

EFFECTIVENESS OF ONLINE LEARNING AMONG UNDERGRADUATE AND POSTGRADUATE NURSING STUDENTS IN JAMSHORO, SINDH.

Original Research

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Abstract

Background: The flexibility and accessibility of online learning have transformed higher education, particularly in nursing education. However, its effectiveness remains under analysis due to the necessity of both theoretical knowledge and practical skills. Access to the internet, learner's involvement, and instructional quality are key factors that influence learning experiences.

Objective: This study aimed to assess the effectiveness of online learning among undergraduate and postgraduate nursing students in Jamshoro, Sindh.

Methods: A cross-sectional study was conducted from December 2023 to April 2024, utilizing a validated questionnaire. A sample of 100 nursing students was selected through non-probability convenience sampling. Data were analyzed using IBM SPSS version 23, with descriptive statistics used to compile demographic and key variables.

Results: The Findings of this study showed that 54% of participants relied on limited mobile internet access, with significant barriers including poor signal availability (50%) and high costs. Despite these issues, 52% felt comfortable with electronic communication, and 51% effectively managed their study time. Nonetheless, many students preferred face-to-face interactions, indicating concerns regarding the quality of online learning.

Conclusion: The study concluded that online learning for undergraduate BSN and postgraduate MSN students in Jamshoro offers both opportunities and challenges. While students demonstrate confidence in their digital skills and value flexibility, barriers such as limited internet access and the need for face-to-face interaction persist. Addressing these issues is essential for improving the online learning experience. Future research should focus on enhancing internet infrastructure and integrating interactive elements into courses to ensure effective and engaging nursing education in a digital environment.

Keywords: Effectiveness, Online Learning, Nursing Education, Undergraduate Students, Postgraduate Students, Internet Access, Digital Skills.

INTRODUCTION

Online learning is defined as education through the internet, and it has completely changed the face of education, particularly in the higher education field. Using digital technologies, this method of education allows students to interact with course materials from almost anywhere, as well as facilitating interactions and assessing student performance(1). The rise of online learning has been accelerated by the increasing availability of technology and the need for flexible educational options, particularly in professional fields such as nursing. Online learning has become a key component of nursing education strategies, aiming to maintain educational continuity while accommodating the diverse needs of nursing students(2). However, the effectiveness of online learning in nursing education remains a critical area of inquiry, given the unique demands of the profession, which requires both theoretical knowledge and practical skills(3). Research indicates that the success of online learning hinges on various factors, including technological infrastructure, student engagement, and the quality of instructional design(4). For nursing students, the ability to interact with instructors and peers, as well as access to reliable internet, significantly influences their learning experiences. Despite the advantages offered by online learning, numerous challenges persist, particularly in the context of internet accessibility. Many students rely on limited mobile connections that may hinder their ability to participate fully in online courses(5). Moreover, financial constraints often exacerbate these issues, with many students unable to afford the necessary resources for effective online learning. Research shows that poor signal availability is a common barrier that impacts not only academic performance but also student satisfaction with online learning (5, 6). Furthermore, the transition from traditional classroom settings to virtual platforms raises concerns about the perceived quality of education. Many nursing students express a preference for face-to-face interactions, believing that in-person instruction enhances learning and fosters stronger relationships with instructors. This sentiment is particularly significant in nursing education, where practical skills and interpersonal communication are essential for effective patient care(7). Therefore, this study aims to assess the effectiveness of online learning among nursing students in Jamshoro, Sindh, by examining both the challenges and opportunities presented by this educational modality. Insights gained from this research will not only contribute to academic discourse but also inform strategies to enhance the online learning experience for nursing students.

This study highlights the effectiveness of online learning for undergraduate and postgraduate nursing students in Jamshoro, Sindh. As online learning becomes increasingly essential, understanding its impact on student engagement and learning outcomes is critical for optimizing nursing curricula. By identifying barriers such as internet accessibility and preferences for face-to-face interactions, this research aims to inform strategies that enhance online learning experiences. Ultimately, the findings will contribute to improving nursing education and preparing students for effective practice in a digital landscape.

METHODOLOGY

A cross-sectional study was conducted from December 2023 to April 2024 at Liaquat College of Nursing (Female) and Peoples Nursing School, LUMHS Jamshoro. These institutions serve nursing students from diverse backgrounds, including undergraduate BSN students at Liaquat College of Nursing and both undergraduate BSN and postgraduate MSN students at Peoples Nursing School. The total sample size was 100 students, consisting of 76 undergraduate BSN students and 24 postgraduate MSN students. A non-probability convenience sampling technique was employed to select participants. Data were collected using a validated questionnaire as the primary source from nursing students. The questionnaire, adapted from another study (referenced as 8), included Section A which gathered demographic information such as age, gender, and educational status, and Section B which focused on online learning-related characteristics of the participants.

Prior to the commencement of data collection, approval was obtained from the Principal of Liaquat College of Nursing (Female) Jamshoro and the Director of Peoples Nursing School, LUMHS Jamshoro. Participants were informed about the study's objectives, and their cooperation was requested. Written and verbal consent was obtained from those who agreed to participate, ensuring that the questionnaires were distributed to the intended 100 nursing students (76 undergraduates and 24 postgraduates). Data analysis was conducted using IBM SPSS version 23, where statistical analysis utilized percentages and frequencies to illustrate variables and demographic data to characterize the study population.

Ethical considerations were meticulously observed to maintain participants' autonomy and confidentiality. Informed consent was secured, ensuring voluntary participation. Participants were fully informed about the study's objectives, methods, potential risks, and benefits prior to their participation, upholding the ethical standards required for such studies.(8).

RESULTS

Table 1: Demographic and Educational Characteristics of Nursing Students

Category	Variables	Frequency (Percentage)
Age	18-22 years	49 (49%)
	23-27 years	33 (33%)
	Above 28 years	18 (18%)
Gender	Male	33 (33%)
	Female	67 (67%)
Educational Status	Undergraduates	76 (76%)
	Masters	24 (24%)

This table presents a consolidated overview of the demographic and educational characteristics of nursing students participating in the study. The data is segmented into three main categories: age, gender, and educational status. The age group distribution indicates that 49% of participants are aged between 18-22 years, 33% are between 23-27 years, and 18% are above 28 years. In terms of gender, 67% of the participants are female, and 33% are male. Regarding educational status, 76% of the students are undergraduates, while 24% are pursuing their master's degrees. This table provides a clear snapshot of the study population, highlighting the diversity in age, gender, and educational levels among the nursing students surveyed.

Table 2: Home Internet Access Among Nursing Students

Variables	Frequencies (Percentage)
Yes	37 (37%)
Limited (access through mobile phone or hand-held device)	54 (54%)
No	9 (9%)

This table assesses the availability of proper internet access among nursing students, focusing on types of access such as DSL, ADSL, SDSL, and VDSL. Out of the 100 students surveyed, 37 (37%) reported having proper internet access at home. A majority, 54 students (54%), indicated they have limited access, relying on mobile phones or other hand-held devices for connectivity. A smaller segment, 9 students (9%), reported having no internet access at home at all. This distribution highlights the varying levels of internet connectivity among students, which can significantly influence their ability to engage effectively in online learning environments. The data underscores the need for educational institutions to consider the connectivity limitations of students when designing and implementing online courses.

Table 3: Reasons for Limited Internet Access Among Nursing Students

Variables	Frequencies (Percentage)
Don't know how to use	6 (6%)
Too expensive connection	26 (26%)
Signal availability	50 (50%)
Other	18 (18%)

This table details the primary reasons nursing students experience limited internet access. Out of the 100 students surveyed who reported having limited access, the predominant issue cited is signal availability, with 50 students (50%) identifying it as the main factor. This

suggests that despite having some form of connectivity, the reliability and strength of the signal significantly hinder their internet use. The cost of internet connections is another major barrier, noted by 26 students (26%), indicating that financial constraints affect their ability to obtain better internet services. A smaller group, 6 students (6%), report not knowing how to use the internet effectively, which reflects a lack of digital literacy. Additionally, 18 students (18%) attribute their limited access to other reasons, which could include factors such as geographical constraints or limited availability of service providers. This information is crucial for understanding the specific challenges faced by students in accessing online educational resources effectively.

Table 4: Student Perceptions on Various Aspects of Online Learning

Statement	Strongly Agree (Frequency, %)	Agree (Frequency, %)	Neutral (Frequency, %)	Disagree (Frequency, %)	Strongly Disagree (Frequency, %)
I am pretty good at using the computer.	27 (27%)	41 (41%)	20 (20%)	11 (11%)	1 (1%)
I am comfortable communicating electronically.	26 (26%)	52 (52%)	13 (13%)	9 (9%)	0 (0%)
Learning is the same in class and at home on the internet.	18 (18%)	23 (23%)	12 (12%)	44 (44%)	3 (3%)
I believe that learning on the internet outside of class is more motivating than a regular course.	23 (23%)	21 (21%)	15 (15%)	31 (31%)	10 (10%)
I believe a complete course can be effectively delivered online without difficulty.	19 (19%)	38 (38%)	14 (14%)	22 (22%)	7 (7%)
I can discuss with other students during online activities outside of class.	12 (12%)	56 (56%)	21 (21%)	11 (11%)	0 (0%)
Ability to discuss with peers and work in groups online	17 (17%)	55 (55%)	11 (11%)	17 (17%)	0 (0%)
I feel that face to face contact with my instructor is essential for effective learning.	48 (48%)	37 (37%)	9 (9%)	4 (4%)	2 (2%)
I am able to manage my study time effectively online and easily complete assignments on time.	32 (32%)	51 (51%)	6 (6%)	10 (10%)	1 (1%)

This table presents detailed insights into nursing students' perceptions regarding online learning, quantified across several statements. For the statement "I am pretty good at using the computer," 27 students (27%) strongly agree, 41 (41%) agree, 20 (20%) are neutral, 11 (11%) disagree, and 1 (1%) strongly disagrees. In terms of comfort with electronic communication, 26 students (26%) strongly agree, 52 (52%) agree, 13 (13%) are neutral, 9 (9%) disagree, and none strongly disagree. When asked if learning is the same in class and at home on the internet, 18 (18%) strongly agree, 23 (23%) agree, 12 (12%) are neutral, 44 (44%) disagree, and 3 (3%) strongly disagree. Regarding the motivation provided by internet-based learning outside of class, 23 (23%) strongly agree, 21 (21%) agree, 15 (15%) are neutral, 31 (31%) disagree, and 10 (10%) strongly disagree. For the effectiveness of complete online course delivery, 19 students (19%) strongly agree, 38 (38%) agree, 14 (14%) are neutral, 22 (22%) disagree, and 7 (7%) strongly disagree. On the capability to discuss with peers during online activities, 12 (12%) strongly agree, 56 (56%) agree, 21 (21%) are neutral, 11 (11%) disagree, and none strongly disagree. The ability to work in groups online shows similar sentiment, with 17 (17%) strongly agreeing, 55 (55%) agreeing, 11 (11%) neutral, 17 (17%) disagreeing, and none strongly disagreeing. Concerning the necessity of face-to-face interaction for effective learning, a significant number, 48 students (48%), strongly agree, 37 (37%) agree, 9 (9%) are neutral, 4 (4%) disagree, and 2 (2%) strongly

disagree. Finally, in managing study time effectively online, 32 (32%) strongly agree, 51 (51%) agree, 6 (6%) are neutral, 10 (10%) disagree, and 1 (1%) strongly disagrees.

This compilation of responses provides a comprehensive overview of the attitudes towards different facets of online learning among nursing students, reflecting a spectrum of experiences and expectations.

DISCUSSION

The findings of this study showed that the effectiveness of online learning among undergraduate BSN and postgraduate MSN students in Jamshoro reveals critical insights. A significant number of students face challenges regarding internet access, with 54% relying on limited mobile connections, which may impede their learning experiences(9). Research shows that inadequate internet infrastructure is a pervasive issue affecting online learning across various educational contexts(10). Additionally, factors such as high costs and unreliable signal availability were identified as major barriers, further emphasizing the necessity of a robust technological foundation for successful online learning (11). Despite these challenges, many students express confidence in their computer skills and comfort with electronic communication, indicating a readiness for online engagement(12). This aligns with recent studies that highlight students' increasing digital literacy, which is essential for navigating online learning environments (13). However, the perception that online learning does not equate to the classroom experience raises concerns about the quality of education delivered in this format. Studies indicate that the lack of face-to-face interaction can diminish the perceived educational value of online courses.(14). While some students find online learning motivating, a significant number still prefer face-to-face interaction with instructors, underscoring the importance of personal connection in the learning process. Research shows that strong instructor student relationships are crucial for fostering engagement and academic success, especially in nursing education(15). Finally, while the ability to manage study time and complete assignments effectively is generally reported, addressing the identified technological and pedagogical challenges is essential for enhancing the overall effectiveness of online learning for nursing students in the region. Further research is justified to explore strategies that could improve these educational outcomes and student experiences, as studies indicate a need for ongoing assessment and adaptation of online learning methodologies.(16, 17)

CONCLUSION

It was concluded that the effectiveness of online learning among undergraduate BSN and postgraduate MSN students in Jamshoro, reveals both opportunities and challenges. While many students demonstrate confidence in their digital skills and prefer the flexibility of online learning, significant barriers, such as limited internet access and the need for face-to-face interaction, persist. Addressing these challenges is crucial for enhancing the overall online learning experience for both undergraduates and postgraduates. Future research should focus on developing strategies to improve internet infrastructure and incorporate more interactive elements into online courses, ensuring that nursing education remains effective and engaging in a digital environment.

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