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ATTITUDES AND IMPRESSIONS OF UPPER PRIMARY TEACHERS IN THE REPUBLIC OF CROATIA ABOUT ONLINE TEACHING DURING THE COVID-19 PANDEMIC – HOW DID WE DO IT?

Original scientific paper

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ABSTRACT

The transition to online teaching during the COVID-19 pandemic included almost all teachers and students. Digital (inadequate) skills and (in)competencies of both teachers and students have come to the fore. Accelerated adaptation, getting used to new forms of work, learning and teaching in these two years has introduced significant changes in the educational process and has shown the need to revise the educational system and the need for modernization and transformation. The study presents the results of a survey of a sample of 1,600 upper primary teachers in primary schools in the Republic of Croatia, which aimed to examine their attitudes and impressions regarding the implementation of online teaching during the pandemic COVID-19. The results of the research showed the following: The vast majority of respondents (94.1%) answered that the classic form of teaching is better than online teaching. Most of the respondents spent 2 to 4 hours in the preparation and evaluation of student materials.

Keywords: *teacher, teaching, digital technologies, digital competencies, online teaching*

INTRODUCTION

The COVID 19 pandemic has affected all spheres of human activity, including the educational system. For many students, teachers and parents, the transition to teaching that took place in a virtual space meant getting used to new situations and making "ad hoc" decisions. The classrooms "moved" to the virtual space and the classes were followed from home. For many, this was an extremely stressful situation, especially in the beginning, when it was necessary to organize uninterrupted work, adequate technological equipment and quality internet connection. For primary school students and especially parents who went to work, it was challenging to organize ways for their children to function independently at home, follow classes and perform necessary tasks and assignments, especially for those parents who are not digitally competent. However, the challenge was also for those teachers who were not interested in the implementation of new information and communication technologies in the educational process before the COVID-19 pandemic. Although the Ministry of Science and Education (MZO, 2020) provided guidelines for the organization of online classes and many instructions and recommendations (Instructions for evaluation and assessment during distance learning, recommendations on the organization of the student's working day, etc.), many students,

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teachers, headteachers and all persons who were directly and/or directly involved in the educational process literally faced the challenge of digital transformation, as the COVID-19 pandemic led to the questioning of several existing assumptions and habits. Among them, the role of teachers was questioned, as well as how teaching and learning are changing (Kucina Softic, Odak, Lasic Lazic, 2021, p. 141). One of the priority areas of every teacher should be lifelong learning and training. A research conducted by Kadum, Ruzic-Baf, Dumancic (2020) with higher education professors showed that they are aware that a lot of things need to be changed in teaching, but most of them still maintain the traditional way of working, "fleeing" from innovation and the use of information and communication technologies that contribute to the modernization of the teaching process. There are several reasons for this and some of the possible ones are: unknown effect of innovation changes, insufficient professional methodological training, while for some higher education teachers, one of the reasons for traditional methodological concepts are unsatisfactory material and technical conditions for more efficient higher education teaching, which makes the reform process even more difficult. Acquiring digital competencies and readiness for lifelong professional education and training should be one of the priorities of teachers to be able not only to accept the challenges of new digital technologies, but also to adequately use them.

DIGITAL COMPETENCIES AND DISTANCE LEARNING

The COVID pandemic contributed to the accelerated training of teachers and students, whether the institution organized education or whether they managed on their own.But what is the situation in EU countries in terms of digital competencies? According to DESI data (2021), the leading countries in the integration of digital technologies are Finland, Denmark and Sweden, while at the bottom of the scale are Bulgaria, Hungary and Romania. In 2019 (European Commission, 2020), a total of 56% of people in the EU had basic digital skills. A total of 80% of young people aged 16 to 24 and 33% of respondents aged 55 to 74 acquired basic and higher digital competences. As far as the student population is concerned, an interesting study was conducted by Shengen Visa (2020) and published in the annual Education and Training Monitor. In this study, more than 15% of the student population does not have sufficient digital skills and OECD data showed that upper primary teachers infrequently receive training on the use of information and communication technology (ICT) for teaching, so they also expressed the need for professional development in the use of ICT skills in their jobs. Specific teacher digital competences are listed within the competences as some of the core competences that teachers should have in approximately two thirds of European education systems (European Commission, 2020). Teachers should know how to integrate and effectively apply digital technologies in teaching and learning. The application of self-assessment tools to help teachers assess their own level of digital competence and thus define their own development needs is promoted in a total of 15 educational systems.

The Digital Education ActionPlan (2021-2027) seeks to:

- offer a long-term strategic vision for high-quality, inclusive and affordable European digital education
- address the challenges and opportunities of the COVID pandemic, during which technology in education and training has been used more than ever before
- strengthen EU-level cooperation in the field of digital education and emphasis
the importance of cross-sectoral cooperation in order to adapt education to the digital age
- create new opportunities, including better quality and offer of digital teaching technologies, support for the digitization of teaching methods and pedagogical methods and to provide the infrastructure needed for inclusive and functional distance learning.

Distance learning took place for almost two years, using various forms of learning that included the use of information and communication technology. Simovic and Ruzic-Baf (2013) state that electronic or virtual learning is a broader term that implies any form of education (and learning) with the help of information and communication technology (ICT) and (primarily network) IS and can be considered any educational (study) program that uses ICT and (primarily network) IS with the aim of realizing teaching / learning. The authors further believe that in recent years, electronic or virtual education includes a wide range of educational activities, with less consideration of infrastructure issues and much more ways of communication, cooperation, interactivity, mobility, quality of teaching content, service delivery, practice, etc. Distance learning includes all forms of teaching and learning where teachers/students are geographically separated. However, Katavic (2015) claims that online distance learning refers to a special online environment where teaching and learning takes place using computers/tablets as a medium for communication. Returning to school desks and returning to the "new normal"

involves the use of new digital technologies in the learning and teaching process. In most countries, distance learning has become part of standard education and is necessary in order to improve the quality of education using advanced information and communication technology (Katavic, Milojevic and Simunkovic, 2018) and the acquisition of digital skills and competencies. Online teaching has certainly left its mark not only on students but also on teachers and parents and all persons who were involved in the educational process, especially on students in the lower grades of primary school. Its advantages and disadvantages should be considered in the light of the students' and teachers' experiences on distance learning.

ADVANTAGES AND DISADVANTAGES OF DISTANCE LEARNING DURING THE COVID-19 PANDEMIC

Distance learning (Katic et al., 2021) has advantages and disadvantages. A study on a sample of 4,789 students aged 15 to 22 concluded that the disadvantages of distance learning include a lack of socialization, especially when it comes to inclusive activities such as practical classes, field trips, work in specialized classrooms and physical activity. The advantage of online teaching is that it is independent learning, which is its biggest advantage. Each user has the opportunity to choose where to study and how long the study will last. Teaching materials are always available and the user can always return and possibly skip the material and return to the same later, which actually contributes to the quality of the process and education (Zelic, 2016). However, students' opinions are divided. For example, Steimle et al (2022) conducted a survey among students at the Georgia Institute of Technology and found that a total of 47% of respondents would choose traditional teaching methods for lecture-based courses, and 60% of respondents would choose the same for laboratory teaching. Psychology students at the University of Australia (Kemp, Grieve, 2014) prefer live teaching over online teaching, although there was no significant difference in solving tests (exams) between the two teaching models In Delhi (Kamal & Illyan, 2021), teachers had on average positive experiences of virtual learning during a pandemic but stated that they encountered technical difficulties during online exams and assessments.Students (Zheng et al, 2021) of Dugoni School of Dentistry, University of the Pacific, 80% of 482 respondents, said they wanted to continue some form of online teaching after the pandemic and said one of the benefits of online teaching was greater flexibility it provides. The results of a survey (Digital promise, 2022) on a sample of 1498 respondents, parents and teachers showed that during the COVID-19 pandemic, a total of 43% of teachers taught exclusively online, while 39% of teachers used a hybrid form of teaching and 18% live classes. The majority of teachers (82%) said it was difficult for students to keep up with academic obligations during the pandemic, and two-thirds of teachers said their ability to fulfil individual learning needs of students deteriorated.

During the COVID-19 pandemic, most teachers held classes from their homes, and the time to prepare classes increased significantly compared to when classes were held live. Ziebel et al. (2020) in a survey of 1,200 Australian teachers found that almost the majority of students worked almost an extra day, and some worked more than 20 hours a week. Three-quarters of teachers surveyed expressed concern about distance learning because they felt it negatively affected students' emotional well-being. Teachers' attitudes (School Education Gateway, 2020) on online teaching and distance learning, on a sample of 4859 respondents, showed that 67% of respondents had their first experience of conducting online teaching during a pandemic. Among the most common difficulties (challenges) were access to technology (computers, software, stable Internet connection). A total of 43% of respondents said they felt increased workload and stress working from home.But the biggest challenge (43% of respondents) was to support students, maintain attention and motivation. A total of 17% of teachers believe that the school will be a little different and that online learning will become an integral part of teaching. During the COVID-19 pandemic in Croatian schools, classes were held according to three models: A model, B model and C model. Since the beginning of the Covid-19 pandemic, elementary school students have attended classes according to this model to a greater extent, except in situations where infection has occurred within the classroom (Ministry of Science and Education, 2020). It should be noted that the school could only be entered with a protective mask on the face and the classes were not allowed to "mix" during the breaks. The B model or mixed form of teaching implied that, depending on the epidemiological situation, part of the teaching took place at school and part at home, e.g. a week at school and a week online. (Ministry of Science and Education, 2020). The last option, model C, meant that during the pandemic, classes were conducted exclusively online.Various online learning platforms and many digital tools were

used during the pandemic. University of Bangladesh students (sample based on 438 respondents) most often used Zoom (79.70%), Google Meet (35.34%) and Google Classroom (43.61%) during the pandemic (Islam & Hossain, 2021).The following systems for conducting and organizing online classes (Carnet, 2020) were available in Croatian schools: *Loomen, MS Teams, Google Classroom, Yammer, etc., and systems for videoconferencing: Zoom, Adobe Connect, Big Blue Button, Google Meet* and others, as well as many digital tools designed for content creation (e-lab, 2020) such as *Book Creator, Kleki, Audacity, HP5, Geo Gebra, Puzzlemaker, Avogardo* and others. Given the really wide range of digital tools and systems for conducting online classes, one of the questions teachers asked themselves was how to help students learn at a a distance. Nelson et al. (2021) in a study of 1535 teachers in England concluded that one of the most effective ways for teachers to help studentslearn at a distance is to actively teach them and to apply similar pedagogical principles to those used during live teaching. What is the opinion of upper primary teachers in Croatian schools in terms of online teaching compared to traditional teaching, we have shown in the following study.

METHODOLOGY

Research questions

This research sought to examine the attitudes of upper primary teachers in primary schools regarding the teaching they conducted online during the COVID-19 pandemic. This research sought to examine the attitudes of subject teachers in primary schools regarding the teaching they conducted online during the COVID-19 pandemic. The following research tasks arose from the goal thus defined:- to examine whether they consider online teaching to be better than traditional teaching,
- to examine how much time teachers spend evaluating students and preparing materials,
- to examine whether they consider that they have at their disposal satisfactory teaching equipment,
- to examine whether there is a difference in the activity of students online and in the classroom,
- to examine which system they use to conduct online classes,
- to examine whether they feel that the quality of teaching differs from teacher to teacher.

Content analysis, participants

The research used a questionnaire designed specifically for the purposes of this research. It consisted of two independent variables and ten variables related to online teaching. Of these, one variable was based on multiple choice, one open-ended, three with offered answers and five variables based on the Likert-type assessment scale, where test participants opted for one of the offered answers. The questionnaire consisted of the following variables:

Independent variables:
V1 Gender,
V2 Years of work experience;

Dependent variables:
V3 The online way of teaching is better than the classic way of teaching
V4 How much time, on average, do they spend at the computer preparing materials or evaluating their students
V5 Satisfaction with online teaching
V6 The equipment they have to use for online teaching is satisfactory
V7 Student activity during online classes is better than in school classes.
V8 Coping in online teaching is greater than expected.
V9 Applications used to conduct online classes
V10 An additional application you are using, but we have not listed it
V11 Realized online teaching varies from teacher to teacher
V12 Desire to return to the classic way of working (in class, without a mask).

For the purposes of the research, a questionnaire was compiled on a Google form. It was divided into Facebook groups for upper primary teachers throughout the Republic of Croatia. Before posting in the Facebook group, we waited for the review and approval of the administrator. It should be emphasized that terms that have a gender meaning, regardless of whether they are used in the feminine or masculine gender, equally include the feminine and masculine genders. During the research, the code of ethics was fully respected: respondents were given written instructions on how to fill out the questionnaire, the possibility of giving up further answers, explained that the data will be used exclusively for scientific purposes and most importantly guaranteed anonymity. Data were processed using the IBM SPSS 24.0 Standard Campus Edition statisti-cal package (SPSS ID: 729357 20. 5. 2016). The research was conducted on a sample of 1,600 upper primary teachers in the Republic of Croatia. With regard to gender, 94.0% of research participants, or 1504 of them, are female, while 6.0%, or 96 of them, are male.

With regard to the length of service in the educational activity, we obtained the results shown in Table I. Most respondents (27.6%) have work experience of 5 to 12 years, while 3.8% have more than 33 years of work experience.

Table 1. Characteristics of the sample with regard to work experience in educational instutuition

	Years of work experience	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 5 years	341	21.3	21.3	21.3
	from 5 to 12	441	27.6	27.6	48.9
	more than 12, but less than 20	354	22.1	22.1	71.0
	more than 20, but less than 26	240	15.0	15.0	86.0
	more than 26, but less than 33	163	10.2	10.2	96.2
	more than 33	61	3.8	3.8	100.0
	Total	1600	100.0	100.0	

RESULTS

The COVID pandemic, which found most educators unprepared, "demanded" from them to first learn to use a particular application and then prepare materials adapted for online teaching. In the research conducted by Kadum, Ruzic-Baf and Farkas (2021), the obtained results showed how much primary school teachers in the Republic of Croatia spend on the preparation of didactic material and evaluation of student work.

On a sample of 329 respondents, 41.0% spent 4 to 6 hours preparing materials and evaluating student work; 36.5% of them spend less than 4 hours, while 8.8% of respondents spend the most time, more than 8 hours, on these jobs. Therefore, we were interested in the same data, but for upper primary teachers, i.e. how many hours they spend on average working on a computer preparing materials and evaluating student work.

In Table II, we present the obtained results; it can be seen that the largest number of research participants spend from 2 to 4 hours in the preparation and evaluation of student materials, while 16.1% spend more than 8 hours a day. 5.9% of respondents spend less than 2 hours.

Table 2. Time spent preparing didactic material and / or evaluating student's works

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 2 hours	95	5.9	5.9	5.9
	more than 2, but less than 4 hours	471	29.4	29.4	35.4
	more than 4, but less than 6 hours	464	29.0	29.0	64.4
	more than 6 hours, but less than 8 hours	312	19.5	19.5	83.9
	more than 8 hours	258	16.1	16.1	100.0
	Total	1600	100.0	100.0	

Software Testing Help (2021) conducted a survey to determine the top fifteen e-learning applications in 2020. The obtained results show that the best e-learning applications include Mindflash, SkyPrep, Knowmax, TalentLMS, Docebo, Moodle, Litmos, Ispring, Canvas, Edmodo, Blackboard, Joomla LMS, Brightspace, Absorb LMS, Schoology, eFront, Adobe Captivate Prime LMS. However, in our research we opted for the following e-learning systems: Microsoft Teams, Microsoft Yammer, Edmodo, Loomen, Zoom, Skype, e- mail. It should be emphasized that the research participants were given the possibility of multiple choices. The obtained results are shown in Graph 1, which shows that 72% of respondents use Microsoft Teams, and the least of them, only 3%, use Skype.

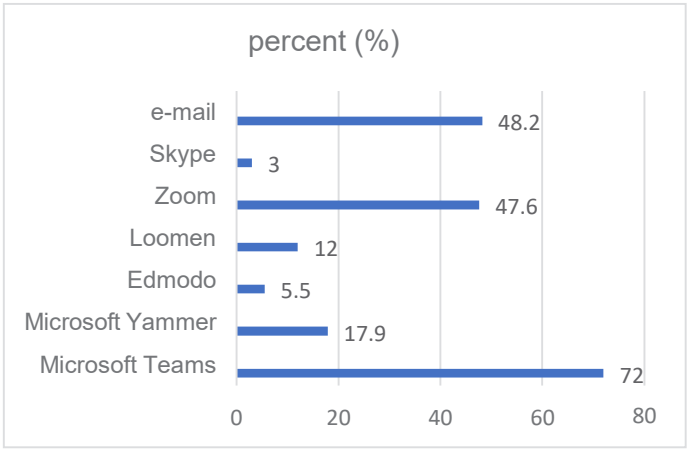

Figure 1: Applications used in online teaching

In addition to this question, we gave the respondents the opportunity to indicate if there is another application that they use to hold online classes that was not mentioned in the previous question. A total of 537 respondents answered that question, with some stating that they use more applications. Respondents answered that in addition to the offer, they also use applications shown in Graph 3. It can be seen that most respondents have chosen to use Google Classroom (209), and the least Edulastic, Testmoz, BigBlueButton, Merlin, Matific, Zoom, Book Widget, Loops, Whiteboard, Trello (1).

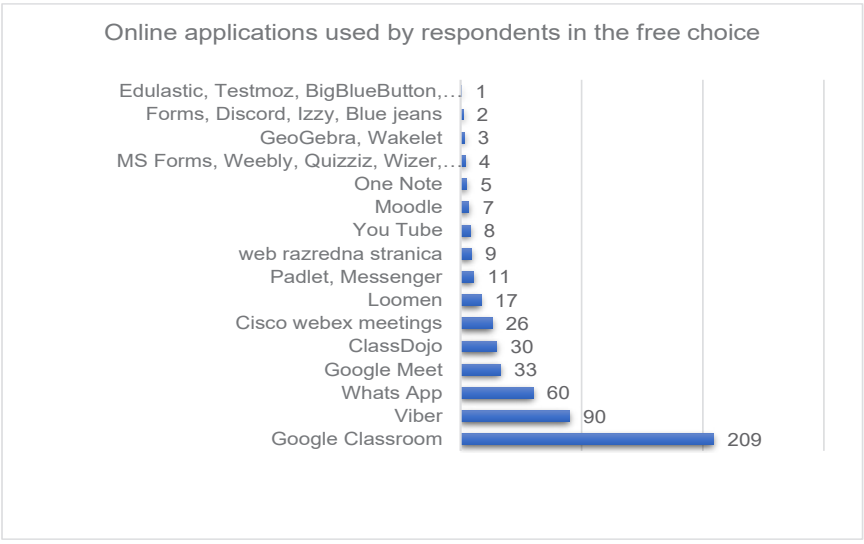

Figure 2: Online applications still used by respondents

We asked our respondents if they were satisfied with how they coped with teaching online and we got the values M = 3.63, SD = .813. Furthermore, according to the obtained results, they are aware of the fact that the realization of online teaching varies from teacher to teacher (M = 4.58, SD = .770). One of the problems of online teaching was the inactivity of students, which was confirmed by our respondents (M = 2.14, SD = .978).The data are shown in Table III.

Table 3. Descriptive statistics of statements

	N	Min.	Max.	Mean	Std. Deviation
... I am satisfied with how I coped with online teaching	1600	1	5	3.63	.813
... the equipment I have at my disposal for online teaching is satisfactory	1600	1	5	3.82	.971
... students are more active in online teaching than in class / school	1600	1	5	2.14	.978
... in online classes I did better than I expected	1600	1	5	3.99	.851
... the quality of online teaching varies from teacher to teacher	1600	1	5	4.58	.770
Valid N (listwise)	1600				

The next two statements shown in Table IV for which we sought an answer were whether they agreed that the online way of teaching was better than the classic way and whether they wanted to return to the classic way as soon as possible. For the first statement whether the online way of working is better than the classic way of working 94% of respondents think that the classic way of teaching is better, for 17% of respondents online teaching is better, while 4.9% of respondents opted for the option "it's the same to me". For the second statement whether they want to return to the classic way of working as soon as possible (in class, without a mask), we found that 91.2% of respondents agree with the statement. 0.3% or 4 respondents did not answer this statement.

Table 4. Values of descriptive statistics for variables the online way of teaching is better than the classic way and I want to return to the classic way as soon as possible (in class, without a mask)

Statements		*f*	%	M	SD
V3 The online way of teaching is better than the classic way.	yes	17	1.1	2.04	.241
	no	1505	94.0		
	it is the same to me	78	4.9		
	did not answer	0	0.0		
V12 I want to return to the classic way as soon as possible (in class, without a mask).	yes	1461	91.2	1.15	.501
	no	35	2.2		
	it is the same to me	100	6.3		
	did not answer	4	.3		

Furthermore, we were interested in the relationship between the variables (V3) *The online way of teaching is better than the classic way* and (V12) *I want to return to the classic way as soon as possible (in class, without a mask)*. It can be seen from Table V that the significance for both variables is p = .000 < .01. The correlation between V3 and V1 is r = .444, and given the range of coefficients, according to Evans (1996), the correlation is moderate.

Table 5. Correlation matrix for variables the online way of teaching is better than the classic way and I want to return to the classic mode as soon as possible (in class, without a mask)

Statements		**V3**	**V12**
V3 The online way of teaching is better than the classic way.	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	1600	
V12 I want to return to the classic way as soon as possible (in class, without a mask).	Pearson Correlation	.444**	1
	Sig. (2-tailed)	.000	
	N	1596	1596

**. Correlation is significant at the .01 level (2-tailed).

We were also interested in the relationship between the variables (V3) *the online way of teaching is better than the classic way* and (V5) *I am satisfied how I coped with online teaching* and (V8) *in online teaching, I did better than I expected.* It can be seen from Table VI that the significance for all three mentioned variables is p = .000 < .01. The correlation between V3 and V5 is r = .110, and given the range of coefficients, according to Evans (1996), the correlation is low; V3 and V8 are r = .090 connection is also low. The correlation between variables V5 and V8 is r = .433 and given the range of coefficients the correlation is moderate.

Table 6. Correlation matrix for variables the online way of teaching is better than the classic way

Statements		**V3**	**V5**	**V8**
V. The online way of teaching is better than the classic way.	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	1600		
V5 I am satisfied how I coped with online teaching.	Pearson Correlation	.110**	1	
	Sig. (2-tailed)	.000		
	N	1600	1600	
V8 In online teaching, I did better than I expected.	Pearson Correlation	.090**	.433**	1
	Sig. (2-tailed)	.000	.000	
	N	1600	1600	1600

**. Correlation is significant at the .01 level (2-tailed).

CONCLUSION

The attitudes of upper primary teachers in Croatia towards online teaching during the COVID pandemic have shown that they have faced many challenges. One of the challenges was the inactivity of students, with which more than half of the respondents (63.2%) agreed, while 6.7% of respondents stated they thought otherwise. This could be explained by the fact that the transition to online teaching took place in a very short time, literally "overnight", and some students and teachers were unprepared and/or perhaps insufficiently trained in terms of digital literacy for teaching in a virtual environment. Furthermore, students were not accustomed to this form of teaching and communication, which was confirmed in the research by Van der Graff et al (2021) stating that in addition to the unwillingness of teachers for digital education, there was a lack of appropriate pedagogical and digital skills and that the age of students and their ability to learn independently should be considered. Satisfaction with the realized online teaching was expressed by 58.4% of respondents, while 6.5% of respondents disagree or completely disagree with this statement. A survey conducted in Indonesia (Hermanto, 2020) on a sample of 71 teachers showed that more than half of the respondents (52.1%) did not have a problem with online teaching and 22.5% agree and 16.9% fully agrees with the statement that online learning should be implemented in a conventional way after the end of the COVID pandemic. The equipment available to teachers and students in primary schools in Croatia was satisfactory, with 66.8% of respondents agreeing, while a total of 9.1% were dissatisfied with the equipment. The quality of online teaching varies from teacher to teacher was the next thing we asked our respondents. 89.2% of them agree or completely agree with the statement, where as 2% of them disagree or completely disagree. 8.8% of them are undecided. 72.1% of respondents agree or completely agree with the statement "I did better in online classes than I expected", while 3.1% of respondents disagree or completely disagree. Researchers Karalar & Sidekli (2021) concluded in their research that teachers' attitudes towards online teaching in Turkey were negative and that distance learning provided limited teaching experience during the COVID-19 pandemic.When asked which way of teaching is better, online or classic, the majority of respondents(94.1%) answered that it is a classic way, while 4.9% of respondents said that it was the same for them, and 1.1% that it is online the way of teaching is better. The last statement offered to our respondents was whether they want to return to the classic way of working (in class, without a mask), and of our respondents a total of 91.3% want to return while 6.3% of respondents opted for the answer "It is the same to me". It should be noted that a total of 4 respondents or 0.3% did not answer this question, and 6.3% of respondents do not want to return to the "old" way of teaching, i.e. prefer online teaching. Wang et al. (2020) concluded a survey in which 77.9% of teachers in China out of 1450 respondents said they would like to continue using online learning platforms to help classroom teaching.

The obtained research results showed in the end that upper primary teachers prefer to hold live classes, i.e. in the classroom. Classic teaching after the pandemic will no longer be or is the same. The need for integration and implementation of digital technologies has become inevitable, which will transform the educational process in accordance with the times we live in and the needs of individuals, primarily students, who need adequate preparation for a safe and purposeful (co) life in the digital society. A Greek proverb says that history repeats itself. The former departure of students to school with chalk, sponge and small board can be replaced by going to school with smaller and smaller electronic devices, and maybe even going to school without anything. Heavy school bags full of books are becoming a thing of the past, and in the future only one "electronic book" will be carried, just as schoolchildren used to carry a chalk board to school. (Miksa, 2011). But what should definitely remain irreplaceable and what should be nurtured in students is the living word, face-to-face communication in real time and space and the warmth of togetherness, because technology should allow us greater automation to have more free time to spend in live words, socializing, etc.

Limitations

The research was done in order to determine the impressions and examine the attitudes of teachers about the implementation of online teaching during the pandemic. Implications for further research may relate to more detailed reasons why the classic way of teaching is better than online teaching, but the opposite should also be considered. It is necessary to consider how to motivate students for online teaching and why the quality of online teaching

differed from teacher to teacher, whether it was the level of digital competencies and skills, previous education for digital skills development and acquisition of necessary competencies, selection of digital tools, knowledge of a foreign language (if the tools were offered in a foreign language and not Croatian), whether the choice of digital tools was appropriate for the subject they teach, etc.

REFERENCES

CARNET (2020). Nastava na daljinu. Avaible at:https://www.carnet.hr/usluga/udaljenoucenje/ (Accessed:29.6.2021.)

Digital promise (2022). Learning in the 21st Century: How the American Public, Parents and Teachers View K-12 Teaching and Learning in the Pandemic. Avaible at: www.digitalpromise.org (Accessed: 29.6.2021.)

E-laboratorij (2020). Izrada digitalnog sadrzaja. Avaible at: https://elaboratorij.carnet.hr/category/izrada-digitalnog-sadrzaja/ (Accessed: 29.6.2021.)

European Commision (2020). Education and Training Monitor 2020. Avaible at: https://op.europa.eu/webpub/eac/education-and-training-monitor-2020/en/chapters/chapter1.html (Accessed: 29.6.2021.)

Europska komisija (2020). Akcijski plan za digitalno obrazovanje 2021.-2027. Avaible at:https://education.ec.europa.eu/hr/akcijski-plan-za-digitalno-obrazovanje-2021-2027(Accessed:29.6.2021.)

Evans, J. (1996). Straight forward statistics for the behaviorl sciences. Pacific Groe, CA:Brooks-Cole Publishig .

Hermanto, H. (2020). Teacher's Attitude towards Online Learning during Covid-19 Pandemic in Indonesia. Indonesian Journal of Development Studies.Vol 1(1). pp.1-7. Avaible at: https://iptek.its.ac.id/index.php/ijds/article/view/8208 (Accessed: 29.6.2021.)

Kadum, S., Ruzic-Baf, M., Dumancic, M. (2020). Contemporary educational technology and teaching media in higher education teaching during the covid-19 pandemic, ICERI2020 Proceedings, pp. 1303-1313.

Kadum, S.; Ruzic-Baf, M.; Farkas, A. (2021). Online teaching and evaluation in primary education. EDULEARN21 Proceedings / Gómez Chova, L. ; López Martínez, A. ; Candel Torres, I. (ur.). Spain: IATED Academy, str. 10500-10506

Kamal, T. and Illiyan, A. (2021). "School teacher's perception and challenges towards online teaching during COVID-19 pandemic in India: an econometric analysis", Asian Association of Open Universities Journal, Vol. 16 No. 3, pp. 311-325. Avaible at: https://doi.org/10.1108/AAOUJ-10-2021-0122 (Accessed: 29.6.2021.)

Karalar, H., Sidekli, S. (2021). Examining Primary School Teachers' Attitudes Towards Distance Education in the COVID-19 Period. European Journal of Educational Sciences, September 2021 edition Vol.8 (3). pp. 1-12. http://dx.doi.org/10.19044/ejes.v8no3a1

Katavic I., Milojevic D., Simunkovic M., (2015). Izazovi i perspektive online obrazovanja u Republici Hrvatskoj. Avaible at: file:///C:/Users/brozo/Downloads/Katavic_Milojevic_Simunkovic_E4E_Vol8_Nr1.pdf (Accessed:29.6.2021.)

Katic, S.; Ferraro, F.V.; Ambra, F.I.; Iavarone, M.L. (2021). Distance Learning during the COVID-19 Pandemic. A Comparison between European Countries. Educ. Sci. 2021, 11, 595. Avaible at:https://doi.org/10.3390/educsci11100595 (Accessed: 29.6.2021.)

Kemp, N., & Grieve, R. (2014). Face-to-face or face-to-screen? Undergraduates' opinions and test performance in classroom vs. online learning. Frontiers in psychology, 5, 1278. Avaible at: https://doi.org/10.3389/fpsyg.2014.01278)(Accessed: 29.6.2021.)

Kucina Softic, S., Odak, M., Lasic Lazic, J. (2021). Digitalna transformacija-Novi pristupi i izazovi u obrazovanju. Koprivnica: Sveuciliste Sjever, Centar za digitalno nakladnistvo.

Miksa M. (2011). Elektronicko ucenje u buducnosti. (Diplomski rad, Sveuciliste u Zagrebu, Zagreb). Avaible at: https://bib.irb.hr/datoteka/972856.elektroniko_uenje_u_budunosti.pdf (Accessed: 29.6.2021.)

MZO (2020). Smjernice osnovnim i srednjim školama vezano uz organizaciju nastave na daljinu uz pomoć informacijsko-komunikacijske tehnologije. školama Avaible at:https://mzo.gov.hr/vijesti/smjernice-osnovnim-i-srednjim-skolama-vezano-uz-organizaciju-nastave-na-daljinu-uz-pomoc-informacijsko-komunikacijske-tehnologije/3585 (Accessed: 29.6.2021.)

Ministarstvo znanosti i obrazovanja (2020). Modeli i preporuke za rad u uvjetima povezanima s COVID-19. Avaible at: https://mzo.gov.hr/UserDocsImages/dokumenti/Modeli%20i%20preporuke%20za%20provedbu%20nastave%20u%202020-2021%20(29.8.2020).pdf (Accessed: 29.6.2021.)

Nelson, J., Andrade, J., Donkin, A. (2021).The impact of Covid-19 on schools in England: experiences of the third period of partial school closures and plans for learning recovery: Graphs and commentary on questions posed to the NFER Teacher Voice Omnibus Survey panel, March 2021. Slough: NFER

Saha, S. M., Pranty, S. A., Rana, M. J., Islam, M. J., & Hossain, M. E. (2021). Teaching during a pandemic: do university teachers prefer online teaching?. Heliyon, 8(1), e08663.Avaible at: https://doi.org/10.1016/j.heliyon.2021.e08663 (Accessed: 29.6.2021.)

School Education Gateway (2020). Survey on online and distance learning – Results. Avaible at: https://www.schooleducationgateway.eu/en/pub/viewpoints/surveys/survey-on-online-teaching.htm (Accessed: 29.6.2021.)

Shengen Visa (2020). Report: Over 15% of Youngsters in EU Demonstrate Insufficient Digital Skills. Avaible at: https://www.schengenvisainfo.com/news/report-over-15-of-youngsters-in-eu-demonstrate-insufficient-digital-skills/ (Accessed: 29.6.2021.)

Software Testing Help (2021).15 Best Learning Management Systems (LMS of the Year 2021). Avaible at: https://www.softwaretestinghelp.com/learning-management-system/ (Accessed: 29.6.2021.)

Steimle, L. N., Sun, Y., Johnson, L., Besedes, T., Mokhtarian, P., & Nazzal, D. (2022). Students' preferences for returning to colleges and universities during the COVID-19 pandemic: A discrete choice experiment. Socio-economic planning sciences, 101266. Advance online publication. Avaible at: https://doi.org/10.1016/j.seps.2022.101266) (Accessed: 29.6.2021.)

Simovic, V., Ruzic-Baf, M. (2013). Suvremeni informacijski sustavi. Pula: Sveuciliste Jurja Dobrile.

Van der Graaf, L., Dunajeva, J., Siarova, H., Bankauskaite, R. (2021). Research for CULT Committee – Education and Youth in Post-COVID-19 Europe – Crisis Effects and Policy Recommendations, European Parliament, Policy Department for Structural and Cohesion Policies, Brussels

Zheng, M., Bender, D. & Lyon, C. (2021). Online learning during COVID-19 produced equivalent or better student course performance as compared with pre-pandemic: empirical evidence from a school-wide comparative study. BMC Med Educ 21, 495 Avaible at: https://doi.org/10.1186/s12909-021-02909-z (Accessed: 29.6.2021.)

Ziebell, N., Acquaro, D., Seah, W. T. & Pearn, C. (2020). Australian Education Survey: Examining the impact of COVID-19 Report Summary. Avaible at: https://findanexpert.unimelb.edu.au/scholarlywork/1456468-australian-education-survey--examining-the-impact-of-covid-19-report-summary education.unimelb.edu.au (Accessed: 29.6.2021.)

Wang, P., Chen, T., Liu, J., & Luo, H. (2020). K-12 Teachers'Attitude Towards Online Learning Platfoms During COVID-19 Epidemic in China. 19-23. 10.1109/EITT50754.2020.00010.