

AVAILABILITY, UTILIZATION AND CHALLENGES OF AUDIO-VISUAL AIDS AMONG NURSE EDUCATORS IN SELECTED NURSING INSTITUTIONS IN IMO STATE

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Abstract: Education in nursing requires tools that bridge theoretical knowledge with practical application. Audio-Visual Aids (AVAs) such as projectors, simulations, and multimedia resources are pivotal in facilitating effective learning. Despite their recognized benefits, the utilization of AVAs in nursing schools in Imo State, Nigeria, faces numerous challenges. This study assessed the availability, utilization, and challenges of AVAs among nurse educators in selected colleges of nursing sciences in Imo State. A descriptive cross-sectional survey was conducted among 100 nurse educators selected through a multi-stage sampling technique. Data were collected using a well-structured questionnaire and analyzed using descriptive and inferential statistics. The study revealed that AVAs were moderately available in most institutions (62%), with tools like projectors, smartboards, and clinical skill labs being the most accessible (mean = 3.69). However, e-learning software and applications were rarely available (mean = 2.44). The extent of utilization varied, with simulation models and clinical skills labs being used to a very high extent (mean = 3.84, 4.00, respectively) while videos and animations were used to a low extent (mean = 2.55). Challenges identified included inadequate power supply, outdated equipment, and lack of training, all showing a mean agreement score of 4.00. Strategies to mitigate these challenges included increased funding, regular maintenance, and training sessions, with a mean score of 3.78. The findings underscore the need for enhanced infrastructure, regular training, and institutional support to maximize the potential of AVAs in nursing education. Addressing these issues will improve teaching efficacy and student outcomes. Statistical analysis confirmed significant relationships between AVA availability and utilization ($p < 0.05$). This study calls for sustained investment in AVAs and the empowerment of nurse educators to optimize educational delivery.

Keywords: Availability; Utilization; Challenges; Audio-visual aids; Nurse educators; Nursing institutions; Imo State

1 INTRODUCTION

Education is a dynamic process that requires continuous improvement to meet the demands of a changing world. In the field of nursing education, the need for effective teaching methods is paramount as nursing students must acquire both theoretical knowledge and practical skills to function effectively in clinical settings. Audio-Visual Aids (AVAs), such as projectors, videos, simulations, and interactive media, serve as vital tools that facilitate the learning process by providing visual and auditory stimuli to enhance understanding and retention [1].

Audiovisual aids refer to the tools, materials, and equipment used to enhance the learning and communication experience by combining auditory and visual elements. These aids support and reinforce information by integrating sound, images, and text, creating a multi-sensory learning environment. From slideshows and videos to interactive presentations and digital media, audiovisual aids play a crucial role in various educational settings, business presentations, and entertainment industries. Engaging multiple senses simultaneously captivates audiences, improves understanding, and leaves a lasting impact on the recipients. With their ability to convey complex concepts, stimulate interest, and enhance communication, audiovisual aids have become indispensable tools in today's dynamic and visually driven world [2].

Studies have established that the use of AVAs in education promotes deeper learning, as they provide real-life simulations that allow students to see and understand complex procedures that might be difficult to explain through text or verbal communication alone (Edeh, 2020). In nursing education, these aids can be particularly useful in teaching clinical skills, anatomy, and patient care procedures, which are often difficult to comprehend without visual demonstrations [3].

Audio-Visual Aids (AVAs) are crucial instructional tools that enhance the teaching-learning process by making content more engaging and easier to understand. In nursing education, AVAs help bridge the gap between theoretical knowledge and practical application. However, despite the known benefits, the availability and utilization of AVAs in many nursing schools, especially in developing regions like Imo State, Nigeria, remain suboptimal (Edeh, 2020). Studies have shown that adequate use of AVAs can significantly improve students' understanding of complex concepts, but the challenge of limited access, poor maintenance, and lack of technical support often hampers their effective use [4].

However, despite the global recognition of AVAs' importance in enhancing educational outcomes, many institutions, especially in developing countries, face significant challenges in their availability and utilization. In Nigeria, particularly in Imo State, the use of AVAs in nursing education is limited by factors such as inadequate funding, poor infrastructure, lack

of skilled personnel, and insufficient training for nurse educators. Without the necessary resources and knowledge to effectively integrate AVAs into the curriculum, the quality of nursing education may be compromised, leading to graduates who are ill-prepared for the demands of the healthcare sector [5].

As nursing education evolves to meet the growing demands of modern healthcare, there is a pressing need to ensure that institutions have access to, and make effective use of, AVAs. This study seeks to investigate the availability, utilization, and challenges of AVAs in nursing education within Imo State, with a focus on identifying ways to enhance their integration into the teaching-learning process.

The availability of AVAs in educational institutions varies significantly depending on resources, institutional policies, and infrastructure. In well-funded institutions, modern AVAs such as digital simulations, 3D anatomy software, and interactive whiteboards are commonplace. However, in many institutions, particularly in developing regions, the types of AVAs available may be limited to traditional tools such as overhead projectors and slide presentations. It is essential to assess not only the availability of AVAs but also the types accessible to lecturers, as this directly affects the quality of education delivered [6].

Availability does not necessarily guarantee effective utilization. Research indicates that even when AVAs are available, they are often underutilized by lecturers due to a lack of familiarity, comfort, or training in their use. Some educators may rely heavily on traditional lecture methods, overlooking the potential benefits of using AVAs to enhance students' understanding. The extent of utilization depends on factors such as the lecturers' technological proficiency, institutional support, and perceived relevance of AVAs to the curriculum. Thus, the challenge lies not only in making AVAs available but also in ensuring they are effectively integrated into teaching practices [7].

Despite the recognized benefits of AVAs, lecturers face numerous challenges in their use. Common issues include inadequate infrastructure (e.g., unreliable electricity, poor internet connectivity), insufficient funding for acquiring modern AVAs, and a lack of technical support for maintaining and operating equipment. Additionally, many lecturers report not receiving adequate training on how to use AVAs effectively, leading to underutilization or inefficient use. These barriers can significantly impede the incorporation of AVAs into teaching, thus affecting the overall quality of education [8].

Addressing the challenges related to the use of AVAs requires a multi-faceted approach. First, institutions must invest in modern infrastructure and ensure the availability of reliable technological tools. This includes regular maintenance of AVA equipment and access to technical support for troubleshooting. Additionally, educators should be provided with continuous professional development opportunities, including training on how to integrate AVAs into their teaching practices effectively. Finally, institutional policies must support the integration of AVAs by encouraging innovation in teaching methods and providing incentives for educators to adopt these tools. This study seeks to examine the availability, utilization, and challenges of AVAs among nurse educators in selected nursing schools in Imo State [9].

Nursing education is foundational to the development of competent healthcare professionals who can provide high-quality patient care. The integration of audio-visual aids into nursing education is widely regarded as an effective strategy for enhancing the learning experience by offering students practical, real-world insights into clinical procedures. AVAs provide an opportunity for nurse educators to move beyond traditional, lecture-based methods and engage students through interactive and visually stimulating content.

There is an urgent need to improve the quality of education to bridge the gap between developed and developing nations, and audio-visual instruction is considered as a necessary tool for this purpose. However, the presence of audio visual alone will not bring significant changes in a school. Nurse educators are important ingredient in the implementation of audio-visual instruction. Without the involvement of nurse educators, most students may not take advantage of all the available potential benefits of audio-visual learning on their own. Teachers need to actively participate in the use of audio-visual facilities for students. They have to be trained in the use of audio-visual materials and in its integration in the classroom activities to enhance thinking and creativity among students. They must also learn to facilitate and encourage students by making them responsible for their own learning. Many of the current graduates were found to be lacking in creativity, communications skills, analytical and critical thinking and problem-solving skills.

Despite the known benefits, there is mounting evidence that nurse educators in many schools of nursing in Imo State are not fully utilizing AVAs in their teaching. The limited use of AVAs could be attributed to several factors, including inadequate availability, lack of institutional support, poor technical infrastructure, and insufficient training on the use of these tools. Without adequate resources, nurse educators may find it challenging to provide students with a holistic learning experience that bridges the gap between theoretical knowledge and practical application.

Moreover, the few AVAs that are available in some institutions are often underutilized due to challenges such as frequent power outages, limited access to internet services, and lack of technical support for maintaining and operating AVA equipment. These challenges significantly impede the quality of education provided to nursing students, potentially affecting their preparedness for clinical practice and their overall competency as future nurses [10].

Furthermore, factors such as poor infrastructure, inadequate funding, and lack of training on the use of AVAs are believed to contribute to this challenge. This study addresses these issues by investigating the availability and use of AVAs among nurse educators in Imo State, as well as identifying the challenges hindering their effective use.

This study seeks to address these issues by exploring the extent to which AVAs are available and utilized in selected nursing schools in Imo State, as well as identifying the challenges faced by nurse educators. Understanding these challenges

is critical to formulating strategies that can enhance the availability and effective use of AVAs, ultimately leading to improved educational outcomes and better-prepared nursing graduates.

2 MATERIALS AND METHODS

2.1 Area of Study

The study was carried out using the public, mission and private nursing institutions in Imo State. The nursing institutions belongs to Imo State government and Catholic Church. Imo State is one of the 36 states of Nigeria and lies in the Southeast of Nigeria. Owerri is its capital and largest city. Its other major cities are Orlu and Okigwe.

The nursing institutions in the state are School of Nursing Owerri, School of Nursing Amaigbo, School of Nursing Emekuku, School of Nursing Umulogho, Ezeala College of Nursing, Imo State college of Nursing, College of Nursing Mbanu, Merit School of Nursing Orlu, Princess School of Nursing and Imo College of Nursing Sciences Orlu (ICON).

2.2 Population of the Study

The target population of the study is 209 Nurse Educators in selected college of Nursing sciences in Imo State

2.3 Sampling

The sample size of the study is 100 respondents.

2.4 Sampling Technique

Multistage sampling technique was used to select a sample of 100 respondents for the study. Firstly, stratified sampling technique was used to divide the target population into Ten (10) strata which comprises of Ten (10) institutions and teachers which formed a stratum. Secondly, Simple Random Sampling (SRS) technique was used to select five (5) strata (institutions) for the study which gave every member of the target population equal chance of been chosen for the study.

Finally, convenience sampling technique which is a non-probability sampling technique was used to select a sample of 100 respondents for the study as every member of the target population may not be available during the time of the study which may be as a result of ASUU strike or holidays or any other factors. This prompted the researcher to use convenience sampling technique.

2.5 Inclusion Criteria

Must be a nurse educator in Imo state.

Must be an educator in a nursing institution in Imo State

Must be readily present at the time of the study.

Must have the willingness to participate in the study.

No sick respondent was used as all the respondents were well enough to participate in the study.

2.6 Exclusion Criteria

Sick teachers

Nurse educators outside Imo state who are indigenes of Imo state

Unwilling nurse educators

2.7 Instrument for Data Collection

A well-structured questionnaire titled "Availability, Utilization and Challenges of Audio-Visual Aids Questionnaire" (AUCAVAQ) were used for data collection. Questions were drawn based strictly on the stated objectives and literatures reviewed on examination malpractice. The questionnaire were made in five sections. Section A elicited demographic information of the respondents, section B assessed the availability and types of Audio visual aids used by nurse educators, section C elicited information on the extent of utilization of Audio -visual aids by nurse educators, section D identified the challenges nurse educators encounter in using audio aids while section E identified the strategies to overcome the challenges encountered by nurse educators in using -audio visual aids. A four-point rating scale that ranged from Strongly Agree = 4, Agree = 3, Disagree = 2 and Strongly Disagree = 1, were used to survey examination malpractice among teachers and students.

2.8 Validity of the Instrument

The instrument for data collection were validated to ensure that it measured what it intended to measure. This were done by giving the draft copy of the instrument to two experts in the department of Nursing Science, Faculty of Health and two in Measurement and Evaluation, Faculty of Education all in IMSU.

2.9 Reliability of the Instrument

The reliability of the instrument were established with a trial test administered to 20 educators in Umuahia, Abia State. This was so because, these respondents in Umuahia Abia State have similar experience regarding the audio visuals and they are not part of the study. The reliability of the instrument will be determined by using Cronbach's Alpha. For the availability and types of Audio visual aids used by nurse educators, the extent of utilization of Audio -visual aids by nurse educators, the challenges nurse educators encounter in using audio aids and the strategies to overcome the challenges encountered by nurse educators in using -audio visual aids, the co-efficient alpha for the four sections were 0.832, 0.785, 0.763 and 0.885 respectively, which gave overall reliability mean of 0.816. This shows that the instrument is highly reliable.

2.10 Method of Data Collection

The researcher administered the instrument through five research assistants who were selected from Imo State and are familiar with the research environment. The research assistants were briefed on how to assist respondents for the purpose of the study. The five assistants helped in covering the 8 nursing institutions in Imo State. The researcher and her assistants did on the spot administration and retrieval of the instruments from respondents. In this process the researcher solicited for the cooperation of the school management. Instructions were given on how to complete the questionnaire in order to safeguard errors due to misunderstanding of the question. Respondents were encouraged to complete and return the questionnaire on the spot. 100 questionnaires were distributed to the respondents which were all retrieved showing 100% retrieval rate. The researcher and her assistants did on the spot administration and retrieval showing 100% retrieval rate.

2.11 Ethical Consideration

In order to conform to the ethical and legal standards of a scientific investigation, the relevant authorities of Nursing institutions scrutinized the proposal and granted permission for questionnaire administration. The participants have a thorough explanation of the study and voluntarily agreed to participate in the study. The participants were ensured of confidentiality of any information given.

2.12 Statistical Analysis

Frequency, Percentage, and Mean which are descriptive statistics will be used to answer research question 1 – 3 while simple linear regression and Chi-Square test were used to test the stated hypotheses at a significance level of 0.05. For answering research questions, 2.50 was used as cut off point which was gotten by adding the 4-point rating scale and dividing by 4 ($4+3+2+1 = 10/4 = 2.5$). Any item with mean score of 2.50 or above were regarded as agreed while any item with mean score of 2.49 or below were regarded as disagreed. All the statistical analyses were performed using Statistical Package for Social Sciences (SPSS), version 22.0.

3 RESULTS

Table 1 Respondents Demographic Characteristics (n = 100)

S/N	Item	Frequency(F)	Percentage (%)
	Age		
	Below 40	49	49%
	40 – 50	37	37%
	Above 50	14	14%
	Highest Educational Qualification		
	Diploma in Nursing (RN/RM)	13	13%
	Bachelor's degree in nursing	58	58%
	Postgraduate (MSc/PhD in Nursing)	29	29%
	Years of Teaching Experience	9	
	Less than 5 years	13	9%
	5–10years	78	13%
	More than 10 years		78%
	Training on Use of Audio-Visual Aids	100	

Yes	0	100%
No		0%

Availability of Audio-Visual Aids in Your Institution		
Highly Available	38	38%
Moderately Available	62	62%
Rarely Available	0	0%
Not Available	0	0%

The analysis on table 1 above revealed that 49(49%) are below 40 years, 37(37%) are between 40 – 50 years while 14(14%) are above 50 years. 13(13%) have Diploma in Nursing (RN/RM), 58(58%) have bachelor’s degree in nursing science (BSc) while 29(29%) have Postgraduate (MSc/PhD in Nursing). 9(9%) have teaching experience less than 5 years, 13(13%) have teaching experience between 5 – 10 years while 78(78%) have more than 10 years teaching experience. All the respondents 100(100%) had training on the use of Audio-Visual Aids. Analysis on the availability of AVAs revealed that 38(38%) accepted that AVAs are highly available while 62(62%) agreed that it is moderately available as none of them 0(0%) agreed that it is rarely or not available.

Table 2 Availability and Types of Audio-visual aids used by nurse educators (n = 100)

S/N	Items	HA 4	MA 3	RA 2	NA 1	Total	Mean	Remark
1	Projectors and Smart Boards	100	0	0	0	400	4.00	HA
2	Simulation Models and Manikins	79	21	0	0	379	3.79	HA
3	Videos and Animation	34	49	17	0	317	3.17	MA
4	Visual aids like charts, diagrams, and slides are accessible for teaching purposes	100	0	0	0	400	4.00	HA
5	Multimedia resources (e.g., educational videos, interactive presentations) are provided.	100	0	0	0	400	4.00	HA
6	Clinical Skills Labs with Interactive Videos	84	16	0	0	384	3.84	HA
7	E-Learning Software and Applications	11	22	67	0	244	2.44	RA
8	Computer-Based Quizzes& Assessments	100	0	0	0	400	4.00	HA
9	AVAs such as computers and microphones	100	0	0	0	400	4.00	HA
	Grand Mean						3.69	HA

Note: Criterion Mean = 2.5; N/B: HA = Highly Available; MA = Moderately Available; RA = Rarely Available; NA = Not Available

The analysis on table 2 which seeks to assess the availability and types of Audio-visual aids used by nurse educators shows a grand mean of 3.69 which exceeds the criterion mean of 2.5 which shows that AVAs are Highly Available (HA). Specifically, the mean values of the items are above the criterion mean (i.e.4.00, 3.79, 3.17, 4.00, 4.00, 3.84, 2.44, 4.00, 4.00> 2.5) which shows that projectors and smart boards are Highly Available (HA), Simulation Models and Manikins are Highly Available (HA), videos and animations are Moderately Available (MA), visual aids like charts, diagrams, and slides are Highly Available and accessible for teaching purposes, multimedia resources (e.g., educational videos, interactive presentations) are Highly Available and are provided, clinical Skills Labs with Interactive Videos are Highly Available, E-Learning Software and Applications are Rarely Available (RA), Computer-Based Quizzes & Assessments are Highly Available and AVAs such as computers and microphones are Highly Available.

Table 3 Utilization of AVAs (n = 100)

S/N	Items	VHE 4	HE 3	LE 2	VLE 1	Total	Mean	Remark
1	Projectors and Smart Boards	39	61	0	0	339	3.39	HE
2	Simulation Models and Manikins	87	12	0	0	384	3.84	VHE
3	Videos and Animation	14	32	49	5	255	2.55	LE
4	Visual aids like charts, diagrams, and slides are accessible for teaching purposes	100	0	0	0	400	4.00	VHE
5	Multimedia resources (e.g., educational videos,	94	6	0	0			

	interactive presentations) are provided					394	3.94	VHE
6	Clinical Skills Labs with Interactive Videos	100	0	0	0	400	4.00	VHE
7	E-Learning Software and Applications	9	24	51	16	226	2.26	LE
8	Computer-Based Quizzes and Assessments	32	49	19	0	313	3.13	HE
9	AVAs such as computers and microphones	100	0	0	0	400	4.00	VHE
	Grand Mean						3.46	HE

The analysis on table 3 which seeks to determine the extent of utilization of Audio -Visual Aids by Nurse Educators shows a grand mean of 3.46 which exceeds the criterion mean of 2.5 which shows that the respondents utilize AVAs to a High Extent (HE). Specifically, the mean values of the items are above the criterion mean (i.e. 3.39, 3.84, 2.55, 4.00, 3.94, 4.00, 2.26, 3.13, 4.00 > 2.5) which shows that Projectors and Smart Boards are utilized to a High Extent (HE), simulation Models and Manikins to a Very High Extent (VHE), Videos and Animation to a Low Extent (LE), Visual aids like charts, diagrams, and slides are accessible for teaching purposes to a VHE, Multimedia resources (e.g., educational videos, interactive presentations) are provided to a VHE, Clinical Skills Labs with Interactive Videos to a VHE, E-Learning Software and Applications to a LE, Computer-Based Quizzes and Assessments to a HE and AVAs such as computers and microphones to a VHE.

Table 4 Challenges Nurse Educators Encounter in Using Audio Aids (n = 100)

S/N	ITEMS	SA 4	A 3	D 2	SD 1	Total	Mean	Remark
1	Technical issues (e.g., equipment malfunction) can disrupt teaching	100	0	0	0	400	4.00	Agreed
2	Inadequate support from IT staff for AVAs	38	62	0	0	338	3.38	Agreed
3	Outdated AVAs may not meet modern teaching requirements	100	0	0	0	400	4.00	Agreed
4	Time constraints make it difficult to prepare and incorporate AVAs into lessons	74	26	0	0	374	3.74	Agreed
5	Lack of proper training on AVA usage can limit the ability to use them effectively	100	0	0	0	400	4.00	Agreed
6	Inadequate power (electricity) supply	100	0	0	0	400	4.00	Agreed
7	High cost of maintenance	100	0	0	0	400	4.00	Agreed
	Grand Mean						3.87	Agreed

Note: Criterion Mean: 2.5

The analysis on table 4 which seeks to identify the challenges nurse educators encounter in using audio aids shows a grand mean of 3.87 which exceeds the criterion mean of 2.5 which shows that the respondents accepted the items as the challenges nurse educators encounter in using audio aids. Specifically, the mean values of the items are above the criterion mean (i.e. 4.00, 3.38, 4.00, 3.74, 4.00, 4.00, 4.00 > 2.5) which shows that the challenges nurse educators encounter in using audio aids are technical issues (e.g., equipment malfunction) can disrupt teaching, inadequate support from IT staff for AVAs, outdated AVAs may not meet modern teaching requirements, time constraints make it difficult to prepare and incorporate AVAs into lessons, lack of proper training on AVA usage can limit the ability to use them effectively, inadequate power (electricity) supply and high cost of maintenance.

Table 5 Strategies to Overcome the Challenges encountered by Nurse Educators (n = 100)

S/N	ITEMS	SA 4	A 3	D 2	SD 1	Total	Mean	Remark
1	More training sessions on AVA use would improve confidence in using them	100	0	0	0	400	4.00	Agreed
2	Regular updates and maintenance of AVAs would reduce technical issues	100	0	0	0	400	4.00	Agreed
3	Having dedicated AVA support staff available during classes would be beneficial	100	0	0	0	400	4.00	Agreed
4	Increased funding for purchasing new AVAs would enhance teaching quality	100	0	0	0	400	4.00	Agreed
5	Developing a shared resource library for AVAs would improve accessibility	36	58	6	0	330	3.30	Agreed
6	Providing an AVA troubleshooting guide would help address minor issues	24	69	7	0	317	3.17	Agreed
7	Scheduling more time for AVA setup before classes	100	0	0	0	400	4.00	Agreed

would reduce disruptions	Grand Mean	3.78	Agreed
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Note: Criterion Mean: 2.5

The analysis on table 4 which seeks to identify the strategies to overcome the challenges encountered by nurse educators in using -audio visual aids shows a grand mean of 3.78 which exceeds the criterion mean of 2.5 which shows that the respondents accepted the items as the strategies to overcome the challenges encountered by nurse educators in using -audio visual aids. Specifically, the mean values of the items are above the criterion mean (i.e.4.00, 4.00, 4.00, 4.00, 3.30, 3.17, 4.00> 2.5) which shows that the strategies to overcome the challenges encountered by nurse educators in using -audio visual aids include more training sessions on AVA use would improve confidence in using them, regular updates and maintenance of AVAs would reduce technical issues, having dedicated AVA support staff available during classes would be beneficial, increased funding for purchasing new AVAs would enhance teaching quality, developing a shared resource library for AVAs would improve accessibility, providing an AVA troubleshooting guide would help address minor issues and scheduling more time for AVA setup before classes would reduce disruptions.

4 DISCUSSION

The demographic spread shows that most respondents have over 10 years of teaching experience, and all have had training in AVA usage. This aligns with [11] findings that experienced nurse educators can better integrate AVAs if trained. It was further emphasized the link between educator experience and effective AVA use, indicating that years of experience and adequate training contribute positively to AVA integration [12].

Most AVAs, such as projectors and smart boards, are highly available, while E-learning software is rarely available. This suggests a disparity in AVA resources, which impacts usage effectiveness. It was found that institutions with limited digital AVAs struggled with modern teaching demands [13,14,15]. The availability of only basic AVAs reflects findings by [16] that under-resourced institutions limit educational quality.

High utilization is noted for visual aids and simulation models, but limited use is observed with digital resources, supporting the need for improved digital competency.

This agrees with the findings of [17] who indicated similar utilization patterns, where AVAs are frequently used for hands-on and interactive training but less so for digital or online learning.

Technical issues, lack of training, and funding were significant challenges. These align with findings that infrastructural challenges hinder AVA usage, emphasizing the need for institutional support [18,19,20]. Challenges such as technical difficulties and inadequate support are echoed in [21,22], reinforcing that institutional improvements are needed for consistent AVA use.

Regular training and increased funding were rated as highly effective strategies to overcome AVA-related challenges.

This agrees with the studies by [23,24] which similarly highlight the importance of training and technical support for AVA use, reinforcing that these strategies can sustainably improve nursing education.

5 CONCLUSION

The study reveals that while there is substantial availability and utilization of certain AVAs among nurse educators in Imo State, limitations in digital AVAs and support infrastructure hinder optimal use. Addressing these gaps is essential to enhancing the educational experience and ensuring that nursing graduates meet the competencies required in modern healthcare.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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