

## SATISFACTION OF NURSING STUDENTS WITH ONLINE TEACHING

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**Abstract:** Online teaching came into focus during the COVID-19 pandemic. Many universities have switched to online classes to prevent the spread of the corona virus infection. The aim of the research study is to assess nursing students' satisfaction with online teaching. The research was designed as a cross-sectional study. The largest number of students followed the online classes, the quality of the classes and the satisfaction of the students were evaluated with the highest marks. A large number of students who are employed state that online classes would suit them even in regular circumstances. Online teaching has a large number of advantages and limitations, it is necessary to carefully design and implement online teaching so that educational efficiency remains at a high level.

**Key words:** Online teaching, learning, e-learning, nursing, digital technologies in education.

### 1. INTRODUCTION

Modern technologies are increasingly gaining importance in nursing education, especially in clinical education, where simulations and virtual learning are becoming key supports, especially in situations where face-to-face contact is not possible, as was the case during the COVID-19 pandemic. However, limited resources can make it difficult to apply these technologies adequately. Technologies such as virtual reality, used through digital devices, provide students with realistic experiences that support desired learning outcomes. A systematic review of scientific studies shows that the use of virtual simulations significantly contributes to the development of important professional competencies in nursing students, such as problem solving, communication and clinical skills. The conclusions indicate that virtual simulations are a valuable tool in education and that educators and educational policy makers should integrate them into curricula to improve the readiness of future medical professionals to work in the health system [1]. There is limited research on the impact of online teaching materials created by general practice schools on medical students' perceptions of the field. The research found that students' experiences with online teaching were analyzed using individual interviews and focus groups. Students rated the usefulness of the materials in relation to their relevance to clinical practice. The authors highlight the need for teaching materials to emphasize the diagnostic complexity and clinical rigor of general practice in order to support its academic and professional value in the eyes of students. Online teaching materials are useful for the acquisition of teaching content [2]. The integration of digital technologies has significantly changed the way medical students approach learning, combining traditional and online sources. A study conducted among first-year medical students in Lucknow analyzed their Internet usage habits for educational purposes, as well as factors that influence their effectiveness and satisfaction. Although a large number of students use the Internet for learning, they still rely heavily on textbooks, which indicates the importance of traditional methods. The main challenges limiting the productivity of online learning include slow Internet and moderate trust in the reliability of available content. The authors highlight the need to improve the infrastructure and quality of online resources to fully exploit the potential of digital education. Digital resources are increasingly complementing traditional methods in medical education.

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Wikipedia and Google are the most common sources of information among students. Improving the technical infrastructure and quality of resources is crucial for more effective integration of technology into teaching [3]. Online learning has become a key element in nursing education, especially in light of the widespread reliance on digital technologies and the need for distance learning. Researchers used bibliometric analysis to examine scholarly production, collaborative networks, and thematic directions in the field of online nursing education from 2000 to 2024. The analysis included over 700 institutions across 56 countries, indicating the global importance of this topic, with the United States having the highest number of publications. Three dominant thematic directions were identified: the impact of the pandemic, student motivation and engagement, and the integration of technology into teaching. The research points to the need to strengthen international collaboration and develop innovative, more equitable educational approaches to prepare students for contemporary challenges in healthcare [4]. The pandemic has accelerated the shift from traditional to digital teaching in biomedical sciences. E-learning has forced teachers to reshape laboratory teaching into a virtual format without practical work. Hybrid models emerged as an attempt to combine the advantages of in-person and online teaching. Students had varying levels of confidence and engagement in virtual laboratories. Inequality in digital access remains a significant challenge to effective learning [5].

## **2. MATERIAL AND METHODS**

The research was designed as a cross-sectional study. The aim of the research is to assess the satisfaction of nursing students with online teaching during the corona virus pandemic. The research instrument is a nursing student questionnaire that was designed for the purposes of this study. The research was carried out during the 2022/2023 academic year on a sample of 40 nursing students at Singidunum University, Faculty of Health and Business Studies, Valjevo. The research was voluntary and anonymous. The data was used for research purposes. The criterion for the inclusion of students is that they answered all the questions from the questionnaire. The criterion for exclusion from the study is that they did not answer all the questions from the questionnaire. The results were analyzed using the methods of descriptive statistics.

## **3. RESULTS**

The observed sample of respondents is dominated by women, who make up 85% of the total number of participants in the study. The majority of respondents, 80%, come from urban areas, which indicates a possible connection between the urban environment and easier access to online education. Work engagement is present in 65% of respondents, which testifies to the need for more flexible forms of teaching that allow for the reconciliation of professional and educational obligations. All respondents have access to the Internet, as well as experience of attending online classes, which provides a reliable basis for analyzing their views on this form of education. A very high percentage of respondents, 90%, expressed satisfaction with the organization of online classes, while 85% of respondents are satisfied with the way in which teachers created teaching content. Regularity in following classes via the Internet is shown by 70% of participants, which indicates a relatively high level of engagement. The positive perception of the usefulness of this form of teaching was confirmed by 88% of respondents, who believe that online teaching was very useful for their education. However, a smaller part of the participants, 10%, point to the problem of excessive volume of teaching materials, which could be the subject of improvement in future educational models. It is important to emphasize that all respondents (100%) believe that it would be useful to enable online teaching in regular circumstances, outside of emergency situations, which indicates the potential for permanent integration of digital learning into the formal education system. Student satisfaction and the benefits of online learning are shown in Figure 1 and Figure 2.

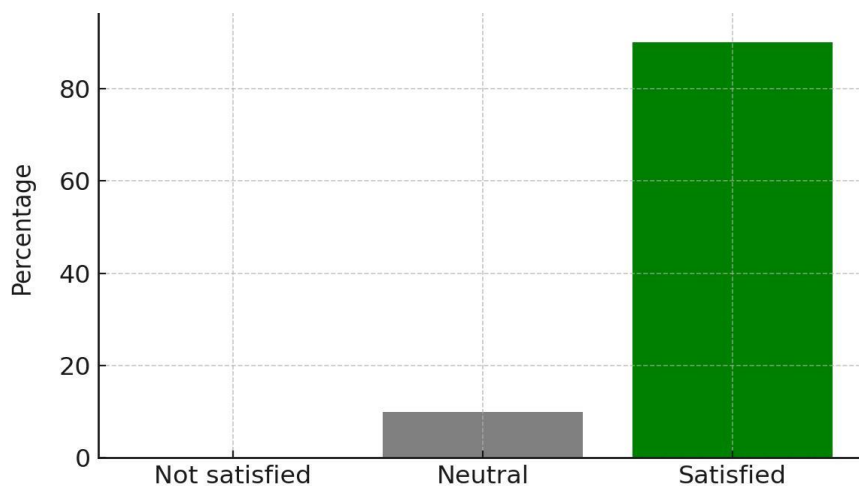


Figure 1 - shows the level of student satisfaction with online teaching during the COVID-19 pandemic, where 90% were satisfied, 10% were neutral, and no one was dissatisfied.

### Advantages of Online Learning

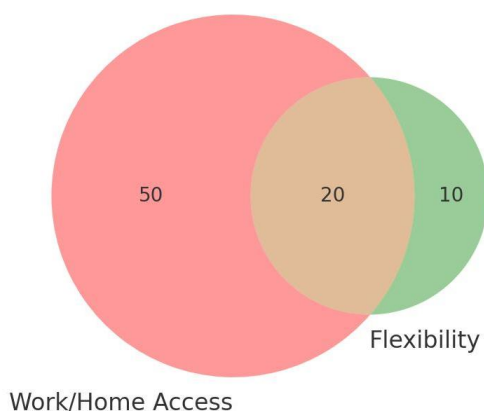


Figure 2 - Venn diagram shows the main advantages of online teaching, the majority of respondents (70%) highlighted the possibility of following classes from the workplace or from home, 30% mentioned flexibility in education, and 20% emphasized both advantages.

## 4. DISCUSSION

The results of this survey indicate a high level of student satisfaction with online learning during the COVID-19 pandemic. The high percentage of respondents who have access to the internet and who actively participated in online learning (100%) confirms that the technological prerequisites for digital education were met in the observed population. This also speaks in favor of the respondents' digital literacy and their adaptability to new forms of learning.

A significant level of satisfaction with the organization of online learning (90%) and the quality of teaching content created by professors (85%) indicates the successful adaptation of teaching staff to the new working conditions. The data also show that the majority of respondents regularly attended classes (70%), which suggests a high level of engagement and motivation despite physical distance and possible technical challenges.

Interestingly, 88% of respondents stated that the classes were very useful to them, which confirms that online education managed to fulfill its primary function – knowledge transfer. Although a smaller part of the respondents (10%) considered that the course material was too extensive, this does not diminish the overall positive impression. On the contrary, this data may indicate the need for a more precise dosage of content and a better structure of the material in the online format. It is particularly significant that all respondents (100%) believe that it would be useful to maintain the possibility of following the classes in the online format and in regular circumstances. The benefits of online learning methods are consistent with other scientific studies [6]- [10].

## 5. CONCLUSION

Based on the results obtained, it can be concluded that online teaching during the COVID-19 pandemic largely met students' expectations. The high level of satisfaction with the organization and content of teaching indicates a successful adaptation of the education system in crisis conditions. Students showed a high level of engagement and recognized advantages such as flexibility and the possibility of learning from different environments. These findings indicate the potential and need for the long-term implementation of hybrid teaching models in higher education.

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