EFFECTIVENESS OF ONLINE LEARNING PROCESS DURING THE COVID-19 PANDEMIC IN KOSOVO

Driton Balaj[*]

Gentiana Zhigolli[**]

Abstract

The global coronavirus crisis led to a radical transformation of the education system. Educational institutions had to switch to virtual teaching methods due to mandatory isolation and the decline of economic activity. Online learning was a surprise and a challenge for both universities and students. To analyze the effectiveness of online learning, we conducted 500 surveys from December 2021 to March 2022 at the Faculty of Economics, University of Prishtina. We assessed factors such as motivation for online learning, home conditions, motivation to read more, and the level of collaboration between students during the Covid-19 pandemic. These factors were used to determine the effectiveness of online learning. In measuring the effectiveness of online learning, *we measured students' experience with online learning before the pandemic, students' willingness to pursue additional academic levels in the future, professors' encouragement to be active, work done during online learning, and desire to practice online education in the future. Based on the collected data, we applied a structural equation model (SEM), which shows that the results are significant, but the effectiveness of online learning is low. The research will help to identify the challenges students face during online learning due to their isolation and how this affects the holistic effectiveness of online learning.*

Keywords: *online learning, effectiveness, COVID-19, Kosovo*

1. INTRODUCTION

The Covid-19 pandemic, which first appeared in China and then spread worldwide, has been a global threat to health and the economy, including education. Mandatory isolation to prevent the spread of the virus has conditionally led to an alternative form of instruction - online learning. The rapid spread of the pandemic forced the introduction of measures to protect the population's health. The rapid progression of events led to an immediate switch to online learning, although many educational institutions were unprepared for this transition. The transition to online learning was challenging, particularly for developing countries like Kosovo. The education system lacked experience in online learning and adequate technical support for implementing the virtual learning process. The experience of online lectures was new for both professors and students. However, the willingness to act immediately and cooperation led to online learning at

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[*]   Driton Balaj, PhD, Faculty of Economics, University of Prishtina "Hasan Prishtina", Prishtina, Kosovo, driton.balaj@uni-pr.edu

[**] Gentiana Zhigolli, Faculty of Economics, University of Prishtina "Hasan Prishtina", Prishtina, Kosovo, gentiana.zhigolli@gmail.com

all levels of education, from primary school to higher education.

In some cases, technological equipment was donated to students to enable them to participate in online learning. Adapting to online learning took longer than expected because the spread of the Covid-19 pandemic was challenging to control, and new waves and variants of the infection emerged. Despite the decline in infection rates, the Covid-19 pandemic is not over yet, as new infections and deaths continue to occur. However, institutions have established mitigating measures allowing a better hybrid learning process. Following the pandemic-related changes, we conducted a study using questionnaires to determine the effectiveness of online learning during the lockdown period.

Research innovation, technological innovation, and socio-economic donations have been seen as benefits of online learning. Academic institutions have reacted quickly by converting their activities to digital formats (Adedoyin & Soykan, 2020). Students see distance learning as an opportunity to acquire knowledge independently, and professors see it as an opportunity to develop their teaching skills (Altwaijry et al., 2021). Although unexpected, the transition to online learning represents an opportunity for cultural change in education (Amir et al., 2020). E-learning helps share learning materials and provides adequate access to study resources. Distance learning is a convenient option for time and space flexibility. It also provides space for diverse learning content (Khan et al., 2020) and stimulates strategic learning (Hongsuchon et al., 2022). However, distance learning is also associated with challenges such as poor internet connections, outdated technological devices, socio-economic factors, no privacy from family or pets, digital incompetence, complex academic assessment, overload of IT infrastructure, and non-practical application of lectures (Adedoyin & Soykan, 2020).

The research was conducted among 500 students of different levels of study (Bachelor's and Master's degrees) at the Faculty of Economics, University of Prishtina. The data was collected in the period from December 2021 to March 2022. The effectiveness of online learning in this study is determined by the student's motivation to attend online lectures, the appropriate home conditions, the degree of co-operation with other students during online learning, and the motivation to read more during isolation. The correlation between these variables is the significance of the latent variable of the effectiveness of online learning. On the other hand, as a measure of the effectiveness of online learning, we used previous experience with online learning, the likelihood of pursuing an additional academic level in the future, professors' encouragement to be active, working while learning online, and the desire to have online learning in the future.

The structure of the paper is as follows: literature review, data, methods, conceptual model and hypotheses, results of the analysis of SEM, discussions, conclusions, and references.

2. LITERATURE REVIEW

The Covid-19 pandemic, despite the abrupt transition to online learning, commenced a new era in the education system, enabling hybrid learning at almost all universities (Adedoyin & Soykan, 2020). The transition to online learning has encouraged students to spend more hours on independent study, catalyzing a vital skill for lifelong

learning (Mukhtar et al., 2020). The results indicate that students are satisfied with institutional online learning, despite the few challenges in the process (Demuyakor, 2020). Other findings suggest that students and faculty were quite willing to engage in online teaching, especially during times of pandemic crisis. Nevertheless, students and faculty felt that some main barriers were passive communication and long-screen time exposure (Altwaijry et al., 2021).

According to previous research, the main challenges affecting e-learning systems' effectiveness are adapting to change, technical problems, and financial constraints in building an adequate technological infrastructure (Almaiah et al., 2020). The most common technical challenges encountered in online learning were network connection failure and lack of technological equipment for many students (Ferri et al., 2020).

The Covid-19 pandemic has also posed an unprecedented threat to mental health (Xiong et al., 2020). The rapid transition to online teaching, blurring the lines between work and personal life, has produced high-stress levels for educators. As a result, the professors attempted to cope with this situation using various techniques (Macintyre et al., 2020). Another study showed high to moderate stress levels among students during Covid-19 isolation and distance learning (Alateeq et al., 2020). Approximately 24.9% of university students experienced anxiety due to isolation during the pandemic (Cao et al., 2020). Lifestyle during the lockdown has been reflected in people's daily habits, such as sleep and social media use, according to a study. As expected, during isolation, people immediately increased their use of digital devices until bedtime. Although sleep duration did not decrease, the quality of sleep decreased. As a result

of the movement restrictions, individuals slept more and spent more time in bed in the following weeks, which worsened sleep quality. Sleep quality began to decline in individuals with more stress, anxiety, and depression (Cellini et al., 2020).

The Covid-19 pandemic has negatively impacted student participation in the labor market. Working students suffered reductions in weekly working hours and pay cuts. The pandemic also affected students' plans for employment opportunities after graduation. In addition, students experienced a drop in academic performance, postponed graduation deadlines, and delayed career orientation. Students' negative experiences with the sudden transition to online learning affected their willingness to take online classes in the future (Aucejo et al., 2020).

Many internships students had planned for the summer have since been canceled. Most consider job security, paid sick leave, and flexible work arrangements to be the most important values at work in light of the Covid-19 crisis. The vast majority of those who worked before reported working less after the pandemic outbreak. Students who tended to study earlier reduced their study time. According to the results, male students tend to be more stressed about the pandemic than female students (Jaeger et al., 2021).

Students who participated in face-to-face learning had better grade point averages, a higher appreciation for the course, and a higher likelihood of passing it than their online peers. Unequal access to technology may have led to differences in the accessibility of learning in e-learning (Altindag et al., 2021).

According to a study on the effectiveness of online learning during the Covid-19

pandic, the study variables are students' understanding of learning materials, student motivation in online learning, and student learning outcomes in online learning. It implies that using the right platform can promote motivation and increase the effectiveness of online learning (Satyawan et al., 2021). A comprehensive study shows that online learning was effective in terms of performance and outcomes; however, effectiveness cannot be considered a definite conclusion (Batdi et al., 2021). In another study, online learning was found to be ineffective. Inefficient instructor strategies, inadequate collaboration, lack of feedback from professors, and monotony of learning were some of the main factors that challenged the effectiveness of online learning during the Covid-19 pandemic (Nhatuve, 2021).

A comparative study between India and France states that online learning in New Delhi increases student engagement with technology, leisure, and flexibility. The respondents cited a lack of interaction with professors and distractions while studying at home as disadvantages of online learning. Some students felt isolated by the lack of social and human interaction. On average, they perceived virtual learning positively during the Covid-19 pandemic, as the combined mean value of positive perceptions was higher than negative perceptions. Similar results emerged from a study in France with engineering students, who expressed satisfaction with online learning and received grades similar to those in traditional physical classes. However, students in online classrooms face obstacles because most of them use smartphones to participate in class online, which is not an appropriate professional device for virtual classrooms. The rest of the students in this French study (46.8%) were not satisfied with online learning because of connection problems, eyestrain, non-private space at home, and unconvincing explanations from the professors (Khan et al., 2021).

For some students, the traditional teacher-led system may be more appropriate. According to another research study, many students do not choose to participate actively in class even though the importance of participation is recognized. One of the many reasons for non-participation is the fear of feeling inadequate in front of others, regardless of the classroom setting (Rocca, 2010).

A fascinating study was conducted in Spain. According to the results, students were constantly motivated to attend classes during Covid-19 isolation. First, using online learning platforms provided a new perspective on learning. Since it was an unprecedented learning method, students were curious to solve the problems faced by higher education institutions at that time (Gonzalez et al., 2020).

In Vietnam, studies showed that many students were not satisfied with online classes and exams; most do not think there should be only online classes in the future. From a psychological point of view, some students showed less energy during isolation, and some showed signs of depression. The study also showed that sleep duration and body weight increased. However, the government took proactive measures to protect the health of citizens, and 65.81% responded positively (Tran et al., 2021).

In a case study in Malaysia, students expressed their preferences for online learning. This form of study made them feel more comfortable interacting with professors and other students and allowed them to take advantage of the flexibility of time and space at home (Shaid et al., 2021).

According to another study, flexibility and convenience were other positive attributes of the Covid-19 pandemic in India. Students preferred structured video lessons recorded and uploaded to the university website (Muthuprasad et al., 2021).

According to a study, movement restrictions such as social distance and isolation have caused people to change their habits and use online services to study and work, leading to a strain on Internet traffic. The case study of a paper written at the Polytechnic University of Turin shows the changes in online traffic due to the transition to online lectures and increased collaboration between students via online networks. The results show that inbound Internet traffic has decreased during isolation while outbound traffic has increased. Microsoft Teams and VPN use also increased during online learning (Favale et al., 2020).

The post-pandemic process has also led to students fearing the spread of infection when returning to class (Lovric, 2020). Another study in Lombardy suggests that the first wave of the Covid-19 pandemic did not threaten higher education in terms of student performance, as indicated by their grades. The quality of teaching was more negative (Topfer & Castagnetti, 2021). The pandemic did not pose a significant threat to the university because students knew in advance how the virus would spread; therefore, they immediately adapted and observed preventive measures. During this time, students responded to the government's measures to limit the spread of contagion and showed a proactive physical and psychological response to the lockdown (Baloran, 2020).

Online evaluation by professors requires a redesign of evaluation methods and metrics. It is suggested not to use traditional exams when classes are delivered online. This means mastering the technical and methodological knowledge of the advantages and disadvantages of technological equipment. It is necessary to use a technological system that suits professors and students to achieve optimal quality and results. The testing strategy should be based on students' time to understand the questions and complete or change the answers. The university must be tasked with developing and transforming online learning methods to optimize the combination of traditional face-to-face instructions and e-learning (Penalvo et al., 2020).

Face-to-face instruction in times of pandemics and crises poses health and logistical hazards, for which society must take preventive measures. Therefore, incremental online and hybrid learning are progressively accepted (Murphy, 2020).

3. DATA AND METHODS

To evaluate the effectiveness of online learning, we prepared a questionnaire with 14 questions. The questionnaire was aimed at students of economics. The students in the sample were randomly selected, including students of different levels, types of study, and years of study. We were able to survey 570 students from December 2021 to March 2022. However, we excluded surveys where most questions were not answered, so the final dataset consists of 500 respondents. The analysis includes a structural equation model (SEM). All latent variables and the regressors had a satisfactory level of internal consistency, as evaluated by the Cronbach Alpha value. The entire questionnaire is presented in the Appendix.

4. CONCEPTUAL MODEL AND HYPOTHESES

To evaluate the effectiveness of the online learning process, we created a model from the observed variables and analyzed it using the SEM (structural equation modeling) method. The SEM approach for studying the online learning process during the Covid-19 pandemic has also been used by other authors such as Khan et al. (2020), Rizun and Strzelecki (2020), and Hongsuchon et al. (2022). Our model includes variables that potentially depend on each other, known as component variables and variables that explain the relationships between latent variables and components, known as measurement variables. Included in the structure of our model are the following questions from our questionnaire.

Table 1. Research variables and questionnaire items

Latent variable:	
EL	Effectiveness of online learning
Component variables:	
EL1	How motivated were you to attend online lectures?
EL2	How suitable were the conditions at your home (space, privacy, lighting, equipment, internet access) for online learning?
EL3	What was the level of collaboration with other students during online learning?
EL4	How motivated were you to read more during the period of isolation due to the pandemic?
Measurement variables:	
EL6	Did you have any prior experience with online learning before the Covid-19 pandemic?
EL7	What is your willingness to advance academically in the future since the pandemic appeared?
EL8	Did the professors encourage students to participate actively in lectures?
EL9	Did you work during the online learning?
EL10	Do you think your university should design online learning so that it can be practiced after the Covid-19 pandemic?

Source: Authors

The questionnaire consists of questions we created and questions from other studies such as Jaeger et al. (2021), Altwaijry et al. (2021), Amir et al. (2020), Aucejo et al. (2020), Kapasia et al. (2020), Khan et al. (2020), Khan et al. (2021), Shaid et al. (2021), Hongsuchon et al. (2022), Tran et al. (2021), and Velde et al. (2021).

In this paper, we will test a conceptual model for the effectiveness of online learning during the Covid-19 pandemic in Kosovo. Below we present the graph of the conceptual model.
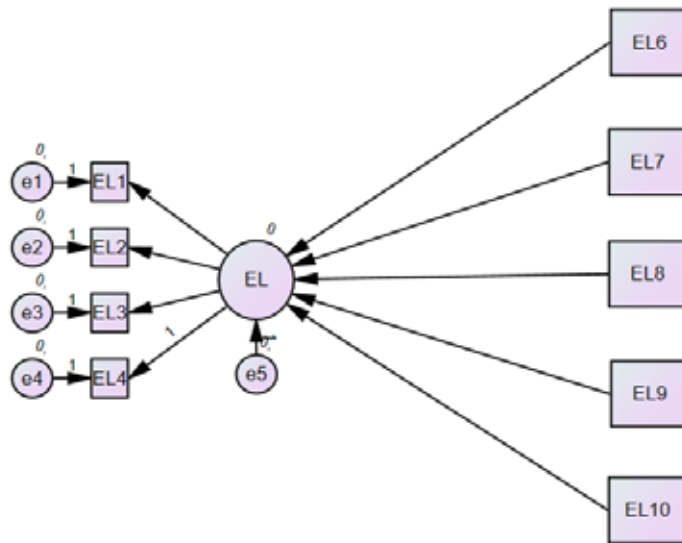
Figure 1. The conceptual model for the effectiveness of online learning

Source: Authors

The disruption of traditional learning and the abrupt transition to online education had multiple effects. In our conceptual model, the latent variable effectiveness of online learning (EL) is explained by the motivation to attend online lectures (Satyawan et al., 2021) and read more, appropriate conditions at home (Gu, 2022), and collaboration among students (Razali et al., 2015) (Mustakim et al., 2020).

To test the effectiveness of online learning in higher education among Kosovar students at the Faculty of Economics, we hypothesized the following based on our questionnaire and literature findings:

H1: Students' experience of online learning before the pandemic increased the effectiveness of online learning during the Covid-19 pandemic.

Most courses at the Faculty of Economics had limited integration of technology. Nevertheless, some students might have been familiar with online meetings, online teaching platforms, or virtual classes before the pandemic. Prior knowledge and experience with virtual classes helped many students and faculty transition to the educational changes brought by the pandemic (Widjaja et al., 2021; Wieland & Kollias, 2020). With Hypothesis H1, we tested how prior experience with online lectures increased the effectiveness of online learning during the Covid-19 lockdown.

H2: The higher the reluctance to advance academically in the future since the onset of the pandemic, the lower the effectiveness of online learning.

The Covid-19 pandemic impacted students' mental health (Xiong et al., 2020), increased stress (Alateeq et al., 2020), and

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induced anxiety (Cao et al., 2020), resulting in a decline in academic performance, postponement of graduation deadlines and delayed career orientation (Aucejo et al., 2020). Willingness to continue academic advancement after Covid-19 is a factor tested by Hypothesis 2.

H3: Encouraging student activity in (virtual) classes increases the effectiveness of online learning.

Engagement during lessons increases academic performance and consequently increases the effectiveness of the learning process. This statement is supported by the findings of Carini et al. (2006) and Voelkl (1995). Therefore, in this study, it was essential to measure student engagement (Hypothesis 3) in class to determine the effectiveness of online learning.

H4: Working simultaneously during online learning reduces the effectiveness of the online learning process.

The Covid-19 pandemic disrupted both the education and the labor market. Many faced the challenge of managing online learning during turbulent times in the workplace. Many workers switched to online jobs, some became unemployed due to the lockdown, and others remained hybrid. Students who worked while learning online faced problems at work. Pay

cuts and inappropriate work practices have caused stress and difficulty for employers and students. Logically, the market disruption affected many students' academic performance, which is tested by Hypothesis 4. This hypothesis is also supported by the findings of Aucejo et al. (2020).

H5: The higher the students' willingness for traditional learning, the lower the effectiveness of online learning.

The Faculty of Economics in Prishtina had a low to medium resource infrastructure for online learning. Considering the intellectual and technological infrastructure, we assumed that students' willingness to continue online learning in the future is low; thus, we formulated Hypothesis 5. According to Altwaijry et al. (2021), several factors influence students' and professors' willingness to participate in online learning, such as infrastructure, classroom environment, activities within the student body, and collaboration with the professors.

5. RESULTS

The following table presents the results of sample statistics, skewness and kurtosis, Cronbach's alpha, Confirmatory Factor Analysis (CFA), and Structural Equation Model (SEM).

Table 1. Summary statistics

Variable	Total number of responses	Responses	
Gender	500	Female	72.8 %
		Male	27.2 %
Level of study	500	Bachelor's	79.4 %
		Master's	20.6 %
Mode of study	499	Regular	90.58 %
		Correspondence	9.42 %
Year of study	498	I	1.61 %
		II	40.76 %
		III	57.63 %

Source: Authors

The respondents' participation by gender is 72.8% female and 27.2%, male. Regarding the level of study, 79.4% of the respondents pursue bachelor studies, and 20.6 % pursue master studies. 90.58% of the respondents are regular students, while only 9.42% study part-time. As for the year of study, 1.61% of the respondents are first-year students, 40.76% are second-year students, and 57.63% are third-year students.

Table 2. Skewness and kurtosis

		EL1	EL2	EL3	EL4	EL6	EL7	EL8	EL9	EL10
N	Valid	496	499	495	494	494	492	491	485	390
	Missing	4	1	5	6	6	8	9	15	110
Skewness		0.172	-0.359	0.028	0.153	1.925	-0.408	0.611	0.865	0.785
Std. Error of Skewness		0.110	0.109	0.110	0.110	0.110	0.110	0.110	0.111	0.124
Kurtosis		-0.230	-0.145	-0.050	-0.267	1.711	-1.841	-1.634	-0.613	-1.391
Std. Error of Kurtosis		0.219	0.218	0.219	0.219	0.219	0.220	0.220	0.221	0.247

Source: Authors

For each variable, less than 5% of values are missing, except for the variable EL10; therefore, we do not consider it a weighted problem. Variable EL6 had the category "prefer not to say," which we removed entirely. Variable EL10 had the category "do not know," which we removed entirely. We analyzed the variables for Skewness and Kurtosis, and the value of any variables is not larger than +3 or smaller than -3; thus, we do not have any non-normal ordinal measures.

The Cronbach's alpha for the latent variable effectiveness of online learning (EL) with variables EL1, EL2, EL3, and EL4 is 0.615, which can be considered acceptable,

according to Sekaran and Bougie (2016), Ramayah et al. (2011), and Pallant (2001).

After conducting the Confirmatory Factor Analysis (CFA), we obtained a CFI of over 0.87, which is acceptable, according to Dagnall et al. (2018), Bong et al. (2013), and Kim et al. (2016). The RMSEA results were 0.052, which is acceptable, according to Kim et al. (2016), Hair et al. (2017), and Hair et al. (2014). The P-close result of 0.395 is acceptable, according to Hair et al. (2014). This suggests that our model fits the latent variable effectiveness of online learning (EL).

The Hoelter index suggests that values less than 75 indicate an inferior model fit. The Hoelter index can only be interpreted meaningfully if N > 200 and the chi-square is statistically significant. In this study, the Hoelter index value is above 100, indicating that our sample size is appropriate (Hu & Bentler, 1998).

Table 3. Model fit summary

Model	CFI	RMSEA	P-close	Hoelter 0.01
Default model	0.874	0.052	0.395	370
Independence model	0	0.113	0	105

Source: Authors

The analysis used in this paper includes the Structural Equation Model (SEM). The results of the SEM analysis are presented in the following diagram and table.
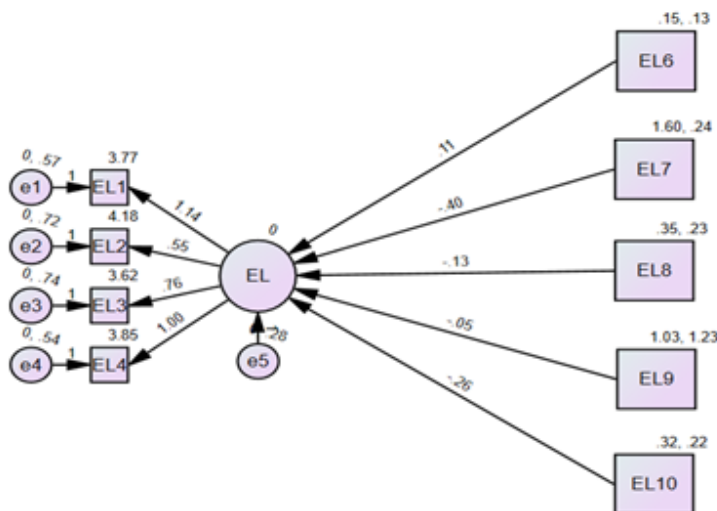

Figure 2. SEM analysis diagram
Source: Authors

Table 4. SEM paths evaluation

			Estimate	SE.	CR.	P
EL	←	EL10	-0.259	0.076	-3.389	***
EL	←	EL9	-0.054	0.029	-1.909	0.056
EL	←	EL6	0.114	0.086	1.318	0.188
EL	←	EL7	-0.404	0.069	-5.813	***
EL	←	EL8	-0.134	0.066	-2.034	0.042
EL4	←	EL	1			
EL3	←	EL	0.759	0.106	7.166	***
EL2	←	EL	0.552	0.093	5.912	***
EL1	←	EL	1.142	0.139	8.209	***

Source: Authors
Note: $^{*}P < 0.1$, $^{**}P < 0.05$, $^{***}P < 0.01$

Analysis of research results from Table 4 shows that variables EL1, EL2, and EL3 are positively related and highly significant, which means that they explain the latent variable EL very well and that all of these variables are suitable measures of our latent variable EL. The measurement variables are also significant (except for the variable EL6) and negatively related to the latent variable EL (except for the variable EL6). The variable EL6 (H1) does not meet the significance criterion and thus does not affect EL.

Results from Table 4 show that Covid-19 negatively impacts students' willingness to continue to advance academically in the future (EL7). Resistance to progress academically indicates the low effectiveness of online learning. In addition, we concluded from the analysis that the effectiveness of online learning is lower for students who work during online classes compared to those who do not work during online learning (EL9). Furthermore, according to the regression parameters, professors' encouragement of student activity (EL8) led to a decrease in EL, which is inconsistent with Hypothesis 3. Finally, according to EL10, students do not want their university

to conduct online classes in the future. They have a higher willingness for traditional learning, leading to a decrease in EL.

6. DISCUSSION

According to our results, encouraging student participation within the virtual classroom did not increase the effectiveness of the online learning process during the Covid-19 pandemic. As this process occurred during a turbulent time for both students and professors, the results indicate no significant degree in effectiveness despite motivation towards students. These results could also be explained by the conclusion of Rocca (2010). Our results contradict the findings of Hongsuchon et al. (2022) and Bergmark & Westman (2018), who suggest that student involvement increases engagement and motivation for future education and careers.

Our findings support that online learning during the Covid-19 pandemic negatively impacted the likelihood of attending another academic level in the future. Similar effects caused by the Covid-19

pandemic are also supported by the findings of Aucejo et al. (2020).

In addition, the results have shown that the experience of online learning during the Covid-19 pandemic reduced the desire to pursue online education. Our findings are also supported by the conclusions of Aucejo et al. (2020) and Tran et al. (2021). However, the results of Demuyakor (2020) and Shaid et al. (2021) indicate students are satisfied with online learning due to other variables and would consider hybrid education in the future.

Covid-19 has significantly harmed the labor market. Consequently, students' participation in the labor market affected their academic performance. They faced stress both at work and during online lectures. Our results suggest that working during lockdown reduced the effectiveness of online learning. Our results could also be explained by Aucejo et al. (2020).

The results of our analysis suggest that online learning during the Covid-19 pandemic had low effectiveness among students. Our findings are also supported by Nhatuve (2021). On the other hand, Batdi et al. (2021) conclude that the online learning process was effective in some cases. The cases from secondary research that demonstrate the greater effectiveness of online learning need to be analyzed and evaluated by educational institutions in the future.

7. CONCLUSION

In conclusion, the motivation to participate in online lectures, appropriate conditions at home, and collaboration with other students very well explain the latent variable effectiveness of online learning. According to students, the Covid-19 pandemic increased hesitation to pursue an additional level of academic study, resulting in a lower effectiveness of online learning during isolation. Reluctance to design online learning in the future also explains the low effectiveness of online learning during the Covid-19 pandemic. Therefore, based on the analysis obtained for our case study, we conclude that online learning demonstrated low effectiveness during the Covid-19 pandemic. Our conclusion is also supported by the findings of other authors: Aucejo et al. (2020), Altindag et al. (2021), Nhatuve (2021), and Tran et al. (2021).

Table 5. Evaluation of hypotheses

Hypotheses		Acceptance
H_1	Students' experience of online learning before the pandemic increased the effectiveness of online learning during the Covid-19 pandemic.	Rejected
H_2	The higher the reluctance to advance academically in the future since the onset of the pandemic, the lower the effectiveness of online learning.	Accepted
H_3	Encouraging student activity in the (virtual) classroom increases the effectiveness of online learning.	Rejected
H_4	Working simultaneously during online learning decreases the effectiveness of online learning.	Accepted
H_5	The higher the students' willingness for traditional learning, the lower the effectiveness of online learning.	Accepted

Source: Authors

This study makes a theoretical and practical contribution to recognizing the effectiveness of online learning during the lockdown in Kosovo. As limitations of our study, we consider the non-inclusion of the average grade of students before and after the online learning process during the Covid-19 pandemic, as well as the fact that the research includes only economics students and not students from other fields of study. Given the above limitations, further studies on the challenges of online learning during the Covid-19 pandemic are recommended.

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UČINKOVITOST PROCESA ON-LINE UČENJA ZA VRIJEME PAN-DEMIJE COVIDA-19
NA KOSOVU

Sažetak

Globalna kriza koronavirusa vodila je prema radikalnoj transformaciji obrazovnog sustava. Obrazovne institucije su morale prihvatiti metode on-line podučavanja zbog obvezne izolacije i smanjenja ekonomske aktivnosti. On-line učenje je predstavljalo iznenađenje te izazov, kako za sveučilišta, tako i za studente. Da bismo analizirali učinkovitost on-line učenja, na Ekonomskom fakultetu Sveučilišta u Prištini, u razdoblju od prosinca 2021. do ožujka 2022., proveli smo 500 anketa. Procijenili smo čimbenike, koji uključuju motivaciju za on-line učenje, uvjete kod kuće, motivaciju za dodatno čitanje te razinu suradnje između studenata za vrijeme pandemije COVIDA-19. Navedeni su čimbenici korišteni za procjenu učinkovitosti on-line učenja. U mjerenju učinkovitosti on-line učenja, mjerili smo iskustvo studenata s on-line učenjem prije pandemije, spremnost studenata za daljnjim akademskim obrazovanjem u budućnosti, ohrabrivanje od strane profesora na aktivnost, količinu aktivnosti za vrijeme on-line učenja te želju za nastavkom on-line obrazovanja u budućnosti. Na temelju prikupljenih podataka, koristili smo metodu modeliranja strukturnih jednadžbi (Structural Equation Modelling – SEM), koja pokazuje da su rezultati značajni, ali da je učinkovitost on-line učenja niska. Ovo će istraživanje pomoći u identificiranju izazova, s kojima se studenti suočavaju za vrijeme on-line učenja uslijed izolacije te na koji način navedeno djeluje na holističku učinkovitost on-line učenja.

Ključne riječi: *on-line učenje, učinkovitost, COVID-19, Kosovo*

APPENDIX: QUESTIONNAIRE FOR THE ONLINE LEARNING PRO-CESS DURING THE COVID-19 PANDEMIC

The purpose of this questionnaire is to examine the impact of online learning during the Covid-19 pandemic. Please complete the questionnaire only if you have participated in online lectures for at least one semester. The questionnaire will take approximately 10 minutes to complete.

* The information you provide in this questionnaire will remain confidential. Responses will be used for research purposes only and will not be shared with third parties. For any further clarification or questions, please contact us!

Gender: O Female   O Male

  Level of study: O Bachelor   O Master

  Mode of study: O Regular   O Correspondence

  Year of study: ___

Your motivation for attending online lectures was:

O Very low   O Low   O Average   O High   O Very high

How suitable were the conditions at your home (space, privacy, lighting, equipment, internet access) suited for attending online classes?

O Very poor   O Below average O Average   O Above average O Very good

What was the level of collaboration with other students during online learning?

O Very low   O Low   O Average   O High   O Very high

How motivated were you to read more during the period of isolation due to the pandemic?

O Very low   O Low   O Average   O High   O Very high

Did you have any prior experience with online learning before the Covid-19 pandemic?

O Yes   O No   O Prefer to not say

What is your willingness to advance academically in the future since the pandemic appeared?

O Less likely to pursue another academic degree

O Equally likely to pursue another academic degree

O More likely to pursue another academic degree

Did the professors encourage students to participate actively in lectures?

O Yes   O No

Did you work during the online learning?

O Yes   O No

Do you think your university should design online learning so that it can be practiced after the Covid-19 pandemic?

O Yes   O No   O Do not know

If you would like to provide additional information, please use the section below.

Thank you for your time and contribution!