels of awareness and knowledge of innovative assessments across both groups (M=3.76, SD=±0.86). Students (Mean=77.23) have slightly higher awareness and knowledge of innovative assessment tools compared to lecturers (Mean=74.29). However, the level of implementation was moderate (M=3.23, SD=1.04). Implementation, however, did not fully align with the levels of awareness. Lecturers reported higher implementation levels than students, with the professorial cadre showing the most consistent use. Gender was significantly associated with knowledge levels, with females scoring higher. A positive correlation was found between knowledge and implementation (r=0.38, p<0.01). Regression analysis showed that knowledge significantly predicts implementation (p=0.02).

Conclusion: Despite high awareness, practical use of innovative assessments remains limited. Lecturers'

professional roles and access to decision-making contribute to higher adoption. Targeted training and institutional support are recommended to bridge the gap between awareness and actual use, and to promote consistent application across all academic levels and departments.

Keywords: Educational assessments, innovative digital methods, student and lecturer, higher education

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1 INTRODUCTION

The adoption of innovative educational assessment methods (IEAM) in higher education has gained significant attention in recent years as universities seek to improve student learning outcomes and better prepare students for the demands of the modern workforce. Traditional methods of assessment, such as written exams and essays, primarily measure students' ability to recall information and solve well-defined problems. However, these methods have been criticized for their limited ability to assess higher-order cognitive skills, such as critical thinking, creativity, and collaboration[1-3]. As a result, innovative assessment methods, which include digital assessments, e-portfolios, peer evaluations, and collaborative projects, are increasingly being integrated into educational practices[4-6]. These methods are believed to provide a more authentic and comprehensive understanding of student competencies by evaluating a wider range of skills and promoting active learning.

Despite the potential benefits of innovative educational assessments, the adoption of these methods has been inconsistent across educational institutions worldwide. A study revealed that while many higher education institutions are experimenting with new assessment tools, the rate of adoption varies significantly depending on the institution, academic discipline, and faculty readiness[4]. In a survey, e-assessment remains a topic of much discussion for many, due to doubts that arise about its efficiency and effectiveness[7]. Some institutions lag behind in terms of digital assessment adoption, despite their known benefits in providing immediate feedback and supporting personalized learning, though there is a strong awareness of the importance of e-assessment[7,8]. Similarly, research indicated that while some universities have successfully integrated project-based and peer-reviewed assessments, challenges such as insufficient training, resistance from educators, and limited technological infrastructure have hindered widespread implementation[9].

Rogers' Diffusion of Innovations (DOI) theory offers a useful model for understanding these trends. The theory explains how, why, and at what rate new ideas and technologies spread through social systems. It identifies five key elements: the innovation itself, communication channels, time, the social system, and adopter categories[10]. Applying DOI to educational settings allows researchers to assess the levels of awareness, knowledge, persuasion, decision, implementation, and confirmation among adopters. In the case of innovative assessments, DOI helps to explain differences in adoption across individuals and institutions based on perceived attributes of the innovation (e.g., relative advantage, compatibility, and complexity), communication strategies, and social influences within academic communities.

In Nigeria, research shows that the adoption of innovative educational assessment tools in Nigerian universities has been slow. The data analysis in a study indicates that the overall use of visualization technological tools accounts for 20.4%, while the implementation of learner autonomy stands at 20.6%[11]. These figures reflect the slow pace at which the Nigerian educational system is adopting innovative techniques in classroom instruction. A study revealed that while students and lecturers recognize the potential benefits of digital tools, lack of technological literacy and competence, inadequate institutional support and infrastructure and high cost of technology significantly affects the adoption of technological tools among academic staff in tertiary institutions[12]. A study similarly revealed that Nigerian teacher educators demonstrated a high level of readiness and a positive attitude toward adopting AI-powered educational tools in innovative assessment, including personalized learning platforms, automated grading systems, and virtual tutors[13].

These patterns reflect different stages in the adoption process as described in Rogers' DOI theory. Early adopters may already be using AI-based assessments or digital platforms, while the majority of lecturers and students remain in the awareness or persuasion stages. These underscore the need for further research into the specific level of knowledge and awareness to the adoption of innovative educational assessments, particularly at Nnamdi Azikiwe University (UNIZIK), where the integration of these tools remains underexplored. This study adopts Rogers' theory as a guide to assess not just whether these innovations are being used at UNIZIK, but also how far lecturers and students have progressed through the adoption stages.

At UNIZIK, like many institutions in Nigeria, there has been a growing interest in adopting new assessment tools to enhance teaching and learning. However, limited research exists on the extent of adoption and implementation of these methods by lecturers and students. This study seeks to fill this gap by assessing the awareness and implementation surrounding innovative educational assessments at the university. Previous studies have highlighted the importance of both lecturers' and students' awareness in the successful implementation of new assessment tools[14-17]. Understanding the level of knowledge and awareness toward innovative assessments is crucial for overcoming resistance and ensuring effective integration. Furthermore, the study will determine whether the level of knowledge and awareness of these tools among students and lecturers across various respondents, gender, academic cadre and department influences the extent of their use in academic settings. The findings could be beneficial not only for improving assessment practices at UNIZIK but also for providing guidance to other universities in Nigeria and similar educational contexts.

1.1 Research Questions

1.What is the level of awareness and knowledge of innovative educational assessment among students and lecturers at UNIZIK, Awka?

2.What is the level of awareness and knowledge of innovative educational assessment among students and lecturers at UNIZIK, Awka based on respondent group, gender, academic cadre, student level, and department?

3.What is the level of implementation of IEAM among students and lecturers at UNIZIK, Awka?

4.What is the level of implementation of IEAM among students and lecturers at UNIZIK, Awka based on respondent group, gender, academic cadre, student level, and department?

1.2 Hypotheses

1.There is a significant difference in the level of awareness and knowledge of innovative educational assessment of students and lecturers at UNIZIK across various clusters.

2.There is a significant difference in the extent of implementation of IEAM at UNIZIK across various clusters.

3.The level of knowledge and awareness of innovative educational assessment among students and lecturers positively influences the extent to which these methods are implemented at UNIZIK.

4.There is a significant relationship between students' and lecturers' awareness and knowledge of innovative educational assessment and the extent of their implementation.

2 LITERATURE REVIEW

Recent studies in higher education have focused on shifting away from traditional assessments toward methods that better reflect real-world skills. These new approaches aim to improve student engagement and evaluate a wider range of abilities. Innovative assessment methods such as e-portfolios, simulations, AI-based grading tools, and peer evaluations are designed to support critical thinking, collaboration, and student autonomy[4-6]. However, adoption remains inconsistent, especially in developing countries.

Rogers' DOI theory provides a lens to understand why this inconsistency exists. According to a study, the rate of adoption of any innovation depends on five key characteristics: relative advantage, compatibility, complexity, trialability, and observability[10]. When applied to education, these attributes influence how lecturers and students perceive innovative assessment tools. For example, tools that are seen as offering clear benefits over traditional assessments (relative advantage), or those that align with existing teaching styles (compatibility), are more likely to be adopted.

As observed in a research, while many institutions are aware of these innovative methods, implementation is often slowed by a lack of training and institutional support[4]. This aligns with Rogers' emphasis on the importance of the social system and communication channels in supporting diffusion. Instructors and students who are not sufficiently supported in the persuasion and decision stages may never reach the point of full implementation. Also noted is the skepticism about e-assessment's effectiveness, especially when clear outcomes and ease of use are not demonstrated, illustrating concerns over complexity and observability[7].

In Nigeria, the DOI theory helps explain the slow rate of innovation uptake. A study identified limited technological literacy and infrastructure as major barriers[12]. These reflect the complexity and compatibility issues described by Rogers. A study found that teacher educators are aware of and interested in AI-based tools but face limitations due to cost, lack of training, and ethical concerns[13]. These obstacles are consistent with the decision and implementation stages of the DOI model, where external and internal factors can delay or prevent adoption.

At UNIZIK, while there are signs of interest in digital and collaborative assessments, the stages of adoption vary widely among lecturers and students. Some may still be in the awareness stage, while others have begun to experiment with implementation. This variation presents an opportunity to study the diffusion process more closely. Understanding how both students and faculty view new assessment tools are essential to successful adoption[16].

By using DOI as a guiding theory, this study explores the factors influencing the diffusion of innovative assessment tools in a university setting. It seeks to identify whether perceived innovation attributes, levels of awareness, and institutional conditions affect how and when these methods are adopted. Rogers' model allows for a structured examination of individual and group behaviors related to innovation, which can inform strategies to promote wider

adoption across departments and disciplines.

3 RESEARCH METHODS

The study adopts a descriptive survey research design and employs a quantitative data collection method to investigate the adoption of innovative educational assessments at UNIZIK, Awka. A structured questionnaire serves as the primary data collection tool and is distributed to representative samples of students and lecturers from various departments in the Faculty of Education at the university. The questionnaire includes five point Likert-scale questions of Strongly Agree (SA-5points), Agree (A-4points), Neutral (SD-3points), Disagree (D-2points) and Strongly Disagree (SD-1point) to assess respondents' familiarity with IEAM, and the extent to which these innovative educational assessments methods are implemented in academic practices.

The development of the structured questionnaire used in this study followed a systematic and rigorous process to ensure content relevance, validity, and reliability. The items were initially developed based on a comprehensive review of existing literature on IEAM, particularly focusing on key constructs such as awareness, knowledge, and implementation. This ensured that the questionnaire was conceptually aligned with the specific objectives of the study and captured relevant dimensions of the constructs under investigation. Following the initial draft, the questionnaire underwent expert validation to establish content and face validity. Three experts in the field of educational assessment were invited to review the instrument. These experts evaluated the clarity, relevance, and comprehensiveness of the items in relation to the study's aims. Based on their feedback, several items were reworded for clarity, and redundant or ambiguous items were removed or revised. To further strengthen the instrument, a pilot test was conducted with a sample of 15 participants drawn from a comparable population within the university. The aim of the pilot test was to assess the comprehensibility of the items, identify potential issues with the scale formatting, and evaluate preliminary internal consistency. Feedback from this pilot study informed additional minor modifications, which enhanced the readability and usability of the final questionnaire. Reliability analysis was conducted to assess the internal consistency of the key scales. The Knowledge scale yielded a Cronbach's alpha of 0.82, indicating high reliability. Similarly, the Implementation scale demonstrated acceptable reliability, with a Cronbach's alpha of 0.79. These results suggest that the questionnaire possesses adequate psychometric properties and is suitable for use in this research context.

The data collected was analyzed using descriptive statistics, such as frequencies, percentages, mean and standard deviations to provide an overview of the awareness and implementation levels among various respondents' clusters. The mean and SD for each item were computed using the response frequencies multiplied by the response point levels in the likert-scale. The mean and SD scores for each scale (e.g., knowledge, implementation) were computed by finding the average of the mean and SD response scores across the items. To test the hypotheses, inferential statistical techniques was used. The first and second hypotheses were tested with a t-test for independent samples and one way and Analysis of Variance (ANOVA) to compare the knowledge and implementation levels across various respondents' clusters, the third hypothesis was tested with correlation analysis, while the fourth hypothesis was tested with multinomial regression analysis to assess the relationship between respondents' awareness and knowledge of innovative assessment methods and the extent of their implementation. The study includes 80 students and 32 lecturers, selected through purposive sampling technique. This approach was chosen to ensure respondents had adequate exposure to the topic under investigation. Since the study aimed to capture informed perspectives from individuals directly engaged in educational assessment practices within the Faculty of Education UNIZIK, Awka. The survey focuses on areas such as awareness and knowledge of IEAM, the frequency and extent of their implementation.

4 RESULTS

The results of this study in Table 1 suggest that both students and lecturers at UNIZIK demonstrate moderate to high levels of awareness and knowledge of innovative assessment tools (Mean=3.76, SD=±0.86). According to Rogers' Diffusion of Innovations theory, awareness is a necessary early step in the adoption process, but alone does not guarantee implementation. While awareness and familiarity were generally favorable, the findings point to a training gap, which could hinder users from progressing to the implementation stage. This aligns with Rogers' concept of complexity, that is, the perceived difficulty in understanding or using an innovation. If users find a tool difficult or are insufficiently trained, adoption is less likely, even if they acknowledge its benefits.

The analysis in Table 2 reveals that students (Mean=77.23) have slightly higher awareness and knowledge of innovative assessment tools compared to lecturers (Mean=74.29), while females (Mean=76.24) show a higher knowledge level than males (Mean=70.81). Among academic cadres, those in the professorial cadre have the highest knowledge level (Mean=79.43), suggesting experience or exposure may influence awareness. For student levels, 200-level students scored the highest (Mean=78.57), possibly reflecting recent exposure to digital tools, while 300-level students had the lowest (Mean=73.10). By department, Early Childhood Education (Mean=84.76), Guidance and Counseling (80.71), and Health Promotion Education (79.29) show the highest awareness, indicating certain disciplines may prioritize or

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Table 1. Awareness and Knowledge of Innovative Educational Assessment among Respondents (N=112)

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Average
	n(%)	n(%)	n(%)	n(%)	n(%)	Mean±SD
I am aware of innovative assessment tools used in education	2(1.8)	4(3.6)	14(12.5)	63(56.3)	29(25.9)	4.01±0.83
I have knowledge of how digital tools can be used in assessments.	1(0.9)	3(2.7)	11(9.8)	73(65.2)	24(21.4)	4.04±0.71
I am familiar with online assessment platforms used at UNIZIK.	3(2.7)	8(7.1)	25(22.3)	58(51.8)	18(16.1)	3.71±0.92
I have received training on the use of innovative assessment tools.	4(3.6)	36(32.1)	33(29.5)	30(26.8)	9(8)	3.04±1.03
I am aware of the advantages of using technology in assessments.	1(0.9)	4(3.6)	9(8)	60(53.6)	38(33.9)	4.16±0.79
I have adequate knowledge of the different types of assessment tools available for education.	2(1.8)	15(13.4)	21(18.8)	62(55.4)	12(10.7)	3.6±0.92
I feel confident in using innovative assessment tools for academic work.	1(0.9)	8(7.1)	27(24.1)	59(52.7)	17(15.2)	3.74±0.84
Average						3.76±0.86

Notes: n=frequency of respondents, %=percentage of respondents.

integrate these tools more effectively in their curriculum.

The results in Table 3 indicate a moderate level of implementation of innovative assessment methods among students and lecturers at UNIZIK, with an overall mean score of 3.23 out of 5 and a SD of 1.04, suggesting that while such methods are in use, they are not yet fully adopted or consistent across the board. Notably, areas like digital assessments and integration into academic schedules scored relatively higher, whereas support for lecturers and standardization of tech use in assessments showed room for improvement.

The level of implementation of innovative assessment methods as seen in Table 4 varies across respondent groups, with lecturers (M=66.42) reporting higher levels than students (M=55.58). Gender-wise, females (M=64.48) perceived a higher implementation level than males (M=58.86), while those in the professorial cadre (M=69.90) showed the highest adoption compared to other staff groups. Among students, 200 level students (M=73.85) reported the highest implementation level, and across departments, Health Promotion Education (M=70.19), Early Childhood Education, and Technical Education recorded the most favorable responses, suggesting variability in adoption based on academic context.

This reflects the distinction between knowledge and actual use, and suggests that while students may recognize these tools and understand their functions, they may lack the authority or opportunity to apply them in practice. This supports Rogers' view that adoption requires both knowledge and the ability to act, which often rests more with the lecturers. The construct of relative advantage, defined by Rogers as the degree to which an innovation is perceived as better than what it replaces, also helps explain the patterns observed. The fact that certain departments, like Early Childhood Education and Health Promotion Education, reported higher awareness and implementation could mean that staffs in these areas see clearer benefits in adopting innovative assessment methods compared to more traditional approaches. This perceived advantage can drive quicker and more enthusiastic adoption, especially when linked to subject areas that emphasize learner-centered or technology-enhanced teaching practices.

The higher knowledge and implementation levels among the professorial cadre (Knowledge Mean=79.43; Implementation Mean=69.90) align with Rogers' classification of early adopters, individuals who are more open to innovations and often have greater access to resources or decision-making authority. Professors may also face fewer institutional barriers due to their experience and established roles, allowing them to experiment more freely with new methods. The study also revealed that although digital assessments and their integration into academic schedules are being used, their application is not widespread. This reflects Rogers' concept of observability, which refers to how visible the results of an innovation are to others. Limited visibility of successful examples or practical demonstrations may reduce motivation for broader adoption. The lack of standardization and inconsistent institutional support further diminishes the ability for others to observe successful models and replicate them. This may explain the overall moderate implementation score of 3.23, even in departments with high awareness levels.

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Table 2. Comparison of Knowledge of Innovative Educational Assessment across Various Clusters

	Knowledge level	Mean	SD
Group	Student	77.23	10.95
	Lecturer	74.29	12.46
Gender	Male	70.81	10.51
	Female	76.24	12.25
	Missing	73.31	15.54
Academic cadre	Non-Professorial Cadre	73.77	8.13
	Professorial Cadre	79.43	11.19
Student level	200 level	78.57	4.95
	300 level	73.10	14.02
	400 level	74.56	12.02
	Graduate level	76.79	9.71
Department	Adult Education	69.71	8.71
	Agriculture education	68.57	16.16
	Business education	70.00	10.64
	Early childhood education	84.76	14.66
	Educational foundations	76.24	8.98
	Educational management and Policy	75.16	18.01
	Guidance and counseling	80.71	8.21
	Health Promotion Education	79.29	11.40
	Library Information Education	71.43	
	Science education	74.81	13.16
	Technical Education	78.10	20.27

Notes: Missing apply to respondents that did not indicate their academic cadre.

Table 3. Implementation of Innovative Educational Assessment among Respondents

Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Average
	n(%)	n(%)	n(%)	n(%)	n(%)	Mean±SD
Innovative assessment methods are regularly used in my department	5(4.5)	26(23.2)	35(31.3)	39(34.8)	7(6.3)	3.15±1
Digital assessments (e.g., online quizzes, e-portfolios) are commonly implemented at the university.	7(6.3)	16(14.3)	25(22.3)	49(43.8)	15(13.4)	3.44±1.09
Students are frequently assessed using online platforms.	8(7.1)	32(28.6)	22(19.6)	42(37.5)	8(7.1)	3.09±1.11
There is sufficient use of formative assessments (e.g., ongoing feedback) at the university.	4(3.6)	20(17.9)	31(27.7)	49(43.8)	8(7.1)	3.33±0.97
Innovative assessment methods are integrated into the regular academic schedule.	5(4.5)	17(15.2)	24(21.4)	55(49.1)	11(9.8)	3.45±1.01
The university provides enough support for lecturers to use innovative assessment tools.	7(6.3)	31(27.7)	39(34.8)	30(26.8)	5(4.5)	2.96±0.99
The use of technology in assessments is a standard practice at UNIZIK.	9(8)	20(17.9)	32(28.6)	42(37.5)	9(8)	3.2±1.08
Average						**3.23±1.04**

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Table 4. Comparison of Implementation of Innovative Educational Assessment across Various Clusters

	Implementation level	Mean	SD
Group	Student	55.58	16.08
	Lecturer	66.42	14.53
Gender	Male	58.86	15.58
	Female	64.48	15.62
Academic cadre	Missing	64.05	14.91
	Non-Professorial Cadre	58.22	16.23
	Professorial Cadre	69.90	13.60
Student level	200 level	73.85	7.64
	300 level	66.97	14.15
	400 level	67.20	16.39
	Graduate level	60.19	8.95
Department	Adult Education	65.54	13.53
	Agriculture education	54.62	18.49
	Business education	66.06	14.40
	Early childhood/Early child education	68.72	11.55
	Educational foundations	56.62	13.69
	EMP/Educational management and Policy	68.17	18.41
	G & C/ Guidance and counseling	66.92	18.86
	Health Promotion Education/HPPHE	70.19	6.78
	Library Information Education	58.46	.
	Science education	65.04	18.18
	Technical Education	68.72	25.39

The results in Table 5 show that there is no significant difference in the level of awareness and knowledge of innovative educational assessment tools between students and lecturers (p=0.25), indicating both groups possess relatively similar levels of knowledge. However, a statistically significant difference exists between genders (p=0.04), with females demonstrating higher knowledge levels than males. Differences across academic cadre (p=0.07), student level (p=0.78), and department (p=0.57) were not statistically significant, suggesting that while mean scores vary slightly across these categories, these differences are not strong enough to be considered meaningful. Overall, gender appears to be the only variable with a significant impact on knowledge levels in this analysis.

The results in Table 6 show that there is a significant difference in the extent of implementation of innovative assessment methods between students and lecturers (p<0.01), with lecturers reporting higher levels of implementation. Similarly, a significant difference exists across professional cadres (p=0.01), especially between professorial and non-professorial staff, as indicated by the post-hoc result (p<0.01). However, no statistically significant differences were found based on gender (p=0.13), student level (p=0.46), or academic department (p=0.31), suggesting more uniform perceptions within these clusters.

The results in Table 7 reveal a moderate positive correlation between knowledge of IEAM and their implementation (r=0.38, p<0.01), as well as between perception of these tools and their implementation (r=0.37, p<0.01), reinforces the DOI claim that higher awareness can support adoption, but only when supported by conducive conditions. This indicates that higher levels of knowledge and positive perception among students and lecturers are significantly associated with greater use of innovative assessment methods at UNIZIK.

The multinomial regression analysis in Table 8 shows that knowledge of innovative assessment tools significantly influences their implementation (Wald=5.46, p=0.02), with an adjusted odds ratio of 1.07, indicating that for every unit increase in knowledge, the likelihood of higher implementation increases by 7%. Notably, students were

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Table 5. Comparison of Knowledge of Innovative Educational Assessment across Various Clusters

Knowledge level		Mean	SD	t-value	p-value
Group	Student	77.23	10.95	1.17	0.25
	Lecturer	74.29	12.46		
Gender	Male	70.81	10.51	-2.13	0.04
	Female	76.24	12.25		
				F-value	p-value
Academic cadre	Missing	73.31	15.54	2.70	0.07
	Non-Professorial Cadre	73.77	8.13		
	Professorial Cadre	79.43	11.19		
Student level	200 level	78.57	4.95	0.37	0.78
	300 level	73.10	14.02		
	400 level	74.56	12.02		
	Graduate level	76.79	9.71		
Department	Adult Education	69.71	8.71	0.87	0.57
	Agriculture education	68.57	16.16		
	Business education	70.00	10.64		
	Early childhood education	84.76	14.66		
	Educational foundations	76.24	8.98		
	Educational management and Policy	75.16	18.01		
	Guidance and counseling	80.71	8.21		
	Health Promotion Education	79.29	11.40		
	Library Information Education	71.43	.		
	Science education	74.81	13.16		
	Technical Education	78.10	20.27		

Notes: t-values apply to independent t-tests and F-values apply to one way ANOVA , and missing apply to respondents that did not indicate their academic cadre..

significantly less likely than lecturers to report higher levels of implementation (Wald=4.82, p=0.03; AOR=0.24), reinforcing that awareness and professional role strongly shape the use of innovative assessments at UNIZIK.

This gap may stem from the professional role difference emphasized in DOI: students are often not in a position to make curricular or assessment-related decisions. Their knowledge, while substantial, remains largely theoretical. On the other hand, lecturers not only have the authority to apply these tools but may also feel a stronger incentive to do so if they perceive clear benefits, again relating to the relative advantage construct. Lastly, the differences across student level, academic cadre, and department were not statistically significant in some areas (e.g., awareness by department, p=0.57), indicating that these variables may not consistently affect adoption. Still, the departmental differences in mean scores, particularly the higher adoption in Health Promotion and Early Childhood Education, suggest that subject-specific needs or training exposure could influence whether an innovation is seen as relevant and beneficial.

5 DISCUSSION

The findings of this study reveal that students and lecturers at UNIZIK possess a generally favorable level of awareness and knowledge regarding IEAM. With an average awareness score of 3.76 out of 5, both groups appear relatively informed about digital tools and their potential applications. This aligns with findings that faculty in Nigerian universities express positive attitudes toward digital assessment tools, although practical application is often limited by inadequate training and infrastructural support[18]. Despite the reported favorable awareness levels, the overall average implementation score of 3.23 suggests moderate use of innovative assessment methods. This confirms earlier findings that, despite growing awareness in Nigerian universities, the actual integration of new assessment tools remains limited[11]. It supports the findings of other studies reporting a persistent gap between awareness and practice in Nigerian higher education[15]. Similarly, others emphasized that awareness does not

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Table 6. Comparison of Implementation of Innovative Educational Assessment across Various Clusters

	Implementation level	Mean	SD	t-value	*p*-value
Group	Student	55.58	16.08	-3.46	<0.01
	Lecturer	66.42	14.53		
Gender	Male	58.86	15.58	-1.54	0.13
	Female	64.48	15.62		
				F-value	***p*-value**
Academic cadre	Missing	64.05	14.91	5.39	0.01
	Non-Professorial Cadre	58.22	16.23		
	Professorial Cadre	69.90	13.60		
	PostHoc of Professional vs Non-Professional Cadre				<0.01
Student level	200 level	73.85	7.64	0.88	0.46
	300 level	66.97	14.15		
	400 level	67.20	16.39		
	Graduate level	60.19	8.95		
Department	Adult Education	65.54	13.53	1.18	0.31
	Agriculture education	54.62	18.49		
	Business education	66.06	14.40		
	Early childhood/Early child education	68.72	11.55		
	Educational foundations	56.62	13.69		
	EMP/Educational management and Policy	68.17	18.41		
	G & C/ Guidance and counseling	66.92	18.86		
	Health Promotion Education/HPPHE	70.19	6.78		
	Library Information Education	58.46	.		
	Science education	65.04	18.18		
	Technical Education	68.72	25.39		

Notes: t-values apply to independent t-tests and F-values apply to one way ANOVA, and missing apply to respondents that did not indicate their academic cadre.

Table 7. Correlation between Implementation and Knowledge of IEAM

	Implementation	
	Pearson Correlation coefficient	*p*-value
Knowledge	0.38	<0.01
Perception	0.37	<0.01

always translate into practice, a gap attributed to insufficient institutional encouragement and lack of formal capacity-building initiatives[13,14] This can be explained through Rogers' construct of complexity. When an innovation is perceived as difficult to use, or when users lack adequate support, implementation is often delayed, even when awareness is high.

The absence of widespread formal training at UNIZIK suggests that while knowledge exists, practical application may be limited. This may result in underutilization of available tools, a pattern also noted in earlier research[13]. The regression analysis conducted in this study supports this, showing that knowledge significantly predicted implementation (p=0.02), with each unit increase in knowledge associated with a 7% increase in the odds of adoption. This reinforces the conclusion that knowledge positively correlates with digital tool adoption and underscores the need for training initiatives to bridge the implementation gap[19].

Demographic differences provide further insight into knowledge and implementation patterns. Students demonstrated slightly higher knowledge levels than lecturers, potentially due to greater exposure to digital platforms in daily learning activities, a finding consistent with existing literature[20]. Female respondents also reported higher knowledge levels than their male counterparts, a

Table 8. Multinomial Regression Showing Variable that Influence Implementation of Innovative Educational Assessment

	Wald	*p*-value	Adjusted Odd Ratio	Confidence Interval (lower-upper)
Intercept	0.02	0.90		
Knowledge	5.46	0.02	1.07	1.01-1.12
Gender				
Male	0.26	0.61	0.73	0.22-2.44
Female	R	R	R	R
Group				
Student	4.82	0.03	0.24	0.07-0.86
Lecturer	R	R	R	R
Academic Cadre				
Missing	1.55	0.21	0.33	0.06-1.89
Non-professional	3.52	0.06	0.24	0.06-1.07
Professional	R	R	R	R

Notes: The dependent variable was "Implementation Level" categorized into Poor, Moderate, and High, with "poor implementation" as the reference category and "R" represents reference categories for the independent variables.

statistically significant difference (p=0.04), which contrasts with findings that identified a significant gender disparity in ICT access and usage, with male students demonstrating a higher mean score compared to female students in the use of e-learning tools[21].

Among staff, the professorial cadre exhibited the highest knowledge and implementation scores, potentially due to their extended experience and access to institutional support. This is supported by studies highlighting how curriculum design and faculty autonomy influence early adoption of educational innovations[22]. Likewise, academic rank and administrative support have been identified as key determinants of technology adoption[16]. Correspondingly, departments such as Early Childhood Education and Health Promotion Education showed higher awareness levels, likely due to curriculum designs that incorporate student-centered or tech-enhanced approaches.

Implementation, however, did not fully align with these levels of awareness. While lecturers reported significantly higher levels of implementation than students (p<0.01), regression analysis revealed students were significantly less likely to report high levels of implementation compared to lecturers (AOR=0.24, p=0.03). The results highlight the influence of professional role in the adoption process. While students may understand and value innovative assessments, they depend on lecturers to apply these tools in actual teaching scenarios. This finding aligns with the DOI theory's emphasis on the social system, the structure of roles and relationships within a system that influences innovation adoption. This suggests that while lecturers may be using these tools, students might not always perceive or participate in their full application. Potential reasons maybe that students' knowledge is more theoretical vs. lecturers' practical barriers and the lecturers have more power dynamics in the implementation of the innovative assessment tools. Students may possess more theoretical or textbook knowledge of innovative assessment methods due to recent coursework, while lecturers are in a better position to implement such methods due to authority, resources, and institutional responsibilities.

This disconnect may hinder the tools' intended impact and reflects the observation that successful implementation relies heavily on faculty readiness and institutional support[4]. Interestingly, professional role emerged as a stronger predictor of implementation than gender, student level, or department, which did not show statistically significant differences in this regard. Professorial staff, due to their autonomy and experience, were more likely to adopt innovative tools (p=0.01), a trend mirrored in other institutions[16,22]. Statistical analysis further confirmed the relationship between knowledge and implementation, with both knowledge (r=0.38) and perception (r=0.37) showing moderate correlations with implementation levels. These results support the assertion that increasing awareness and perception of digital tools contributes to their broader adoption[19]. It confirms that knowledge supports adoption, but does not guarantee it. This echoes the view that adoption is not automatic; it is shaped by the innovation's perceived characteristics, user roles, and institutional setting. As such, training and support structures are essential to move users from knowledge to action.

Thus, while the study shows that awareness and knowledge of innovative assessment tools are relatively high among students and lecturers at UNIZIK, actual implementation remains moderate and inconsistent. Professional role and level of knowledge were the most significant factors influencing adoption. These findings support prior research[18,19,23] and highlight the critical need

for structured training to reduce the perceived complexity of using these tools, through workshops, hands-on sessions and mentoring, institutional support, and policy reforms aimed at enhancing the practical application of educational innovations in Nigerian universities.

6 CONCLUSION

This study has shown that although students and lecturers at UNIZIK possess a relatively high level of awareness and knowledge of IEAM, actual implementation remains uneven and moderate overall. Lecturers, particularly those in the professorial cadre, report significantly higher levels of use, which can be attributed to their greater authority, access to resources, and experience in academic decision-making. Among all factors studied, knowledge emerged as the most reliable predictor of implementation, reinforcing the idea that informed individuals are more likely to apply these methods when supported by institutional structures.

The limited implementation among students suggests that awareness alone does not guarantee practical use, especially when students lack the authority to apply assessment tools. The absence of significant differences across student levels, academic departments, and gender (in terms of implementation) suggests that while awareness is fairly uniform, structural and administrative barriers may be limiting actual adoption.

The findings point to the need for stronger institutional support, including regular training, standardized policies, and dedicated resources that encourage and sustain the use of innovative assessment methods. Emphasizing these methods within departmental planning and academic staff development initiatives could lead to more consistent implementation across all areas. Ultimately, bridging the gap between knowledge and practice will require not only individual awareness but also systemic changes in how assessment is understood, supported, and evaluated within the university environment.

7 RECOMMENDATIONS

1. Provide Regular Training: The University should organize workshops and training sessions for both students and lecturers to improve practical use of innovative assessment tools.

2. Increase Institutional Support: Faculty should be given better access to digital tools and technical assistance to encourage more frequent and consistent implementation.

3. Embed in Curriculum: Departments that have yet to integrate innovative assessments should be encouraged to revise course content and include project-based, digital, and collaborative tasks where applicable.

4. Involve Students More Actively: Efforts should be made to increase student participation in the design and evaluation of assessment methods to foster a deeper understanding and appreciation of their value.

5. Monitor and Evaluate Implementation: Continuous monitoring of assessment practices across departments will help identify gaps and measure progress, allowing for targeted interventions where needed.

6. Prioritize Knowledge Transfer: Senior academic staff with higher usage levels can serve as mentors or facilitators in building awareness and competence among their colleagues and students.

8 STRENGTHS AND LIMITATIONS

8.1 Strengths

1. The study includes both student and lecturer groups, allowing for direct comparison between two key academic stakeholders.

2. The use of multiple statistical techniques provided detailed information on differences, relationships, and predictors of implementation.

3. The questionnaire design captured a range of relevant variables, including knowledge, perception, and demographic categories.

8.2 Limitations

1. The use of purposive sampling limits the ability to generalize findings beyond the Faculty of Education at UNIZIK, or other institutions in Nigeria.

2. Self-reported data may be influenced by social desirability bias, particularly on questions about usage and knowledge.

3. The cross-sectional design captures responses at a single point in time, which may not reflect longer-term patterns of adoption.

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Ethical Statement

The study was conducted in accordance with the Declaration of Helsinki. Ethical clearance for the study was obtained from the Ethics Committee of the Faculty of Education, Nnamdi Azikiwe University, Awka (Ethical approval number ASMOHREC/2024/04112024/25). Participation was voluntary, and informed consent was obtained from all participants before data collection.

Conflicts of Interest

The authors declared no conflict of interest.

Data Availability

The datasets generated during and/or analyzed during the

current study are available from the corresponding author on reasonable request.

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Author Contribution
Eleje LI conceptualized and designed the research; Metu IC and Osonwa KE performed the data collection and preliminary analysis; Eleje LI, Eleje GU and Okeke NL analyzed and interpreted the results; Eleje LI and Esomonu NPM drafted the manuscript. All authors have read and approved the final version of the manuscript.

Abbreviation List
IEAM, Innovative Educational Assessment Methods
UNIZIK, Nnamdi Azikiwe University
ANOVA, Analysis of Variance
DOI, Diffusion of Innovations

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