Teaching Innovations, Volume 36, Issue 1, pp. 102–116
DOI: 10.5937/inovacije2301086D

Marija M. Jovanović[1]
Dragana V. Dimitrijević
University of Niš, Faculty of Philosophy, Niš, Serbia

Original research paper

Paper received: Oct 1 2022
Paper accepted: Feb 19 2023
Article Published: Apr 20 2023

Barriers during Distance Learning in a Pandemic Time from the Aspect of Serbian Secondary School Students[2]

Extended summary

During 2020, in the conditions of the global pandemic, when the whole world was facing the COVID-19 virus, all spheres of society faced a challenge, including education. As face-to-face learning was identified as a specific threat to the community, e-learning was urgently introduced into the educational process. By the decision of the Government of the Republic of Serbia[3] from 15/03/2020 on suspending on-site classes, all education activities, at all levels of education, were transferred to the online environment and the entire learning process was conducted via distance learning until the end of the 2019/2020 school year. Although distance learning is not a novelty in our field, the specific circumstances left all participants in the learning process insufficiently prepared to carry out such a radical change. We have decided to dedicate this paper to the study of the barriers that students faced during the implementation of distance learning.

The aim of this research was to identify the barriers to the implementation of distance learning from students' perspective. The research was conducted on a sample of 424 high school

1 marija.jovanovic@filfak.ni.ac.rs

2 This study was supported by the Ministry of Education, Science and Technological Development of the Republic of Serbia (Contract No. 451-03-68/2022-14/200165).

3 Odluka o obustavi izvođenja nastave u visokoškolskim ustanovama, srednjim i osnovnim školama i redovnog rada ustanova predškolskog vaspitanja i obrazovanja (2020). [Decision on suspending on-site classes in higher education institutions, secondary and primary schools, as well as preschool institutions]. *Službeni glasnik Republike Srbije*, br. 30.

students from the territory of Southeast Serbia in May and July of 2020. In relation to the research variables, the sample includes 108 male and 316 female participants; 199 participants were between 14 and 16 years of age and 225 respondents were between 16 and 18 years of age. From the aspect of academic success, the sample structure shows that the largest number of our participants had excellent academic success (336), while those with good and sufficient/insufficient academic success were the lowest. In relation to the way of conducting distance learning, the largest number of participants used a mobile phone (387), followed by Google classroom (30), and the least represented learning type was via email and Meet or Zoom applications. The used instrument was a Likert-type assessment scale comprising 40 items that include different barriers. In accordance with the nature of the instrument, the analysis of the obtained data was conducted by using multivariate statistics.

Nine factors of the barriers to distance learning during a pandemic were identified. The most frequent were cheating on tests, assessment, administrative, organizational, and content-related barriers, which indicates that high school students are critical of distance learning, pointing to significant problems. Statistically significant differences were confirmed within the communication and support factor ($p<.001$) and academic success. The data indicate that barriers were least pronounced in students with excellent academic success, and most common in students with sufficient/insufficient academic success. Also, socio-emotional and content-related barriers were significantly more common in older participants than in the group of the younger ones.

Implications for practice:

- The systematic regulation of the issue of didactic-methodological training of teachers in the field of competencies for distance learning implementation.
- School instructional work should be focused on empowering students and teachers to apply various methodological procedures that would create a positive communication and social interaction and prevent emotional problems of students.
- Organize situations of horizontal learning in which teachers would improve the skills for distance learning through the exchange of experience, cooperation, and teamwork.

Keywords: distance education, online learning, COVID-19 pandemic, factor analysis

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