

" A study to assess effectiveness of E-Learning and its effects on the academic performance among nursing students in selected college of nursing in metropolitan city".

Mrs. Tejasvi Pavaskar^{1*}, Ms. Nikhita Logade², Ms. Riya Khanolkar³

^{1*}(Associate professor SMES SSPG CON Matunga, Mumbai),

²(Associate professor SMES SSPG CON Matunga, Mumbai)

³(Clinical Instructor SMES SSPG College of Nursing, Mumbai)

ABSTARCT

Introduction: E-learning has emerged as a critical alternative to traditional education, particularly in nursing education where access to timely and updated information is essential. With the COVID-19 pandemic acting as a catalyst, online platforms have become vital for academic continuity.

Objective: To assess the effectiveness of E-learning and its impact on academic performance among nursing students in a selected college in a metropolitan city.

Methodology: A quantitative descriptive survey was conducted among 50 Basic B.Sc. Nursing students using a structured self-administered questionnaire. Data were collected on students' demographics, their usage of E-learning tools, and perceptions regarding the effectiveness and academic outcomes of E-learning.

Results: Most students agreed that E-learning enhances flexibility and time efficiency, though concerns were raised about stress, reduced student-teacher interaction, and technical challenges. A majority used mobile phones for accessing E-learning platforms, with data usage exceeding 1GB daily for 63.2% of participants.

Conclusion: E-learning proves to be an effective supplementary mode of education for nursing students, contributing positively to their academic progress. However, strategic interventions are needed to address its limitations.

Keywords: E-learning, Nursing students, Academic performance, Online education, Student perception

Introduction

The digital revolution has significantly influenced the education sector, enabling a shift from traditional chalk-and-board teaching methods to dynamic, technology-driven learning platforms. E-learning, defined as the use of digital technology and internet-based resources for educational delivery, has gained tremendous momentum, particularly during the COVID-19 pandemic. In the nursing profession, where education involves continual updates on disease processes, treatment modalities, and practical competencies, E-learning has presented a timely and adaptable solution. This paradigm shift allows students to access education anytime and anywhere, aligning with the goals of lifelong learning and self-paced education¹.

Background of the Study

With the widespread closure of educational institutions during the COVID-19 pandemic, nursing colleges were compelled to adopt E-learning as a primary mode of instruction. This sudden transition exposed both the strengths and weaknesses of digital education. While many students found E-learning to be time-efficient and accessible, others reported challenges such as lack of technical support, reduced interaction with instructors, and increased cognitive stress. Nevertheless, E-learning was adopted universally using platforms such as Google Meet, Zoom, and Microsoft Teams, transforming educational delivery from instructor-led sessions to student-driven digital environments².

Need of the Study

In the evolving landscape of healthcare education, students and institutions must adapt to flexible, technology-mediated learning environments. Given the growing reliance on E-learning systems, there is an urgent need to evaluate their actual impact on nursing students' academic performance. The effectiveness of these platforms depends not only on content delivery but also on user engagement, motivation, interactivity, and usability. Investigating these variables will help in refining digital pedagogical strategies and identifying areas requiring support or redesign³.

Problem Statement

A study to assess effectiveness of E-learning and its effects on the academic performance among nursing students in selected college of nursing in a metropolitan city.

Objectives

1. To assess the effectiveness of E-learning among nursing students.
2. To assess the effects of E-learning on the academic performance of nursing students.

Review of Literature

A wide range of studies have examined the impact and effectiveness of E-learning, particularly in the context of higher education and health sciences. One such study by **Elfaki et al. (2019)** investigated the comparative influence of E-learning versus traditional classroom learning. The findings revealed that students exposed to E-learning demonstrated improved academic performance and higher levels of satisfaction. These benefits were largely attributed to the flexibility, accessibility, and personalized pace of learning that digital platforms offered, especially during the COVID-19 pandemic, when physical attendance was restricted⁶.

Similarly, **Mohammadi et al. (2017)** explored the relationship between learning and study strategies and students' academic achievements. The study revealed a strong positive correlation, highlighting that learners who adopted organized and self-regulated strategies were more likely to perform better academically in an E-learning environment. This finding is significant in the context of nursing education, where self-motivation and active learning are key competencies⁷.

A study conducted by **Fayomi et al. (2015)** in Nigerian tertiary institutions examined how E-learning impacted student development and performance. Their research concluded that students experienced enhanced academic self-efficacy and skill acquisition through digital learning environments. They emphasized that E-learning platforms provide broad access to academic materials, which facilitates continual learning and independent research⁸.

Further, **Yuwono and Sujono (2018)** conducted a meta-analysis encompassing various studies on E-learning's effectiveness across disciplines. The analysis produced an average effect size of 0.67, indicating a moderate to strong positive impact of E-learning on student achievement. The authors emphasized that while E-learning is not a universal replacement for face-to-face instruction, it serves as a powerful complement, particularly when supported by structured content and interactive elements⁹.

Finally, **Ali and Mohamed (2019)** focused on nursing students' satisfaction with E-learning platforms. Their study found that students' contentment was influenced by various factors, including the quality of the courses, user-friendliness of the technology, interaction levels, and support mechanisms in place. This study further corroborates that while E-learning can be highly effective, its success depends on both technological infrastructure and pedagogical design¹⁰.

Collectively, these studies highlight that E-learning is not merely a technological alternative but a pedagogically significant mode of instruction that, when implemented effectively, can enhance academic performance, student satisfaction, and learning autonomy. However, they also caution that without attention to design, support, and interactivity, E-learning can lead to disengagement and reduced learning outcomes.

Research Methodology

This study followed a **quantitative descriptive survey** approach using a **structured questionnaire**. The research was conducted in **Nursing institute**, Mumbai, among **50 Basic B.Sc. Nursing students** ranging from first to final year.

Sampling Technique

A **convenient sampling** method was used due to the accessibility of students during the study period.

Data Collection Tool

The tool included demographic data and 20 structured statements rated on a 5-point Likert scale covering E-learning effectiveness and academic outcomes.

Variables

- **Independent Variable:** E-learning exposure
- **Dependent Variable:** Academic performance indicators

Inclusion Criteria

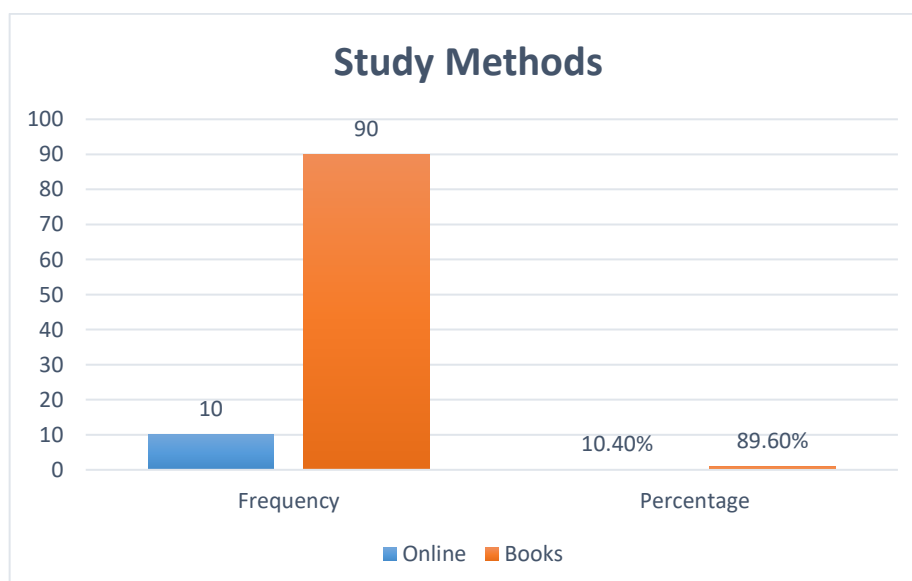
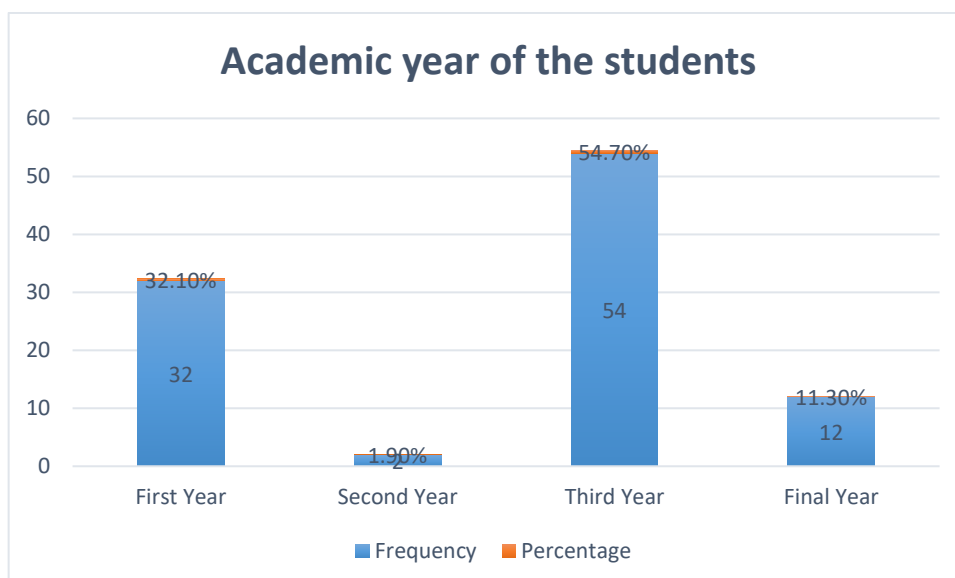
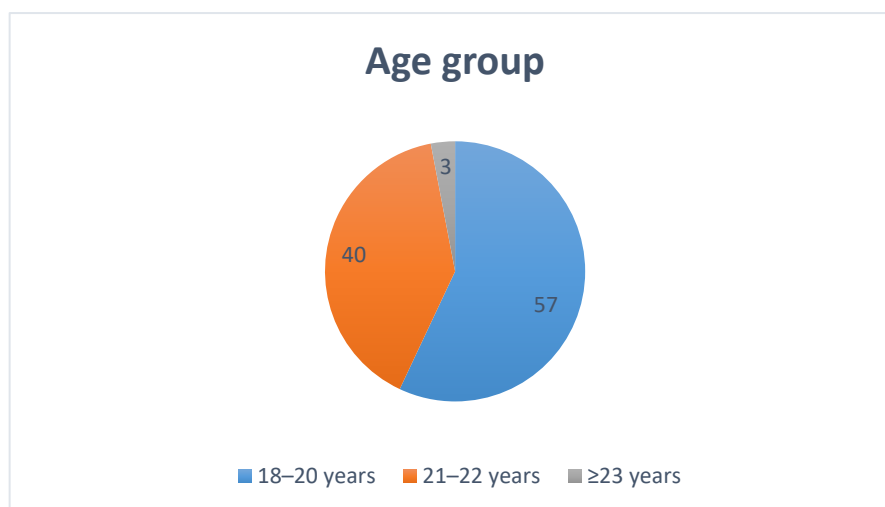
- Students aged 19–23 years
- Enrolled in B.Sc. Nursing
- Willing to participate

Data Analysis

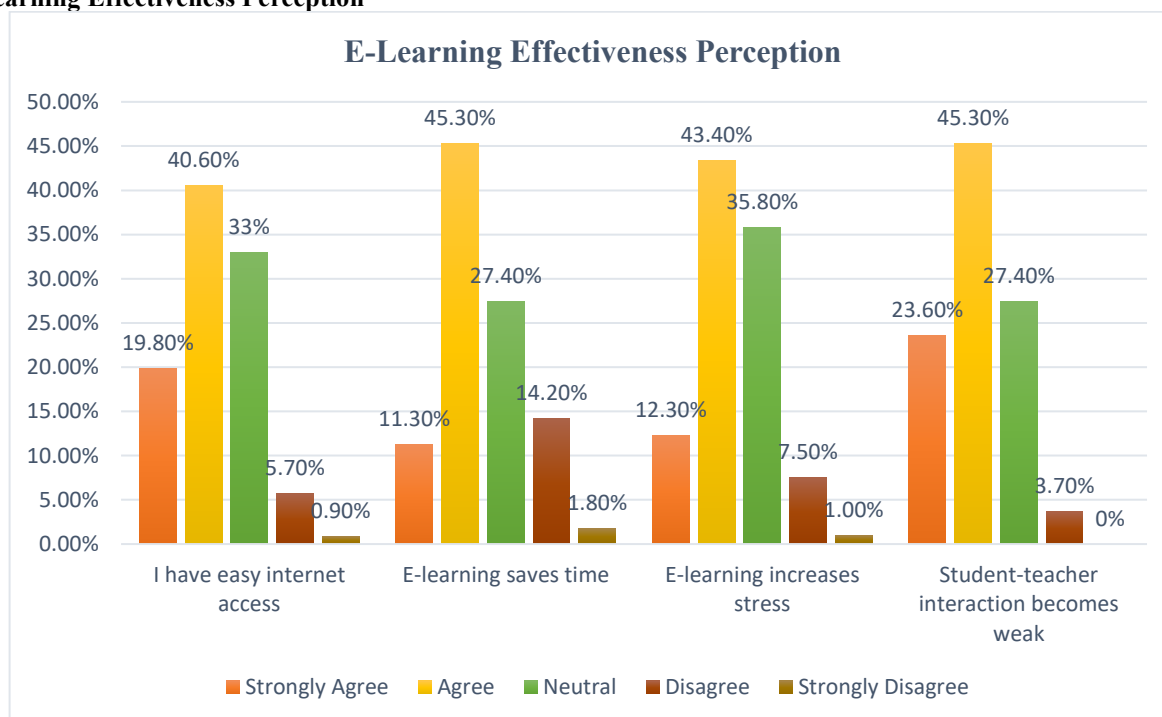
Descriptive statistics including **frequency and percentage analysis** were used. Results were interpreted graphically.

Data Analysis and Interpretation

Demographic variables



E-Learning Effectiveness Perception



Overall, students reported moderate agreement with the positive outcomes of E-learning. However, stress and lack of faculty interaction were recurring concerns.

Conclusion and Recommendations

This study confirms that E-learning contributes positively to nursing education in terms of flexibility, curriculum coverage, and accessibility. Yet, a significant portion of students highlighted drawbacks such as reduced interaction, stress, and difficulty in self-discipline. Institutions should consider the following recommendations:

- Develop hybrid learning models that blend classroom and online learning
- Conduct training for faculty and students on effective E-learning practices
- Improve platform usability and provide mental health support for stress management
- Encourage interactive features such as breakout rooms, forums, and real-time discussions

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