# UNIVERSITY OF OSIJEK STUDENTS' ATTITUDES TOWARDS ONLINE LEARNING DURING AND AFTER *LOCKDOWN* DUE TO COVID-19 PANDEMIC: ANALYSIS AND COMPARISON

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## Summary

In the spring of 2020, learning in higher education in the Republic of Croatia had the characteristics of online learning because *lockdown* was imposed due to the COVID-19 pandemic. We have investigated the attitudes of University of Osijek's students towards online learning during the *lockdown,* due to the fact that *lockdown* and compulsory online learning were unprecedented in Croatian history. We have found that students' attitudes towards online learning were slightly negative.

Because learning has retained most of the characteristics acquired during that period until the academic year of 2021/2022, we have decided to examine the University of Osijek students' attitudes towards online learning once again and connect them to the *perceived ease of use* of tools, to the *perceived usefulness* of online learning and to some socio-demographic variables. The sample was made up of 229 students, and the data has been collected via an online questionnaire during July, August and September of 2021. We have found that the average students' attitude is slightly negative, however the population parameter is, judging by the confidence interval, between slightly negative and neutral. The indirect connection of the *perceived ease of use* of tools and the attitude, as well as the mediation effect of the *perceived usefulness* of online learning have been confirmed.

**Key words:** online learning, students' attitudes, *technology acceptance model*, *perceived ease of use*, *perceived usefulness*, Josip Juraj Strossmayer University of Osijek, COVID-19, *lockdown*, interdisciplinarity, sociology of education, philosophy of education

## 1. Introduction

Because of the COVID-19 pandemic, during spring of 2020 Republic of Croatia had imposed a *lockdown* which included the measure of transferring the educational process on all educational levels from classroom to distance education. The measure of compulsory distance education, which, expectedly, had a direct impact on the learning process, had been imposed by the Croatian Government on 16 March and it lasted up until 11 May 2020.[1] In that period, higher education was transferred onto software applications which enable all participants in the educational process to exchange information and collaborate via the Internet—applications which centralize and automatize multiple aspects of learning, also known as *Learning Management Systems* (LMS).[2] Therefore, the characteristics which learning in higher education took on during the *lockdown* in Republic of Croatia were those pertaining to online learning, which is defined as a form of distance learning for which all the necessary resources, including teachers, are available to students exclusively via the Internet.[3]

Since *lockdown* and compulsory online learning were unprecedented in Croatian history, we had conducted a quantative research in order to examine the attitudes of Josip Juraj Strossmayer University of Osijek's students towards online learning during the imposed *lockdown*, aiming to both deter-

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[1]     Andrej Plenković, "Odluka o obustavi izvođenja nastave u visokim učilištima, srednjim i osnovnim školama te redovnog rada ustanova predškolskog odgoja i obrazovanja i uspostavi nastave na daljinu", *Narodne novine* 29 (14 March 2020), p. 670; Andrej Plenković, "Odluka o izmjeni Odluke o obustavi izvođenja nastave u visokim učilištima, srednjim i osnovnim školama te redovnog rada ustanova predškolskog odgoja i obrazovanja i uspostavi nastave na daljinu", *Narodne novine* 32 (19 March 2020), p. 711; Andrej Plenković, "Odluka o načinu izvođenja nastave u osnovnim i srednjim školama kao i na visokim učilištima te obavljanju redovnog rada ustanova predškolskog odgoja i obrazovanja", *Narodne novine* 55 (8 May 2020), p. 1094.

[2]     Fuad A. A. Trayek, Sharifah Sariah Syed Hassan, "Attitude Towards the Use of Learning Management System Among University Students: A Case Study", *The Turkish Online Journal of Distance Education* 14/3 (2013), pp. 91–103, on p. 92; Sanja Šain, *Učenje na daljinu*, Master's thesis. Supervisor: Marija Bušelić (Pula: Odjel za ekonomiju i turizam "Dr. Mijo Mirković" Sveučilišta Jurja Dobrile u Puli, 2007), p. 39.

[3]     Mohhamad Ally, "Foundations of Educational Theory for Online Learning", in: Terry Anderson (ed.), *The Theory and Practice of Online Learning*, second edition (Edmonton: AU Press, 2008), pp. 15–44, on p. 17; D.[arko] Dukić, S.[laven] Mađarić, "Online učenje u hrvatskom visokom obrazovanju", *Tehnički glasnik* 6/1 (2012), pp. 69–72, on p. 70a.

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mine their attitudes and the factors affecting them.[4] We had collected the data during the *lockdown*. Despite the fact that the Croatian Government appeased the measures over time and that *lockdown* is no longer present in Croatia, we have conducted a second quantitative research. We wanted to see if, and to what extent, the attitudes of Josip Juraj Strossmayer University of Osijek's students towards online learning had changed after *lockdown*, bearing in mind that learning transformed from its compulsory online to hybrid form—mostly in online (distance) and partially in classroom (physical) surroundings.

New theories try to resolve the challenges which contemporary education faces in general, and learning and knowledge in particular. One of those theories is the so-called *philosophy of education in a new key*. This new, immanently interdisciplinary undertaking is the successor to the eponymous project launched more than half a century ago by the Australian scientist Charles Dunn Hardie, as an attempt to reform the whole way of teaching modeled on the changes that philosophy was experiencing back then.[5] Today's *philosophy of education in a new key* is focused on education in both digital and postdigital, but also in epidemic contexts. Thereat accentuating the rehumanisation of teaching with a special emphasis on strengthening the position of teachers, for which a new *Philosophy for Teachers* (P4T) was devised, as well as the predominant role of ethics, especially "the ethics of the other, the ethics of care for the other, the ethics of duty, of treatment of the other," as key areas.[6]

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[4]     Juraj Jurlina, Demian Papo, Hrvoje Potlimbrzović, "Stavovi studenata Sveučilišta u Osijeku prema *online* učenju tijekom *potpunog zatvaranja* uslijed epidemije COVID-19", *Metodički ogledi: časopis za filozofiju odgoja* 30/1 (2022), pp. 265–285.

[5]     C.[harles] D.[unn] Hardie, "The Philosophy of Education in a New Key", *Educational Theory* 18/4 (1960), pp. 255–261, on pp. 255, 258 and 260–261.

[6]     Janet Orchard, "Rehumanising teaching", in: Michael A.[drian] Peters, Sonja Arndt, Marek Tesar, Liz Jackson, Ruyu Hung, Carl Mika, Janis T. Ozolins, Christoph Teschers, Janet Orchard, Rachel Buchanan, Andrew Madjar, Rene Novak, Tina Besley, Sean Sturm (open reviewer), Peter Roberts (open reviewer), Andrew Gibbons (open reviewer), "Philosophy of education in a new key", *Educational Philosophy and Theory* (4 May 2020), pp. 1–21, on pp. 9–10; Janet Orchard, Ruth Heilbronn, Carrie Winstanley, "Philosophy for Teachers (P4T) – developing new teachers' applied ethical decision-making", *Ethics and Education* 11/1 (2016) pp. 42–54; Petar Jandrić, Jeremy Knox, Tina Besley, Thomas Ryberg, Juha Suoranta, Sarah Hayes, "Postdigital science and education", *Educational Philosophy and Theory* 50/10 (2018), pp. 893–899; Michael A.[drian] Peters, Sonja Arndt, Marek Tesar, "Postscript: Pandemic education: Philosophy of education in the time of Covid-19", in: Peters, Arndt, Tesar, Jackson, Hung, Mika, Ozolins, Teschers, Orchard, Buchanan, Madjar, Novak, Besley,

As was hypothesized in previous research, a decline in teaching and learning quality was expected at the start of the pandemic, since it had caused unseen and sudden changes in the educational process.[7] The decline in quality could reflect on students' attitudes towards online learning, with potential differences regarding their socio-demographic characteristics. This hypothesis has been confirmed by some recent research which involved students of Croatian universities, while other research has shown that the same population has a slightly positive attitude towards various aspects of online learning, so research results are not unanimous.[8] Nevertheless, the explanation of possible reasons of less pronounced positive attitude is what they have in common. Some of them are, without a doubt, the fact that learning tools are not sufficiently used, then the lack of adequate technical equipment in faculties, as well as the fact that this form of learning was not appropriately implemented.[9] Besides that, some research has shown that students are not willing to completely replace traditional forms of learning with online learning, but they rather believe that it would be ideal to find the right measure in pervasion of both forms of learning, which would result in *mixed*, *hybrid* or *blended learning*.[10] The variability of the mentioned results requires further research on students' attitudes towards online learning. Based on the results of available research, and because of the former com-

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Sturm (open reviewer), Roberts (open reviewer), Gibbons (open reviewer), "Philosophy of education in a new key", pp. 18–19.

[7] Stella Chiemeke, Mike Imafidor Omokhagbo, "Web-based Learning in Periods of Crisis: Reflections on the Impact of COVID-19", *International Journal of Computer Science & Information Technology* 12/3 (2020), pp. 33–46, on pp. 33 and 45.

[8] Darko Dukić, Dina Jukić, "Predictors of Online Learning Acceptance among University Students: An Analysis Based on Data Mining", *Tehnički glasnik* 9/3 (2015), pp. 279–284, on pp. 281b and 283a; Ana Zgrebec, "E-učenje kao motivator: istraživanje stavova studenata Fakulteta političkih znanosti", *Mali Levijatan: studentski časopis za politologiju* 7/1 (2020), pp. 50–63, on p. 60; Antonela Bušelić, *Stavovi studenata o iskustvu studiranja u uvjetima nastave na daljinu*, Master's thesis. Supervisor: Ivana Batarelo Kokić (Split: Filozofski fakultet Sveučilišta u Splitu, 2021), pp. 19–26.

[9] Dukić, Jukić, "Predictors of Online Learning Acceptance among University Students: An Analysis Based on Data Mining", pp. 281b–282b; Zgrebec, "E-učenje kao motivator: istraživanje stavova studenata Fakulteta političkih znanosti", pp. 56–60; Bušelić, *Stavovi studenata o iskustvu studiranja u uvjetima nastave na daljinu*, pp. 15 and 43.

[10] Dina Jukić, *Analiza stavova studenata hrvatskih sveučilišta o online učenju*, Master's thesis. Supervisor: Darko Dukić (Osijek: Odjel za fiziku Sveučilišta Josipa Jurja Strossmayera u Osijeku, 2015), p. 57; Nena Matković, *Stavovi i percepcije studenata splitskog sveučilišta o provedbi* online *nastave za vrijeme trajanja epidemije Covid-19*, Undergraduate thesis. Supervisor: Ivanka Buzov (Split: Filozofski fakultet Sveučilišta u Splitu, 2021), p. 51.

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pulsory relocation of the whole learning process into online environment during *lockdown*, it is to be examined whether the average score on the scale of attitudes towards online learning will still be slightly negative as it was in our first research wave.

Since online learning is based on the use of new communication, information and computer technologies, especially the LMS, theoretical and conceptual framework of both of our research relied on the *technology acceptance model* (TAM), which was conceived in 1986 by Fred D. Davis. This theoretical model is used to explain the user's attitude towards a technological system by two factors: *perceived ease of use* and *perceived usefulness*. *Perceived ease of use* is the estimation of the amount of effort required to use the system, whereas *perceived usefulness* is the estimation of the increase in the usefulness of using the system.[11] The direct influence of *perceived ease of use* on the *perceived usefulness* is assumed. According to this model, user's attitude is the main determinant of motivation to use or to reject the technological system. A growing number of studies, according to Marangunić's and Granić's overview of research on the TAM model and its applications and modifications, accentuate the applicability of the *technology acceptance model* in different domains in which new technologies are used, and one of them is higher education, which is why this model is incessantly evolving and expanding.[12] Another proof of TAM model's usefulness in the context of higher education can be found in another research, in which it was stated that "TAM is the top extensively utilized model when it comes to technology and M-learning adoption in literature – it focuses on the behaviour of users in higher education," and, more importantly, that "TAM is a highly cited model and its extensive acceptance is owed to its robust theoretical assumption and practical effectiveness."[13]

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[11] Fred D. Davis, *A Technology Acceptance Model Empirically Testing New End-User Information System: Theory and Results*, Doctoral thesis. Supervisor: John C. Henderson (Cambridge: Massachusetts Institute of Technology, 1986), p. 26: "Perceived usefulness is defined as 'the degree to which an individual believes that using a particular system would enhance his or her job performance.' Perceived ease of use is defined as 'the degree to which an individual believes that using a particular system would be free of physical and mental effort.'"

[12] Nikola Marangunić, Andrina Granić, "TAM – četvrt stoljeća istraživanja", *Suvremena psihologija: časopis za psihodijagnostičku teoriju i praksu kao i ostala područja psihologije* 15/2 (2012), pp. 205–224, on p. 217.

[13] Mohammad Elayan Ayed Alsharafat, "A Theoretical Discussion of Factors Affecting the Acceptance of M-Learning by Integrating is Success Model with TAM Model", *Journal of Theoretical and Applied Information Technology* 99/17 (2021), pp. 4213–4259, on pp. 4218b–4219a and 4219b.

Davis had conducted several empirical research in 1989 and had confirmed his hypotheses about *perceived usefulness* and *perceived ease of use* as attitude factors, but *perceived usefulness* proved to be a more significant determinant than *perceived ease of use*.[14] Therefore, the assumption is that if the user does not perceive the technology as useful, for example if it does not improve his efficiency, the ease of use of the technology becomes irrelevant in defining the attitude. In fact, mediation effect is to be expected, i.e. the indirect impact of *perceived ease of use* on the attitude towards online learning through a mediating variable—*perceived usefulness*.

Implementation of the *technology acceptance model* and comparison of the results of our first research wave with the second one will, in our opinion, offer insight into the possible change of students' attitudes towards online learning due to the change from compulsory to optional learning in online environment. Besides the attitude towards online learning, the change in *perceived usefulness* and *perceived ease of use*, as predictors of the attitude, will also be in our focus.

## 2. Aims and hypotheses

The first aim of our research was to analyze the attitude towards online learning from the perspective of the *technology acceptance model* in the period after *lockdown*. The following two hypotheses were formulated:

1. *Perceived ease of use* of online learning tools and *perceived usefulness* of online learning are statistically significantly and positively correlated to attitudes towards online learning.
2. *Perceived usefulness* of online learning is a mediator of the connection between the *perceived ease of use* of online learning tools and the attitude towards online learning.

Our second research aim was to compare the results of 2021 to the results of 2020 from the perspective of the *technology acceptance model*.

3. The difference in the average attitude towards online learning between 2020 and 2021 is consistent with the difference in the average *perceived usefulness* of online learning.

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[14]   Fred D. Davis, "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology", *MIS Quarterly* 13/3 (1989), pp. 319–340, on pp. 320, 334a and 335a.

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We also hypothesized the connection between the attitude towards online learning and some theoretically relevant socio-demographic variables:

4. The grade point average is correlated to the attitude towards online learning.
5. Computer literacy is correlated to the attitude towards online learning.
6. The field of study (Humanities and Social Sciences / STEM) is correlated to the attitude towards online learning.

## 3. Sample and methodology

Quantitative methodology was used in both waves of our research. The data has been collected by a voluntary and anonymous online questionnaire during July, August, and September of 2021. The questionnaire included 45 questions concerning online learning paired with different assessment scales. The convenience sample was made up of 229 students, data was extracted from *Google Forms* into *MS Excel* and, after initial recoding and transforming, analyses were done in the *IBM SPSS* software. In the first wave of our research in 2020, 337 students participated, and their data had been collected from April to May 2020. Sample structure from both 2020 and 2021 is shown in Table 1.

| | | 2020 (N=337) | | 2021 (N=229) | |
|---|---|---|---|---|---|
| | | frequency | percentage | frequency | percentage |
| **Gender** | **Female** | 255 | 75,7% | 183 | 79,9% |
| | **Male** | 82 | 24,3% | 46 | 20,1% |
| **Year of Study** | **1** | 110 | 32,6% | 45 | 19,7% |
| | **2** | 76 | 22,6% | 45 | 19,7% |
| | **3** | 79 | 23,4% | 68 | 29,7% |
| | **4** | 53 | 15,7% | 31 | 13,5% |
| | **5** | 19 | 5,6% | 36 | 15,7% |
| | **6** | 0 | 0,0% | 4 | 1,7% |
| **Field of study** | **Humanities and Social Sciences** | 248 | 73,6% | 152 | 66,4% |
| | **STEM** | 89 | 26,4% | 77 | 33,6% |

**Table 1** Sample structure of both waves of our research

The measurement instruments included items which were used for constructing scales for attitude towards online learning (Likert scales of evaluation), *perceived ease of use* of tools for online learning (semantic differential scales of evaluation), and *perceived usefulness* of online learning (semantic differential scales of evaluation). In all three scales Cronbach's alpha was above 0,8, which means that they had a very good reliability. Participants' results on those scales were thereby represented by an average calculated using all of the items from belonging scales (items and scales means can be seen in Table 2).

| | $M_{2020}$ | $M_{2021}$ |
|---|---|---|
| *Perceived ease of use* (scale) | 4.94 | 5.34 |
| They require a lot / little mental effort. | 4,51 | 5,07 |
| They are impractical / practical. | 4,61 | 5,11 |
| Instructions are difficult / easily accessible. | 5,26 | 5,41 |
| They are complicated / easy to use. | 5,39 | 5,76 |
| *Perceived usefulness* (scale) | 3,56 | 3,89 |
| They decrease / increase the quality of teaching. | 2,96 | 3,21 |
| They slow down / speed up the learning process. | 3,54 | 3,86 |
| They make it harder / easier to fulfill obligations. | 3,78 | 4,43 |
| They are inefficient / efficient. | 3,94 | 4,06 |
| Attitude towards online learning (scale) | 2,78 | 2,85 |
| I like online learning. | 2,92 | 3,04 |
| Online learning provides an attractive learning environment. | 2,78 | 2,72 |
| I believe that there should be more online learning in higher education. | 2,58 | 2,69 |
| I oppose online learning. (recoded) | 3,41 | 3,36 |
| Online learning is better than traditional learning. | 2,23 | 2,41 |

**Table 2** Average results on three scales: *perceived ease of use*, *perceived usefulness*, and attitude towards online learning

## 4. Results and discussion

In order to achieve our first research aim, and at the same time to test the first two hypotheses, we conducted a series of linear regression analyses using the attitude towards online learning as a dependent, or criterion variable. Coefficients and other relevant statistics can be observed in Table 3. Taken separately, both *perceived ease of use* and *perceived usefulness* were

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statistically significantly correlated with the attitude. Standardized *B* coefficients were 0,613 and 0,86, respectively. But when we incorporated them into a single model, *perceived ease of use* became significantly less correlated with our criterion.

| Dependent variable = Attitude towards online learning (scale) | | | |
|---|---|---|---|
| | model 1 | model 2 | model 3 |
| intercept | | | |
| *perceived ease of use* | 0,613[*] | - | 0,119[*] |
| *perceived usefulness* | - | 0,860[*] | 0,785[*] |
| | R2=0,37 | R2=0,74 | R2=0,748 |
| | | | [*] p<0,01 |

**Table 3** Regression analysis

This finding strongly suggests that there is a mediation effect at hand. Partial mediation was confirmed to be significant using the Sobel test (10,13; p<0,01). *Perceived ease of use* is thus connected to the attitude towards online learning mostly through its connection to *perceived usefulness*. In other words, we can better predict student's attitudes *via* their perception of quality, effectiveness and positive impact of online learning tools on learning process than *via* their perception of how easy, practical or accessible the tools are. Thereby, we can confirm the first two hypotheses ("*Perceived ease of use* of online learning tools and *perceived usefulness* of online learning are statistically significantly and positively correlated to attitudes towards online learning" and "*Perceived usefulness* of online learning is a mediator of the connection between the *perceived ease of use* of online learning tools and the attitude towards online learning"). The connection between the concepts is shown in Graph 1.
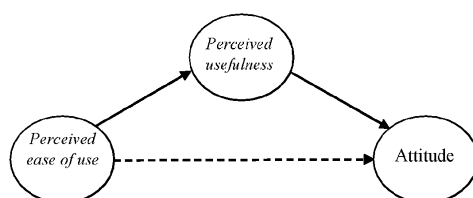


**Graph 1** The connection between *perceived ease of use*, *perceived usefulness*, and the attitude towards online learning

Our second research aim was to compare the results concerning attitudes towards online learning, *perceived usefulness*, and *perceived ease of use* from 2020 to the ones from 2021. We did this by calculating the attitude scale means for those two waves of research and comparing them by conducting

independent samples T-test. We found that, although there was a slight increase, there was no statistically significant difference in attitudes towards online learning, nor in *perceived usefulness*. In other words, average perception of usefulness and the attitude stayed the same. However, there was a significant and positive change in the *perceived ease of use* of tools for online learning. This finding suggests that through the course of the passing year and with the experience gained in using online learning tools it became easier for students, but it did not affect their attitude significantly (see Table 4).

|  | t | Sig. | Mean Difference |
|---|---|---|---|
| Attitude towards online learning | 0,584 | 0,560 | 0,06057 |
| *Perceived ease of use* | 3,097 | **0,002** | **0,39703** |
| *Perceived usefulness* | 2,320 | 0,021 | 0,33445 |

**Table 4** T-tests (difference in means between the two waves of our research)

Our third hypothesis ("The difference in the average attitude towards online learning between 2020 and 2021 is consistent with the difference in the average *perceived usefulness* of online learning") was thus confirmed. This finding, although on the *macro*-level, is actually in accordance with the *technology acceptance model*. In regression analyses it was shown that *perceived ease of use* is connected to attitudes towards online learning mainly through *perceived usefulness*. This can be interpreted in a way that we should not be expecting a change in the attitude towards online learning because of a change in *perceived ease of use*, if *perceived usefulness* stays the same. This is precisely what we observed in our data. *Perceived ease of use* has significantly risen, but *perceived usefulness* and, consequently, the attitude did not change significantly.

Our final research aim was to test for connections between some socio-demographic variables and the attitude towards online learning. We hereby point out that this refers only to the second wave of our research. We used Pearson coefficient of correlation and point biserial correlation. The findings suggest that, out of all the variables we incorporated in our analysis (grade point average, computer literacy and the field of study), only the field of study was statistically significantly correlated with the attitude towards online learning (see Table 5). More precisely, students who are studying in the field of STEM had a more positive attitude than their colleagues from fields of humanities and social sciences. That being said, just one of the

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hypothesized correlations was confirmed ("The field of study is correlated to the attitude towards online learning").

| | Year of Study | Field of Study | Grade point average | Computer literacy |
|---|---|---|---|---|
| Attitude towards online learning | –0,038 | –0,199[*] | –0,132 | 0,112 |
| | | [*] p<0,01 | | |

**Table 5** Correlations between students' attitude towards online learning
and socio-demographic variables

In addition, after we conducted a 2-way ANOVA with attitude towards online learning as the criterion and field of study together with year of study as predictors, another interesting finding was made. It can be seen in the Graph 2 that the biggest difference in the attitude between humanities and social sciences students and STEM students occurred in the final year of their studies.
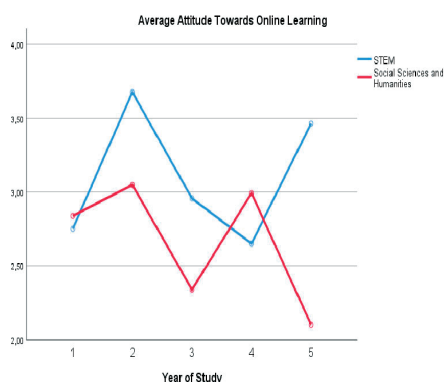


**Graph 2** Difference in the attitude towards online learning between humanities and social sciences students and STEM students depending to their year of study

## 5. Conclusion

In conclusion, Josip Juraj Strossmayer University of Osijek students' attitude towards online learning was slightly negative in both 2020 and 2021, even though online learning was not compulsory during 2021. The contribution of this research is reflected in the fact that we compared results that were collected in the midst of *lockdown* with the results after the anti-pandemic measures were lifted. *Technology acceptance model* was confirmed in both cases using multivariate regression analyses, meaning that *perceived usefulness* preceeds the importance of *perceived ease of use*.

Comparison of the results between the two waves show stagnation of the average attitude towards online learning in spite of the statistically significant increase in the *perceived ease of use*. This is also in accordance with the *technology acceptance model* and its hypothesized mediation effect of *perceived usefulness*, which is also stagnating. Finally, when it comes to socio-demographic variables, only the field of study is correlated to the students' attitude towards online learning. We should note that further research could be improved by implementing teacher's perspective, and also by constructing a probabilistic stratified sample of University's students which would offer us the possibility of generalizing our findings. Furthermore, future research could also be strengthened by including findings pertaining to philosophy of education, especially when contemporary educational challenges are taken into consideration. For example, one of the appropriate methodological frameworks for addressing those challenges is offered by the so-called *philosophy of education in a new key*, which is inherently interdisciplinary.

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## Stavovi studenata osječkog Sveučilišta prema *online* učenju tijekom i nakon *potpunog zatvaranja* (*lockdown*) uslijed pandemije COVID-19: analiza i usporedba

### Sažetak

U proljeće 2020. godine u Hrvatskoj je uslijed pandemije bolesti COVID-19 nastupilo *potpuno zatvaranje* zbog kojega je učenje u visokom obrazovanju poprimilo obilježja *online* učenja. U takvim okolnostima ispitali smo stavove studenata Sveučilišta Josipa Jurja Strossmayera u Osijeku o *online* učenju tijekom *potpunog zatvaranja*, posebice zbog činjenice da su *potpuno zatvaranje* i prinudno *online* učenje bez presedana u hrvatskoj povijesti. Tada smo utvrdili da su stavovi studenata prema *online* učenju bili blago negativni.

Učenje je sve do akademske 2021./2022. godine u velikoj mjeri zadržalo obilježja stečena tijekom tog razdoblja, usprkos tome što mjera *potpunog zatvaranja* u Hrvatskoj više nije bila na snazi. Zato smo ponovno ispitali stavove studenata Sveučilišta Josipa Jurja Strossmayera u Osijeku prema *online* učenju i povezali ih s *percipiranom lakoćom korištenja* alatima, *percipiranom korisnošću online* učenja te nekim socio-demografskim varijablama. Uzorak istraživanja bio je sačinjen od 229 studenata, a podaci su prikupljani *online* anketom tijekom srpnja, kolovoza i rujna 2021. godine. Utvrdili smo da je prosječan stav studenata iz našeg uzorka blago negativan, ali da se, sudeći prema intervalu pouzdanosti u populaciji, nalazi između blago negativnog i neutralnog. I ovom smo prigodom potvrdili indirektnu povezanost *percipirane lakoće korištenja* alatima i stava, kao i efekt medijacije *percipirane korisnosti online* učenja.

**Ključne riječi:** *online* učenje, stavovi studenata, *model prihvaćanja tehnologije, percipirana lakoća korištenja, percipirana korisnost,* Sveučilište Josipa Jurja Strossmayera u Osijeku, COVID-19, *potpuno zatvaranje* (*lockdown*), interdisciplinarnost, sociologija odgoja i obrazovanja, filozofija odgoja i obrazovanja