DOI 10.51558/2490-3647.2023.8.1.319

UDK 37.018.43:616.036.21
37.018.43:004.738.5

Primljeno: 09. 02. 2023.

Izvorni naučni rad
Original scientific paper

Slađana Zuković, Dušica Stojadinović, Senka Slijepčević

FACTORS OF STUDENTS' PERCEIVED SATISFACTION WITH DISTANCE LEARNING DURING THE COVID-19 PANDEMIC

Bearing in mind the specifics of the educational process in the online context and the factors of satisfaction with this type of teaching in a crisis, the paper presents the results of research aimed at examining student satisfaction with distance learning in the conditions of the coronavirus pandemic. The research was conducted on a convenient sample of 505 students in the second cycle of primary school education in the Republic of Serbia. A modified version of the Technology Acceptance Model (Davis 1989) instrument was used for the research. Using factor analysis, we identified two subscales (Attitudes towards distance learning and Motivated behaviour) for which we established criterion validity. The obtained results for the entire scale showed that the respondents moderately positively assessed the factors of satisfaction with distance learning, while female students and respondents from two-parent families rated satisfaction with this aspect at a higher level. The analysis of the differences in the answers obtained concerning the measured socio-demographic variables showed that the answers on the subscale Attitudes towards distance education of the child differ concerning the birth order in the family. On the subscale Motivated behaviour differences were determined concerning gender, school achievement and family structure. In addition to the research limitations highlighted in the paper, the results generally suggest that strengthening the sense of personal control and self-regulation is one of the more essential ways to improve satisfaction, motivation and intention to learn during distance learning.

Keywords: Covid-19 pandemic; Technology Acceptance Model; distance learning, student satisfaction.

1. INTRODUCTION

The crisis induced by the Covid-19 pandemic at the global level caused a sudden transition to distance learning, which required significant changes in the functioning of educational systems (Adnan 2020) and affected the learning process and the lives of approximately 91% of students (Dreesen et al. 2020). Distance learning solutions adopted by schools were heterogeneous across and within countries, as well as between school levels (Adnan 2020; Champeaux et al. 2020). At the same time, it is essential to emphasise that before the pandemic, distance learning was an alternative used with the intention of reconsidering traditional ways of learning, in other words, to complete and enrich the teaching process. However, the pandemic conditions caused distance learning and the use of technology in the educational process to become an obligation and an inevitability. This implied the presence of a wide range of goals and learning strategies, as well as approaching the newly created situation with different priorities (Adnan & Anwar 2020, Bozkurt & Sharma 2022, Pace, Pettit et al. 2020). Also, with the emergence of the Covid-19 pandemic, educational systems around the world have become vulnerable to external influences and threats. This digital transformation of the learning process has had several logistical challenges - from the impact of anxiety associated with the pandemic on the effects of the academic success of students to the fact that a large part of teachers was not effectively prepared to deliver high-quality distance learning (Adedoyin & Soykan 2020).

The crucial question of assessing the effectiveness of distance learning, both in regular and crisis conditions, is a question of its acceptance by the students. Davis (1989), the creator of the Technology Acceptance Model, assumed that the effective adoption of an information system is determined by the user's intention to use the system. That intention is determined by the perception of the system's usefulness and ease of use. Perceived usefulness of technology refers to the degree to which an individual believes that using a particular system will help them improve their performance or academic achievement. Perceived ease of use of technology refers to an individual's belief that using a particular learning platform or tool will be relatively effortless (Trivunović & Kosanović 2021; Zuo et al. 2021). Accordingly, researchers point out that the degree of technology acceptance is a significant predictor of the student's appreciation of the system and the predisposition to continue using it during the learning process (Shao 2020; Zuo et al. 2021). When it comes to the acceptance of technology during the state of emergency due to the Covid-19 pandemic, one of the studies (Baber 2020) showed that students were not prepared or motivated to start

and continue distance learning, which could largely impede positive learning outcomes. Also, this research showed that students' motivation to learn in an online environment in such conditions is a significant determinant of successful learning outcomes and the overall assessment of distance learning. In this sense, some authors (Zuo et al. 2021) particularly emphasize the importance of student engagement for the effectiveness of distance learning because the online learning context provides fewer opportunities for students to make meaningful contacts with peers and teachers, which can lead to student isolation and passive learning.

Although earlier research (Hew 2016; Pellas 2014; Sun & Rueda 2012) identified various factors that influence online engagement (previous online learning experience, self-efficacy, self-regulation, online interactions, quality of technology, course resources, teaching strategies, etc.), the fact is that most empirical findings regarding student engagement in online learning have been obtained from higher education context rather than elementary and/or secondary school context. Therefore, during the pandemic, several research studies were conducted that sought to look at the challenges and opportunities associated with online learning at different levels of education, focusing on examining the advantages and disadvantages of distance learning from the perspective of various stakeholders (Adnan & Anwar 2020). The justification of the significance of researching opinions regarding online learning is understanding the challenges students face and the specifics of distance learning that stimulate or hinder students from achieving their learning goals.

As in most countries, in the Republic of Serbia, a decision was made to implement distance learning and teaching to maintain the continuity of the educational process during the pandemic. Following the epidemiological situation, the organisation of distance learning has been modified several times (Zuković & Slijepčević 2022), so the challenges of practical realisation of teaching and learning in such conditions were significant, which implied the need to analyse the situation in practice from different perspectives. Following that, this paper presents the research on student satisfaction with distance learning factors during the pandemic period, when teaching at all levels of education in the Republic of Serbia was conducted exclusively online.

1.1. The goals of the research

The research aimed to examine the factors of perceived satisfaction with distance learning during the COVID-19 pandemic, as assessed by students of upper grades of an elementary school in the Republic of Serbia. The following research tasks were

formulated based on the research goal: 1. Verification of a factor structure and criterion validity of a Scale for measuring perceived satisfaction with distance learning; 2. Descriptive analysis of the assessment of the factors of perceived satisfaction with distance learning, as well as the differences in assessment depending on the measured socio-demographic variables; 3. Descriptive analysis of factors of perceived satisfaction with distance learning at the level of separate subscales and the difference in assessment depending on the measured socio-demographic variables.

2. METHOD

2.1. Research instrument

The first part of the instrument was intended to collect data on the socio-demographic characteristics of the respondents: gender, grade, place of residence, school performance, family structure, number of children in the family, birth order, father's and mother's working situation during Covid-19 pandemic. The second part of the instrument consisted of the Scale for measuring perceived satisfaction with distance learning, which was created based on the Technology acceptance model (Shao 2020) but adapted to our cultural context and pandemic conditions in which distance learning was conducted. The scale contains a total of 15 items which, according to the starting points of the original scale, are divided into five subscales, each of which is made up of three things: 1. Attitudes – a subscale that refers to the respondent's attitude about online teaching (e.g., Online teaching should continue); 2. Satisfaction - a subscale that determines how satisfied the respondents are with the materials and content of online classes (e.g., When I raise a problem and need to solve it, it is dealt with quickly); 3. Ease of use- a subscale that examines the ease of navigating the learning process in online teaching (e.g., The operation of online learning must be very easy for me); 4. Usefulness – a subscale that examines the contribution of online teaching to progress in the teaching process (e.g. Online teaching improves my learning performance); 5. Behavioural intention – a subscale that examines the existence of active and regular participation in online teaching activities (e.g. I will actively participate in online learning courses). A five-point Likert-type scale was used with a range of responses from 1 (Strongly disagree) to 5 (Strongly agree). For criterion validation of the Scale for measuring perceived satisfaction factors with distance learning, a question was asked about general satisfaction with distance learning, with the answers offered – I am satisfied, I am partially satisfied, and I am not satisfied.

2.2. Sample, research and statistical procedures

The research sample consisted of 505 students in the second cycle of primary school education from the territory of Serbia. It is a convenient sample, and the characteristics of the sample are shown in Table 1. The data were collected through the Google forms platform when students attended classes entirely online (period April-May 2020). The questionnaire was sent to school pedagogues, who then forwarded it to the students, along with a confirmation of the parent's consent for their children's

Table 1. Characteristics of the sample

	N	%
Gender		
Male	202	40
Female	303	60
Grade		
The fifth	3	0.6
The sixth	91	18
The seventh	213	42.2
The eighth	198	39.2
Place of living		
City	218	43.2
Suburb	176	34.9
The countryside	111	22
School achievement at the end of the semester		
Insufficient	6	1.2
Sufficient	2	.4
Good	62	12.3
Very good	193	38.2
Excellent	242	47.9
Family structure		
A complete family	431	85.3
An incomplete family	74	14.7
Number of children in the family		
One	62	12.3
Two	306	60.6
Three and more	137	27.1
Birth order		
The oldest child	260	51.5
Middle child	65	12.9
The youngest child	180	35.6
Father's working situation during the state of emergency		
He goes to work	315	62.4
He works from home	112	22.2
Does not work at all	78	15.4
Mother's working situation during the state of emergency		
She goes to work	198	39.2
She works from home	143	28.3
Does not work at all	164	32.5
Total	**505**	**100**

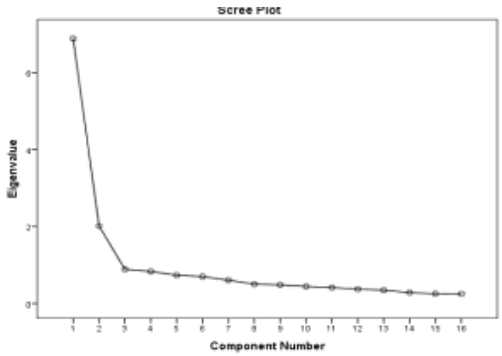
participation in the research. The SPSS package was used for the statistical analysis of the data and within it the procedures of descriptive statistics: t-test of independent samples, correlation, ANOVA, Tukey post-hoc test, checking the instruments' reliability and the data distribution normality.

3. RESULTS

3.1. Factor structure and criterion validity of the Scale for measuring perceived satisfaction with distance learning

After the data were collected, the 15 statements of the scale were subjected to principal component analysis (PCA) in SPSS version 20. Before conducting PCA, the suitability of the data for factor analysis was assessed. The value of the Kaiser-Meyer-Olkin index was 0.91, which exceeds the recommended value of 0.6. Bartlett's test of sphericity also reached statistical significance (p=.00), indicating the factorability of the correlation matrix. Principal components analysis (Direct Oblimin rotation) revealed the presence of two components with characteristic values over 1, which explains 41.9% and 13% of the variance. Examining the diagram, it is evident that there is a clear breaking point behind the second component (Diagram 1).

Diagram 1. Analysis of the main components of the scale



These two components explain 55% of the variance, with the first component explaining 41.9% and the second 13% of the variance. Thus, three of the five factors that were given in the original scale do not have a value above 1, which indicates that they do not stand out as unique factors.

The first component consists of items that in the original scale belonged to the subscales "Attitude", "Ease of use" (except for item 6 – I can easily follow the teaching duties during distance learning) and "Usefulness". Based on this, this component is called the subscale Attitudes about distance learning.

The second component consists of items from the original subscales "Behavioural intention" and "Satisfaction", with item 6 talking about both intentions to attend and satisfaction. Based on this, this subscale has been named the Motivated behaviour.

Further, by applying a statistical correlation procedure, the connection between the obtained subscales and the scale as a whole was examined (Table 2), after which the reliability of the scale as a whole and subscales were determined.

Table 2. Correlation of the subscales and the Scale for measuring perceived satisfaction with distance learning

	Scale for measuring perceived satisfaction with distance learning	Distance learning attitudes subscale	Motivated behaviour subscale	Overall satisfaction with distance learning
Scale for measuring perceived satisfaction with distance learning	1			
Distance learning attitudes subscale	.920**	1		
Motivated behaviour subscale	.823**	.553**	1	
Overall satisfaction with distance learning	.582**	.573**	.433**	1

By applying the Pearson correlation coefficient, we see that the subscales correlate highly with each other at a statistically significant level (p=.00) and that each subscale individually correlates with the scale as a whole at a higher level of significance. This finding tells us that the scores on the subscales are a good indicator of the scores obtained on the entire scale. The reliability analysis of the scale showed an appropriate level, as Cronbach's alpha is .896. At the subscale level, Attitudes about distance learning Cronbach alpha is .871, and at the Motivated behaviour subscale, Cronbach alpha is .848, which are also appropriate levels of reliability. As seen from Table 2, the Scale for measuring perceived satisfaction with distance learning and both subscales show a high positive correlation with the general satisfaction of students with distance learning, which speaks of the achieved criterion validity on our population of respondents.

3.2. Descriptive indicators of the Scale for measuring perceived satisfaction with distance learning and differences based on the measured socio-demographic variables

The arithmetic mean of the entire scale is 53.05 (min= 15, max= 75), which indicates that the surveyed students have a moderately positive perception of their satisfaction with distance learning during the COVID-19 pandemic. The obtained values of descriptive statistics for each scale item can be seen in Table 3.

Table 3. Descriptive indicators of the Scale for measuring perceived satisfaction with distance learning

Item	min	max	M	SD
1. Distance learning is a good substitute for regular classes.	1	5	3.19	1.31
2. Distance learning should continue even when we return to school desks.	1	5	2.30	1.52
3. Distance learning motivates me to study more than before.	1	5	2.73	1.49
4. I think distance learning is easy.	1	5	3.14	1.40
5. I like the activities and assignments within distance learning.	1	5	3.37	1.35
6. I can easily follow the coursework during distance learning.	1	5	3.91	1.29
7. Because of distance learning, it seems to me that I learn better and faster.	1	5	2.99	1.46
8. Distance learning makes me like studying more.	1	5	2.81	1.50
9. Distance learning provides all the necessary information about school duties.	1	5	3.50	1.32
10. I actively participate in distance learning.	1	5	**4.41**	1.04
11. I hand in my homework on time.	1	5	**4.47**	.93
12. I communicate with the teacher and classmates during distance learning.	1	5	**4.04**	1.31
13. I quickly understood how to follow the coursework during distance learning.	1	5	4.30	1.12
14. When there is a problem related to distance learning, I always solve it easily.	1	5	3.86	1.19
15. Learning aids (e.g., presentations, videos, texts) are complete and clear.	1	5	4.04	1.16

The highest rated items are those related to subscale Motivated Behaviour – I actively participate in distance learning; I hand in my homework on time; I communicate with the teacher and classmates during distance learning, and Learning resources (e.g., presentations, videos, texts) are complete and clear. On the other hand, the lowest-rated items are those related to subscale Attitudes about distance learning.

When examining the differences in perceived satisfaction with distance learning based on the measured socio-demographic characteristics of the respondents, statistically significant differences were found in relation to the gender and family structure of the respondents. T-test of independent samples showed statistical significance in favour of female respondents (Table 4), i.e., female students achieved higher scores in perceived satisfaction with distance learning than male students.

Table 4. Perceived satisfaction with distance learning and gender

	N	M	SD	F	p
Female	303	54.02	12.02	1.57	. **03**
Male	202	51.60	13.17		

Also, the analysis showed a statistically significant difference in the general perception of the perceived satisfaction with distance learning depending on the family structure (Table 5). Namely, students living with both parents seemed more satisfied with distance learning than students from single-parent families.

Table 5. Perceived satisfaction with distance learning and family structure

	N	M	SD	F	p
Both parents	431	53.50	12.23	3.94	.04
One parent	74	50.45	13.99		

3.3. Analysis of descriptive indicators at the level of the subscales and differences in assessment based on the measured socio-demographic variables

Taking into account the maximum possible scores on each of the components of the scale as well as the achieved arithmetic means of the scores (Table 6), it is a parent that the students evaluated at a higher level the items of the subscale Motivated behaviour (in the original scale "Intention about learning/behaviour" and "Satisfaction with teaching") than is the case with the subscale Attitudes about distance learning (in the original scale "Attitudes" and "Usefulness").

Table 6. Descriptive indicators of the subscales

	N	min	max	M	SD
Attitudes about distance learning	505	8	40	24.02	8.27
Motivated behaviour	505	7	35	29.31	5.89

Regarding the differences in the assessment of the subscale Attitudes about distance learning based on the examined socio-demographic characteristics, statistically significant differences were found only on one socio-demographic characteristic – the student's birth order (Table 7).

Table 7. Attitudes about distance learning and birth order of respondents

	N	M	SD	F	p
The oldest child	260	23.06	8.17	4.07	.01
Middle child	65	25.84	9.01		
The youngest child	180	24.75	7.98		

Tukey test showed statistically significant differences in the assessment between individual groups of students concerning their order of birth in the family (p=.01). Results have shown that the middle children assessed their attitudes about distance learning at a statistically significant higher level compared to the students who are the oldest or the youngest child in their family.

Statistically significant differences were found in the assessment of the subscale Motivated behaviour based on the following respondents' socio-demographic characteristics: gender, school achievement and family structure (Table 8).

Table 8. Motivated behaviour and socio-demographic characteristics of the respondents

		N	M	SD	F	p
Gender	Female	303	29.84	5.49	9.02	.00
	Male	202	27.80	6.25		
School achievement at the end of a semester	Insufficient	6	26.83	8.44	10.55	.00
	Sufficient	2	27.50	2.12		
	Good	62	25.43	8.85		
	Very good	193	28.51	6.35		
	Excellent	242	30.43	4.61		
Family structure	Both parents	431	29.28	5.69	4.38	.03
	One parent	74	27.56	6.77		

The results have shown that the female student achieved a statistically significant higher score than male students. Regarding the differences in perceived Motivated

behaviour found based on the student's school achievement, additional analysis using the Tukey test revealed the existence of statistically significant differences (p=.00) between students with good (M=25.43) and very good achievement (M=28.51) and between students with good (M=25.43) and excellent achievement (M=30.43). Also, Table 8 shows that students with sufficient and insufficient school achievement scored higher on the component of Motivated behaviour than students with good school achievement. However, the differences between these two groups are not statistically significant, which can be explained by the small sample of respondents in this group. Other than that, the t-test of independent samples showed a statistically significant difference based on the family structure (Table 8), favouring the students living with both parents.

4. DISCUSSION

The emergence of the Covid-19 pandemic has placed a demand for adaptation and flexibility educational systems worldwide (Wu 2020), which, among other things, has resulted in the transition to distance learning at all levels of education. This adaptation to the new situation undeniably left effects on all participants in the teaching process, especially students. For the students, the process of distance learning in this context represented learning in a crisis, which is very different from distance learning in regular conditions, i.e., using technology to enrich the existing teaching process (Bozkurt & Sharma 2020; Pace et al. 2020)**.** Bearing in mind the aforementioned, the presented research results should be seen as a contribution to examining the factors of student satisfaction with distance learning during the Covid-19 pandemic. Adding to this, the presented conclusions contribute to the consideration of this topic in future research on the long-term effects of distance learning in this crisis situation.

The first research task was to implement an exploratory factor analysis of the scale based on the theoretical grounds of the *Technology Acceptance Model* (Davis 1989), which was constructed by Shao (2020). For this research, the scale was modified and adapted to the cultural context and the pandemic conditions of distance teaching. In contrast to the assumed five subscales that make up the original scale, two subscales were extracted using the method of principal components on our sample of students of upper grades of primary schools in the Republic of Serbia: Attitudes towards distance learning and Motivated behaviour. This scale structure can be explained by the assumption about the delicacy of the context in which the scale was applied because the original scale was designed to identify factors of satisfaction with online learning

in regular conditions (Davis 1989). Also, a significant feature of distance learning held during Covid-19 pandemic is that the study contents, materials, and teaching methods are not explicitly designed for online learning. In other words, the structure of distance learning during the pandemic was mainly transferred to the online space, which was not structurally adapted (Baber 2020). In addition, the fact that a smaller number of subscales were obtained in our research compared to the original scale can be explained by the characteristics of the sample of respondents. First, the original scale was distributed to a random sample of adults while our respondents were primary school students. Second, it is also essential to point out the cultural differences of our sample and the broader context of the educational process.

The second research task was related to the analysis of descriptive indicators obtained at the level of the entire scale of perceived satisfaction with distance learning. The results showed that students moderately positively assess the perceived factors of satisfaction with distance learning in these conditions, with some of the items being assessed at a higher level (e.g., I *actively participate in distance learning; I hand in homework on time; I communicate with the teacher and classmates during distance learning*). When analysed, the statements on which the respondents achieved the highest scores, it is apparent that those items are characterised by the internal locus of control. In other words, behaviours portrayed in those statements are related to the personal ability and responsibility of managing the teaching process. This result can be interpreted bearing in mind the previous research conducted in regular face-to-face conditions of teaching, as well as in regular conditions of online teaching (Artino 2008; Joo et al. 2013; Levy 2007; Liaw 2008; Ponto 1999). Those findings showed that internal locus of control and self-efficacy significantly influence student satisfaction with the teaching process. On the other hand, the items related to the attitudes about distance learning were evaluated at a lower level. In addition to the aforementioned locus of control, the obtained results can also be a consequence of an urgent transition to this type of teaching and the general unpreparedness of all actors in the educational process for its realisation (Baber 2020; Prasetyo et al. 2021; Tukiran et al. 2022).

Statistically significant differences in perceived satisfaction with distance learning were found concerning the socio-demographic variables of gender and family structure. The obtained differences in the assessment depending on the gender of the respondents are in favour of the female respondents. This finding is not consistent with research on online learning in regular settings (Li & Kirkup 2007; Ong & Lai 2006), which found that male respondents are more willing to use technology while learning,

learn about its application, as well as to have a more positive perception of online learning compared to the female respondents. However, the results of some research (González-Gómez et al. 2012) are more consistent with the ones obtained here, as they show that female respondents, compared to male respondents, asses online learning at a higher level on average and attach greater importance to learning methods and planning, active participation in the teaching and learning process. Also, differences in perceived satisfaction with distance learning align with the results of similar research conducted during the Covid-19 pandemic. Namely, one such study (Korlat et al. 2021) determined that female students have the same level and perception of digital competence as male students. Still, female students show greater engagement in the online environment, are more dedicated and oriented towards learning and are more proactive when interacting with teachers. These findings can be explained in light of the assumption that female students transferred their established learning practices more successfully to the new learning context when schools switched to distance learning compared to male students (Hodges et al. 2020).

In addition to gender, differences were also found concerning family structure. Namely, students who live with both parents achieved higher scores on the entire scale than students who live with one parent, suggesting that two-parent families represented a greater resource for support in the distance learning process. Accordingly, it can be assumed that the higher level of perceived satisfaction with distance learning among students from two-parent families is a consequence of the higher level of parental involvement in the educational process of their children, which is also confirmed by the findings of some earlier research (Berthelsen & Walker 2008; Black 2009; Huerta et al. 2006).

Examining the differences at the level of subscales concerning the examined sociodemographic characteristics showed a significant difference in the assessment of the subscale Attitudes about distance learning regarding the birth order of children in the family. Namely, respondents who occupy the middle child position in the family rated their attitudes towards distance learning more positively at a statistically significant level. This finding is unexpected because earlier research (Combs-Draughn 2016) supports the thesis that middle-born children achieve lower school success and have the lowest motivation to learn. Still, it can potentially be explained by the small number of respondents in this group.

Regarding the subscale Motivated behaviour, statistically significant differences were found in the assessment concerning gender, school achievement and family structure. Statistically significant differences in favour of female students can be in-

terpreted with the assumption of their greater agility to transfer their already existing competencies in a traditional learning environment to the new context of distance learning during the pandemic (Korlat et al. 2021). School achievement was also shown to be statistically significant at the level of this subscale, and additional analyses showed statistically significant differences between the groups, favouring students with higher school success. This result can be interpreted by assuming that students with higher achievement are generally more motivated, independent and confident during the teaching process, including during distance learning. Although this assumption does not mean that in crisis circumstances such was Covid-19 pandemic, they do not need additional support (Saykılı 2018). Additional support includes self-management skills in a new form of distance learning because self-regulation is the key to motivation and better achievement (Artino & Stephens 2009; Wolters 2003). Finally, differences in scores on the level of the subscale Motivated behaviour were also found concerning the family structure because students from two-parent families achieve a higher average score on this subscale. Furthermore, this finding supports the previously stated assumption that two-parent families have a greater capacity for involvement and support during distance education, which can further affect satisfaction and motivated behaviour in this context of education (Berthelsen & Walker 2008; Black 2009; Huerta et al. 2006; Slijepčević et al. 2022).

5. CONCLUSION

The obtained findings are significant because they indicate the importance of the active role of students in distance learning. More precisely, their perception of control and self-regulation contributes to students' greater satisfaction, motivation and intention to learn in this context. Also, a significant finding, both at the level of general assessment and the level of individual components, concerns the family structure as a resource for providing support and increased satisfaction with distance learning during the emergency caused by the pandemic. Therefore, one of the ways to improve satisfaction, motivation and intention to learn during distance learning is to find a way for students to strengthen their sense of personal control, self-regulation and continuous support of parents, whose competencies should also be strengthened when it comes to this context of the teaching process.

5.1 Limitations of the study

After the presented results and their interpretation, it is essential to point out certain limitations of the conducted research, which at the same time represent valuable guidelines for future research on the implementation of the teaching process in this context. First, it is important to note that this research's limitations are methodological and are a consequence of the need for a quick response to the emerging situation. In addition, the sample included in this research is not representative, so the possibility of generalising its results is reduced. Also, the structure of the components of the original scale differs from the components obtained from our sample of respondents, which makes it challenging to interpret the results within the framework of this theoretical model. All of the above supports the need to improve this instrument for future research on this topic.

REFERENCES

1. Adedoyin, Olasile Babatunde, Emrah Soykan (2020), ″Covid-19 pandemic and online learning: the challenges and opportunities″, *Interactive learning environments*, 1-13.
2. Adnan, Muhammad, Kainat Anwar (2020), ″Online Learning amid the COVID-19 Pandemic: Students' Perspectives″, *Journal of Pedagogical Sociology and Psychology*, 2(1), 45-51.
3. Adnan, Muhammad (2020), ″Online learning amid the COVID-19 pandemic: Students' perspectives″, *Journal of Pedagogical Sociology and Psychology*, 1(2), 45–51.
4. Artino, Anthony, Jashon Stephens (2009), ″Academic motivation and self-regulation: A comparative analysis of undergraduate and graduate students learning online″, *The Internet and Higher Education*, 12(3-4), 146–151.
5. Artino, Anthony R. (2008), ″Motivational beliefs and perceptions of instructional quality: predicting satisfaction with online learning″, *Journal of Computer Assisted Learning*, 24(3), 260–270.
6. Baber, Hasnan, (2020) ″Determinants of students' perceived learning outcome and satisfaction in online learning during the pandemic of COVID-19″, *Journal of Education and E-Learning Research*, 7*(*3), 285–292.
7. Berthelsen, Donna, Sue Walker (2008), ″Parents' involvement in their children's education″, *Family Matters*, 79, 34–41.

8. Black, Erick W. (2009), *An evaluation of family involvements' influence on student achievement in K–12 virtual schooling* [Unpublished], The University of Florida, Florida
9. Bozkurt, Aras, Ramesh C. Sharma (2020), ″Emergency remote teaching in a time of global crisis due to the Corona Virus pandemic″, *Asian Journal of Distance Education*, 15(1), 1–6.
10. Champeaux, Hugues, Lucia Mangiavacchi, Francesca Marchetta, Luca Piccoli (2020), ″Learning at home: distance learning solutions and child development during the COVID-19 lockdown″, *Rev. Econ. Househ*, 20(3), 659-685.
11. Combs-Draughn, Alissa Jo (2016), *The Impact of Psychological Birth Order on Scholastic Achievement and Motivation*, Doctoral dissertation, Walden University
12. Davis, Fred D. (1989), ″Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology″, *MIS Quarterly*, 13(3), 319–340.
13. Dreesen, Thomas, Spogmai Akseer, Mathieu Brossard, Pragya Dewan, Juan-Pablo Giraldo, Akito Kamei, Javier Santiago Ortega Correa (2020), *Promising practices for equitable remote learning Emerging lessons from COVID-19 education responses in 127 countries.* https://ideas.repec.org/p/ucf/inores/inores1090.html
14. González-Gómez, Francisco, Jorge Guardiola, Óscar Martín Rodríguez, Miguel Ángel Montero Alonso (2012), ″Gender differences in e-learning satisfaction″, Computers and Education, *58*(1), 283–290.
15. Hew, Khe Foon (2016), ″Promoting engagement in online courses: What strategies can we learn from three highly rated MOOCS″, *British Journal of Educational Technology*, 47(2), 320–341.
16. Hodges, Chareles, Stephanie Moore, Barb Locker, Torrey Trust, Aaron Bond (2020), ″The difference between emergency remote teaching and online learning″, *Educause Review.* https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning
17. Huerta, Luis A., Maria-Fernanda Gonzalez, Chad d' Entremont (2006), ″Cyber and home school charter schools: Adopting policies to new forms of public schooling″, *Peabody Journal of Education*, 81(1), 103–139.
18. Joo, Young Jo, Kyu Yon Lim, Jiyeon Kim (2013), ″Locus of control, self-efficacy, and task value as predictors of learning outcome in an online university context″, *Computers and Education*, 62, 149–158.

19. Korlat, Selma, Marlene Kollmayer, Julia Holzer, Marko Lüftenegger, Elisabeth Rosa Pelikan, Barbara Schober, Christine Spiel (2021), ″Gender Differences in Digital Learning During COVID-19: Competence Beliefs, Intrinsic Value, Learning Engagement, and Perceived Teacher Support″, *Frontiers in Psychology*, 12(March), 1–12.
20. Levy, Yair (2007), ″Comparing dropouts and persistence in e-learning courses″, *Computers and Education*, 48(2), 185–204.
21. Li, Nai, Gill Kirkup (2007), ″Gender and cultural differences in Internet use: a study of China and the UK″, *Computers & Education*, 48, 301–317.
22. Liaw, Shu-Sheng (2008), ″Investigating students' perceived satisfaction, behavioral intention, and effectiveness of e-learning: A case study of the blackboard system″, *Computers and Education*, 51(2), 864–873.
23. Ong, Chorng-Shyong, Jung-Yu Lai (2006), ″Gender differences in perceptions and relationships among dominants of e-learning acceptance″, *Computers in Human Behavior*, *22*(5), 816–829.
24. Pace, Christi, Stacie Pettit, Kim Barker (2020), ″Best Practices in Middle Level Quaranteaching: Strategies, Tips and Resources Amidst COVID-19″, Becoming: *Journal of the Georgia Middle School Association*, 31(1), 1–13.
25. Pellas, Nikolao (2014), ″The influence of computer self-efficacy, metacognitive self-regulation and self-esteem on student engagement in online learning programs: Evidence from the virtual world of second life″, *Computers in Human Behavior*, 35, 157–170.
26. Ponto, Maria T. (1999), ″Relationship between students' locus of control and satisfaction″, *British Journal of Nursing*, 8(3), 176-181.
27. Prasetyo, Yogi Tri, Ralph Andre C. Roque, Thanatorn Chuenyindee, Michael Nayat Young, John Francis T. Diaz, Satria Fadil Persada, Bobby Ardiansyah Miraja, Anak Agung Ngurah Perwira Redi (2021), ″Determining Factors Affecting the Acceptance of Medical Education eLearning Platforms during the COVID-19 Pandemic in the Philippines: UTAUT2 Approach″, *Healthcare*, *9* (7), 780.
28. Saykılı, Abdullah, (2018), ″Distance education: Definitions, generations, key concepts and future directions″, *International Journal of Contemporary Educational Research*, 5(1), 2-17.
29. Shao, Chunling (2020), ″An empirical study on the identification of driving factors of satisfaction with online learning based on TAM″, In: *5th international conference on economics, management, law and education (EMLE 2019)*, Atlantis Press, 1067-1073.

30. Slijepčević, Senka, Slađana Zuković, Dušica Stojadinović (2022), ″Parental involvement in children's education during the corona virus pandemic″, *Innovations in teaching*, 35(2), 56-70.
31. Sun, Jerry Chih-Yua, Robert Rueda (2012), ″Situational interest, computer self-efficacy and self-regulation: Their impact on student engagement in distance education″, *British Journal of Educational Technology*, 43(2), 191–204.
32. Trivunović, Bojana, Maja Kosanović (2021), ″Technology acceptance factors in higher education teaching: TAM model″, In: Katić, Vladimir (ed.), *Proceedings XXVII Conference TRENDS OF DEVELOPMENT: "Online teaching at universities"*, University of Novi Sad – Faculty of Technical Sciences, Novi Sad, 119-121.
33. Tukiran, Martinus, Widodo Sunaryo, Dian Wulandari (2022), ″Optimising Education Processes During the COVID-19 Pandemic Using the Technology Acceptance Model″, *Frontiers in Education*, 7, 1-7.
34. Wolters, Christopher, (2003), ″Regulation of motivation: Evaluating an under-emphasised aspect of self-regulated learning″, *Educational Psychologist*, 38, 189–205.
35. Wu, Jen-Her, Robert D. Tennyson, Tzyh-Lih Hsia (2010), ″A Study of Student Satisfaction in a Blended E-Learning System Environment″, *Computers & Education*, 55(1), 155-164.
36. Wu, Zhaohui (2020), "How a top Chinese university is responding to coronavirus*",* Retrieved from: World Economic Forum. https://www.weforum.org/agenda/2020/03/coronavirus-china-the-challenges-of- online-learning-for-universities
37. Zuković, Slađana, Senka Slijepčević (2022), ″The functioning of schools in pandemic conditions from the perspective of pedagogues″, In: Beljanski, Mila, Marija Cvijetić Vukčević, Dejan Đorđić (eds.), *Education in primary school during the pandemic*, University of Novi Sad, Faculty of Education in Sombor, Sombor, 40-50.
38. Zuo, Mingzhang, Ma, Hu Yue Yunpeng, Heng Luo (2021), ″K-12 Students' Online Learning Experiences during COVID-19: Lessons from China″, *Frontiers of Education in China*, 16(1).

FAKTORI ZADOVOLJSTVA UČENIKA NASTAVOM NA DALJINU TOKOM PANDEMIJE KORONA VIRUSA

Sažetak:

Imajući u vidu specifičnosti vaspitno-obrazovnog procesa u onlajn prostoru, kao i faktore zadovoljstva ovakvim vidom nastave u kriznoj situaciji, u radu su prikazani rezultati istraživanja koje je imalo za cilj ispitivanje zadovoljstva učenika nastavom na daljinu u uslovima pandemije koronavirusa. Istraživanje je sprovedeno na prigodnom uzorku od 505 učenika drugog ciklusa osnovnoškolskog obrazovanja u Republici Srbiji, a za potrebe istraživanja korišćena je modifikovana verzija instrumenta Model prihvatanja tehnologije (Davis 1989). Faktorskom analizom izdvojene su dve subskale (Stavovi prema nastavi na daljinu i Motivacija i ponašanje) kod kojih je utvrđena kriterijumska validnost. Dobijeni rezultati na nivou skale u celini su pokazali da su ispitanici umereno pozitivno ocenili faktore zadovoljstva nastavom na daljinu, pri čemu su učenice i ispitanici koji žive u dvoroditeljskim porodicama na višem nivou procenili zadovoljstvo ovakvim vidom nastave. Analiza razlika u dobijenim odgovorima u odnosu na merene socio-demografske varijable je pokazala da se odgovori na subskali Stavovi prema nastavi na daljinu razlikuju s obzirom na red rođenja deteta u porodici, a na subskali Motivacija i ponašanje razlike su utvrđene u odnosu na pol, uspeh i porodičnu strukturu. Pored ograničenja istraživanja koja su istaknuta u radu, dobijeni rezultati generalno sugerišu da jačanje osećaja lične kontrole i samoregulacije predstavlja jedan od važnijih načina za poboljšanje zadovoljstva, motivacije i namere za učenje tokom nastave na daljinu.

Ključne reči: Pandemija koronavirusa; model prihvatanja tehnologije; nastava na daljinu; zadovoljstvo učenika.

Adrese autorica
Authors' address

Slađana Zuković
Dušica Stojadinović
Senka Slijepčević

University of Novi Sad
sladjana.zukovic@ff.uns.ac.rs
dusica.stojadinovic@ff.uns.ac.rs
senkaslijepcevic@ff.uns.ac.rs