

Activity and Effectiveness of Online Learning among Nursing Students in Nigeria

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Abstract

Introduction: Understanding the activity levels and effectiveness of online learning among nursing students is essential for informing curriculum development, instructional design, and pedagogical practices in nursing education.

Method: The study adopted prospective web-based cross-sectional descriptive design. Multistage sampling technique was used for selection of the 429 participants that completed the Google driven data, which was analyzed using Statistical Package for the Social Sciences (SPSS) Version 22, and results were presented in tables.

Results: Majority 258(60.2%) of the respondents were aged between 21-25 years as at their last birthdays. married 392(91.4%), maily Christian 377(87.9%) and all were undergraduate. Anambra, Imo, Kwara, Ondo and Enugu were the modal states of origin 110(25.6%), 57(13.3%), 45(10.5%), 44(10.3%) and 21(4.9%) respectively. On activity levels of the students, 69(16%) the students reported extremely active, 117(27.3%) were active while 40(9.3%) were inactive. On effectiveness of online learning, Majority of the respondents had the opinion that online learning was effective 355(82.8%) while 74(17.2%) said that online learning was ineffective.

Conclusion: The utilization of online mode of learning has not been without challenges especially in area of engagement, network hitches, attention and standardization of the contents delivered. Curriculum planners and teachers utilizing the online method should make sure that students progress through ; Concrete Experience, Reflective Observation, Abstract Conceptualization and Active Experimentation to enhance effectiveness and encourage more students engagements.

Keywords: Activity, Effectiveness, Online Learning, Nursing Students, Nigeria

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Introduction

E-learning also known as online learning has transformed the healthcare education system by providing healthcare professionals with training and development opportunities, regardless of their location¹. The emergence of e-learning or online learning programs has transformed the traditional learning approach worldwide, including school and university education, adult education, and other health supplementary learning programs^{2,3}. As a result, it is critical to rethink and revolutionize the creation of learning programs that are functional and beneficial in response to these technological advancements^{4,5}. Online learning is a form of learning free from spatial and temporal constraints, using information and communications technology⁶. In contemporary nursing education, the integration of online learning has become increasingly prevalent, offering both challenges and opportunities for educators and students alike⁷. The incorporation of online learning into nursing education is a response to the evolving needs of both learners and the healthcare industry⁸. Asynchronous and synchronous online learning modalities offer students the flexibility to access course materials at their convenience, facilitating a self-paced learning environment that accommodates diverse learning styles and schedules. Since nursing curriculum is not designed to have a complete distance education⁹, the pedagogical transition from traditional to online learning posed major challenges in nursing education¹⁰.

The American Association of Colleges of Nursing (AACN) has emphasized the importance of integrating informatics and technology-enhanced learning environments into nursing curricula to prepare students for the complexities of modern healthcare settings¹¹. With the proliferation of electronic health records, telehealth initiatives, and healthcare informatics systems, nurses are required to possess proficiency in digital literacy and information management skills. Online learning provides an opportunity for nursing students to develop these competencies, along with critical thinking, problem-solving, and communication skills essential for effective nursing practice.

Despite the potential benefits of online learning, challenges exist in ensuring its effectiveness and

relevance to nursing education. Concerns regarding the quality of online instruction, the adequacy of student support services, and the authenticity of clinical simulations have been raised within the nursing education community¹². The primary reasons behind adopting these technologies in nursing education include to better prepare nursing students for the workforce, to improve student nurse confidence and competence, particularly in the areas of problem solving, critical thinking and decision making, to provide students with variety in the types of clinical cases they are exposed to due to the reduction in the quantity and quality of available clinical sites, to meet changes in the technology being used in practice and to serve the way incoming students learn.

Understanding the activity levels and effectiveness of online learning among nursing students is essential for informing curriculum development, instructional design, and pedagogical practices in nursing education. By identifying effective strategies and best practices in online learning, educators can optimize the educational experiences of nursing students, enhance their clinical competence, and prepare them for the demands of contemporary healthcare practice.

Materials and Methods

The study adopted prospective web-based cross-sectional descriptive design. Multistage sampling technique was used for selection of the participants. Simple random sampling method was used in selecting three regions out of six regions in Nigeria. South West, South East and North Central. Simple random sampling was also used to select four nursing institutions from the three regions including Department of nursing science university of Lagos, School of Nursing university of Ilorin Teaching Hospital, Department of Nursing Nnamdi Azikiwe University and Department of adult and psychiatric mental health nursing University of medical sciences Ondo state. Convenient sampling was used to select participants for the study. The sample size for the study was 429, 42 from Unilag, 205 from Unizik, 128 from Uniondo and 54 from SON UIITH using proportionate method. The instruments for data collection was researchers designed questionnaire which was validated and tested for reliability. The

Socio-demographic variables and objectives were analyzed using descriptive statistics (Percentage, Frequencies, Mean, Median, Standard Deviation and Tables. Ethical approval was obtained from Health Research Ethics Committee, Lagos University Teaching Hospital for the study with approval Number ADM/DCST/HREC/APP/4220. Electronic informed consent was obtained from the participants before completing the study instrument. Data analysis was done using SPSS version 24 and results were presented in tables.

Results

Table 1: Socio-demographics of the respondents

Variables	Frequency	Percentage
Age		
16 - 20	86	20.0
21 - 25	258	60.2
26 - 30	66	15.4
31 and above	19	4.4
Institution		
NAUTH	205	47.8
UNILAG	42	9.8
UNIONDO	128	29.8
SON UITH	54	12.6
Marital Status		
Single	392	91.4
Married	37	8.6
Religion		
Islam	51	11.9
Christianity	377	87.9
Others	1	.2
State		
Anambra	110	25.6
Imo	57	13.3
Kwara	45	10.5
Ondo	44	10.3
Others	173	40.3
Level of Education		
Undergraduate	429	100

Table 1 shows majority 258(60.2%) of the respondents were aged between 21-25 years as at their last birthdays. Majority of the students were married 392(91.4%), 377(87.9%) of them were Christians and all were undergraduate. Anambra,

Imo, Kwara, Ondo and Enugu were the modal states of origin 110(25.6%), 57(13.3%), 45(10.5%), 44(10.3%) and 21(4.9%) respectively.

Table 2: Activity During Online Learning

Variables	Frequency	Percentage
Describe your activity during e-learning		
Extremely inactive	40	9.3
Inactive	66	15.4
Not sure	137	32.0
Active	117	27.3
Extremely active	69	16.0

Table 2 shows 69(16%) the students reported extremely active, 117(27.3%) were active while 137(32%) were not sure either active or inactive and only 40(9.3%) were inactive.

Table 3: Effectiveness of online-learning

Variables	Frequency	Percentage
Rate the effectiveness of e-learning in terms of increasing knowledge		
Extremely ineffective	40	9.3
Ineffective	45	10.6
Not sure	150	35.0
Effective	102	23.7
Extremely effective	92	21.4
Rate the effectiveness of e-learning in terms of increasing clinical skills		
Extremely ineffective	137	31.9
Ineffective	108	25.2
Not sure	78	18.2
Effective	60	14.0
Extremely effective	46	10.7
Rate the effectiveness of online learning in terms of increasing social competences		
Extremely ineffective	78	18.2
Ineffective	88	20.6
Not sure	103	24.0
Effective	85	19.8

Continue.....

Extremely effective	75	17.4
Rate the effectiveness of traditional face-to-face learning in terms of increasing knowledge		
Extremely ineffective	30	7.0
Ineffective	37	8.6
Not sure	74	17.2
Effective	128	29.8
Extremely effective	160	37.4
Rate the effectiveness of traditional face-to-face learning in terms of increasing clinical skills		
Extremely ineffective	44	10.3
Ineffective	42	9.8
Not sure	56	13.1
Effective	71	16.5
Extremely effective	216	50.3
Rate the effectiveness of traditional face-to-face learning in terms of increasing social competences		
Extremely ineffective	24	5.6
Ineffective	54	12.6
Not sure	74	17.2
Effective	117	27.2
Extremely effective	160	37.4

Figure 1: Effectiveness of online-learning

Table 3 shows the Effectiveness of e-learning among the respondents. A 5-point Likert scale was employed to measure the respondents' opinions toward the effectiveness of online learning. Six items scored in ascending order 1-5 were used to assess the effectiveness of online learning. The average score was graded to give the level of effectiveness; those that scored >2.5 were graded as effective while a score of <2.5 showed the opinion that online learning is not effective.

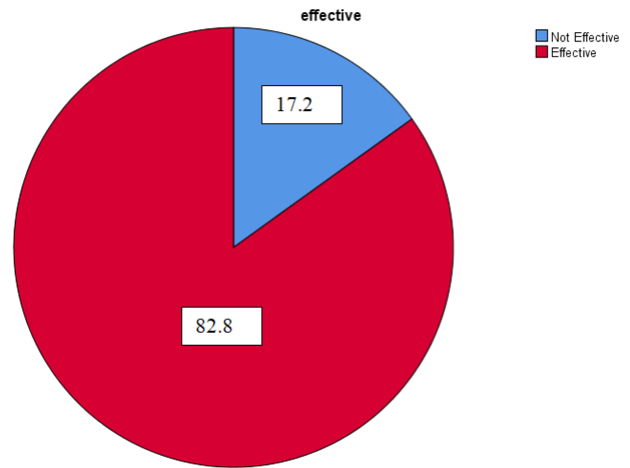


Figure 1: Majority of the respondents had the opinion that online learning was effective 355(82.8%) while 74(17.2%) said it was ineffective.

Discussion of findings

On activity levels during online learning among nursing students. Results shows that the students reported extremely active and active to a greater percentage. About a quarter percentage neither active or inactive and a few of the students reported to be inactive. Active learning strategies in nursing education is all about empowering students to *actually* remember the large amount of information they face throughout nursing school. This view was supported by Maria-Pilar et al,¹³ who stated in their report that Faculty have an opportunity to address student stressors and design remote courses in such a way to facilitate student engagement and community building. The benefits of using active learning strategies in nursing education Simply presenting course material may provide short-term value, but physical practicing, experiencing, and learning through active engagement helps the roots of that material grab hold. Those that reported inactive signifies a preference for face-to-face learning hence there is suggestions for optimising remote learning include an emphasis on synchronous live sessions rather than asynchronous learning, incentivised learning, and a focus on ongoing formative informal assessment to maintain engagement. Specific challenges related to poor retention, difficulty remaining motivated, academic role stress and maintaining focus on content and learning outcomes ¹⁴ may also be a source of inactivity for the

participants. It is important to note that activities to encourage active learning among students include; Pre-class assignments, role play, concept map, nursing simulation, gallery work, what if scenarios, may not be possible with online learning hence the preference for face to face or traditional learning method by this students. While online learning is reported by some authors as causing social isolation, lack of motivation and difficulties in communicating with the instructors and peers^{15,16}, was a factor that affect online learning as a large number of students in the current study reported the opposite as the result showed majority of the students reported to be active during online learning. In a study by O'Doherty et al¹⁶, the students considered online learning to be a safe space for engagement that enhanced active participation. They also noted that it forced them to reflect on their pre-existing knowledge before learning new information and ultimately enhanced their understanding of the learning material. The findings of this research suggest that online platforms can support nursing students' learning engagement, although not specific to behavioural engagement, cognitive and affective engagement as well^{17,18}.

On the effectiveness of online learning among the students, majority of the participants had the opinion that online learning was effective while a few of them said that online learning was ineffective. For any learning method to be judged effective, it must cover Kolb's experiential learning cycle which defines four stages that a learner should progress including Concrete Experience, Reflective Observation, Abstract Conceptualization and Active Experimentation¹⁹. For the majority of the students that reported online learning to be effective showed they are satisfied in these four domains hence the acquired knowledge can be applied in future situations, resulting in new experiences.

The real case online learning provides a different atmosphere including more interesting class, interactive interaction with the patients directly and providing positive experience for the students in the form of seeing the real cases online. The facilities (internet availability and stability) are important factors in the online learning process to aid its effectiveness¹³.

There are various obstacles in the online learning that cause the learning process to be less than optimal. Some studies reported that the internet connection and facilities owned by the students and, also tutors were the important factors that become a "barrier" in online learning thereby impeding its effectiveness^{20,21}. Supporting the effectiveness of online learning, a meta-analysis study found that, on average, students in online learning conditions performed modestly better, had significant positive effect on students' knowledge and attitude than those receiving face-to-face instruction.²²

Contrary to the report in the current study, Tiwari & Srivastava³ in their own study revealed that majority of the nursing students had poor overall self-efficacy scores in online learning, which highlights the need for urgent identification of possible predictors. Although some degree of agreement regarding focus in lectures, interactions and summative online assessments was found between students and faculties³. Internet speed and technical issues were revealed to be the main constraints of this format, whereas flexibility, availability of content for revision, and fewer distractions were the positive features. Frequent summative and formative assessments was seen as vital to draw attention, help with retention and address the issues relating to learning and teaching²³ and should be utilized appropriately in online learning to enhance effectiveness.

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Ethical approval

Ethical approval was obtained from Health Research Ethics Committee, Lagos University Teaching Hospital for the study with approval Number ADM/DCST/HREC/APP/4220. Electronic informed consent was gotten from the participants before completing the study instrument.

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Authors' contributions: All authors contributed to every aspect of the study from its inception to the end.

Conclusion

The study showed students were active and saw online learning to be effective. It is important to note that understanding the activity levels and effectiveness of online learning among nursing students is essential for informing curriculum development, instructional design, and pedagogical practices in nursing education. By identifying effective strategies and best practices in online learning, educators can optimize the educational experiences of nursing students in all ramifications.

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