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EFFECTIVENESS OF USING ICT IN HIGHER EDUCATION IN COVID-19¹

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Abstract

For the past two years, the whole world has been facing a pandemic caused by COVID-19. All segments of our everyday living are affected by this and so is the educational process. Although in the last decade, in our country there has been an increase in the integration of ICT in teaching, especially in the higher education, during this pandemic number of problems were detected in online courses: unpreparedness for online teaching, not sufficient knowledge of using ICT for teaching, infrastructure problems etc. This paper aims to present ways to increase the effectiveness of using ICT to improve online teaching during a pandemic.

Key words: ICT, higher education, COVID, e-learning.

INTRODUCTION

Due to the COVID pandemic, which has hit the world in recent years, all higher education institutions, including universities, institutes, colleges, globally over 10 million academic hours were canceled, which is quite difficult to compensate. In this situation, the higher education institutions were closed in the middle of their academic semester, which resulted in a huge loss of knowledge and no access to teaching activities that are pedagogically designed for the physical presence of students. Given this pandemic, this study examines and evaluates the impact of digital technologies aimed at sustaining the academic activity of higher education students.

According to a 2007 UNESCO report (Leye, 2007): ICT is rapidly penetrating educational environment and improving the very success of education in the 21st century. ICT adds lasting value to the learning

¹ professional paper

process, as well as to the organization and management of educational institutions. Digital technologies are driving force in much of development and innovation in developing countries. In particular, ICT is considered a major integral part of higher education, where it is used in many areas such as the development and distribution of course materials; distributing learning content; communication between students, teachers and third parties; creating and holding presentations, lectures and academic research; administrative support and enrollment of students; monitoring of their progress and activities (Mandal & Mete, 2012). E-learning has increased not only the speed of knowledge transfer, but also the way knowledge is transferred from one person to another.

E-LEARNING DURING COVID

Online teaching and learning or popular E-learning is a broad term, often defined in different ways. But one thing in common is that it is defined as learning that takes place in part or in full through appropriate Internet services. This definition excludes print media, television or radio broadcasts, video conferencing, videocassettes, and standalone educational software programs that do not have a significant Internet-based learning component. There are two ways to learn online: online learning entirely as a substitute or alternative to the traditional way, and online learning combined with partial physical presence called "Hybrid teaching" (Diaz et al., 2020). These changes of the way of teaching are due to the pandemic threat of the coronavirus, due to which the education system in our country remained handicapped overnight. With personal efforts of teachers, almost all universities in the country have started online classes instead of traditional classroom classes. These online classes have become very useful not only for the progress of the participants in the educational process, but also have provided great help in protecting their health.

Pedagogy is usually defined simply as a method and practice of teaching through which the teacher makes the lessons more attractive and useful. It is a theory and practice of education. Pedagogy is the relationship between learning techniques and culture and is determined based on educators' beliefs about how learning should take place. Pedagogy requires significant interactions by establishing mutual respect between teachers and students. During this pandemic crisis, professors at higher education institutions were obliged to adapt their pedagogy to include students in online teaching, for which the professors themselves had the

opportunity to participate for the first time. Due to lack of infrastructure, as well as insufficient knowledge of this technology, some of the professors were forced to be innovative. Some of the them, who lacked ICT skills, became experts in providing online teaching or using various social media platforms to engage their students academically and mentally.

EFFECTIVNESS OF ONLINE TEACHING

When information and communication technology is successfully combined with education, it provides opportunities for students to accelerate the speed of learning and generating personality as an independent active learner. The increased use of ICT in recent years has only shown that we are ready to develop e-learning not only during a pandemic but also under normal conditions.

The application of ICT in higher education provides access to more students and greater efficiency with better information. Students have access to online libraries, magazines, conferences and online virtual classrooms. This approach, according to Ottosson (Ottosson, 2020) offers a combination of education with balancing family and work life: "Students can participate in and complete courses in accordance with their daily responsibilities. This makes e-learning education a valuable option for those who have other responsibilities, such as family or work and / or are unable to attend regular classes often." In addition, saving travel costs and time are certainly beneficial for students, especially those from rural areas in our country, where reducing travel and accommodation costs eventually leads to a gradual reduction in education costs.

Although the previous benefits may sound tempting to leave traditional teaching and move on to online learning, in practice it is not that simple. The emergence of the COVID pandemic has brought Internet learning to the forefront. While universities were generally focused on traditional teaching, in order to maintain continuity in education it was inevitable to immediately start using a wide range of technical and teaching approaches, perhaps not all of them effective but sufficient for the purposes of educational continuity. All participants in the educational process were overnight confronted with the new conditions and ways of working, so they had to adapt quickly. E-learning is not a blow to existing teaching and learning practices, but an opportunity for integration into the education system. Disciplinary differences were not taken into account, and the provision of short and rapid training to

address the skills shortage of academic staff, although a necessary step, could not replace the need for sustainable training in both the pedagogical and technical areas. Also, the lack of organizational measures for academic staff to effectively balance the demands for new forms of online learning with their other activities do not overlap. The lack of continuous feedback, especially from students, weakens the notion of e-learning organization.

As a positive result of the advantages and disadvantages in this situation of rapid transition is that online learning has gained new interest. The extent to which this can eventually manifest itself in effective learning depends on how the challenges posed by the new situation are addressed. High costs for setting up, researching and providing hardware tools can rarely be afforded, especially for developing countries. E-learning is not appropriate to be used as a teaching method in every field. Training methods should be such that students' practical and productive thinking skills eventually grow. This means that the person will be able to process the problem and offer a solution. In other words, in an efficient and practical education system, the student should be encouraged to find a method for solving tasks and to expand their knowledge. The first step in applying e-learning in education is to master working with computers and because computers are the main tool in this method of training. Thus, e-learning can be considered a valuable method. Our country offers a large number of e-services, but due to lack of knowledge of these technologies, their use is still not widespread.

CONCLUSION

During the COVID-19 pandemic a significant link was found between the integration of ICT and digital skills, as they enable students to learn and master techniques that make them compatible with modern education. In this regard, the analysis of Van Laar et al. (2020) showed that compatibility contributes to the adoption and integration of ICT in teaching and learning, and the emphasis is on harmonizing the characteristics of technology and the characteristics of the task. Also, the lack of access to technological tools is an obstacle to the integration of ICT in teaching and learning Okanja et al. (2020). On the other hand, digital skills related to professions that are less likely to grow tend to be related to the use of software for administrative purposes. Similarly, the analysis of the results obtained was in line with what Suarez et al. (2019) suggested that both professors and students should be aware that they have the appropriate digital skills, even more so in this era of pandemics

that require digital literacy. These competencies also help to overcome potential difficulties such as accessibility presented by new technologies and maintaining an appropriate status to continue learning in digital environments. Opportunities and benefits of using digital technology for academic purposes became apparent only after the crisis occurred. The COVID crisis has revolutionized the entire higher education architecture for teaching and learning, and since there is no other option for continuing the academic activities, all participants in the educational process have quickly adapted to the conditions, and future research will show how successful it was.

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