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Students Viewed on Digital Platforms for Online Learning During Covid-19 Pandemic

Amiruddin Muthi*, Sugiarto, Sarkadi

Education Management, Universitas Negeri Jakarta *Corresponding Author. Email: pscpd.amiruddin@gmail.com

Abstract: The study aims to obtain the digital platforms students use for online learning, perceptions, and problems using digital platforms at Madrasah Tsanawiyah during the Covid-19 pandemic. This research used qualitative research through a case study. The participants in this study were 100 students at MTs Miftahul Huda who were taken randomly from grade one to grade three. Documents, observations, and a questionnaire were used to collect data. Data analysis entailed gathering information, reducing it, presenting it, and drawing conclusions. The findings showed that students preferred offline learning to online learning. At the same time, the preferred online applications are zoom and WA. The obstacles faced were the internet network, the ability to provide internet quota, and psychological challenges related to being active in class. So, various digital platforms only sometimes provide comfort and suit the needs of students in online classes. These findings provide an understanding from the student's perspective that digital platforms must be adapted to the learning environment at home, family conditions, and the readiness of the teacher or students themselves.

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Introduction

The spread of the Covid-19 virus has caused many changes in human life. All outdoor activities have been restricted, including face-to-face learning activities that must be carried out online. Learning activities are carried out using various digital applications as a communication medium during learning activities (Rachmat, 2020; Lai & Bower, 2019; Domingo & Garganté, 2016). The teacher explains the material via text or video call, which the students understand. After this, the teacher gives practice questions or exams and sends the results via email, Google classroom, or other supporting facilities. However, the application of an online learning system cannot work like face-to-face learning activities. It is essential to adequately prepare and support teachers and students in online teaching at institutional and national levels (Markovi, Pavlovi, & Mamutovi, 2021; Lebedeva, 2020).

The results of observations at MTs Miftahul Huda Bekasi in preliminary research and interviews with the principal and three teachers found that they still needed help with various problems, such as learning technology difficulties. Hence, they gave assignments without feedback or interaction between teachers and students. Unfinished learning material delivered by the teacher then changed to other material. It is a complaint for students because the assignments given by the teacher become more and more. In addition, the use of digital platforms could be more diverse. While other problems found are 1) limited facilities and infrastructure, especially technological facilities; 2) the limited skills possessed by teachers and students in using technology. Online learning activities require technological readiness and devices from the school, teachers, and students. So, schools must be prepared for the

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current digital transformation process (Deja, Rak, & Bell, 2021; Christensen & Knezek, 2017; Matukhin & Zhitkova, 2015).

Digital platforms can serve as both online meeting places for classes and crossplatform instant messaging applications for current class interactions and discussions (Amin & Paiman, 2022). Even during the Covid-19 pandemic, digital media for parent-teacher communication has increased. However, many parents and teachers still need to be convinced to use these media to enhance two-way pedagogical communication between parents and teachers (Bordalba & Bochaca, 2019). Another study concludes that education stakeholders should pay attention to three different dimensions of how technology is integrated into schools: the social use of digital technology, the design decisions that are made about these products, and the material resources that help operate them (Garcia & Nichols, 2021). The technological revolution that has changed from analog to digital creates new challenges and opportunities, primarily when referring to a communication perspective, such as the largest online learning platform in Indonesia, Ruangguru. Ruangguru's online learning communication pattern uses the theory of social presence in the dimensions of social context, online communication, and interactivity. However, in the online communication dimension, Indonesia still needs to be constrained by technical problems in terms of technological infrastructure and the readiness of teachers and students (Rahmawati & Sujono, 2021).

Therefore, from the findings of problems at MTs Miftahul Huda and the results of previous research studies, digital platforms' existence is fascinating, especially in implementing online learning during the Covid-19 pandemic. Moreover, not all junior high schools in Indonesia are familiar with using digital platforms. As in MTs Miftahul Huda, students need cell phones and limited quotas to support learning. Meanwhile, the current conditions urged learners to use smartphones to access digital applications as learning media. Therefore, the fundamental reason that it is a different concept from previous research is an analysis of the use of digital platforms to evaluate the results of implementing online education at MTs Miftahul Huda.

Thus, this study aims to obtain the types of digital platforms students use for online learning, perceptions, and problems using digital platforms at Madrasah Tsanawiyah during the Covid-19 pandemic. The results of this study are expected to provide input or recommendations on various problems in implementing education using digital platforms and their use for face-to-face learning activities or blended learning.

Research Method

This study used qualitative research with a case study type (Creswell & Creswell, 2018). A case study is a research approach to generate an in-depth and diverse understanding of complex issues in real-life contexts. It is a well-established research design used widely across various disciplines, particularly the social sciences (Crowe et al., 2011). This study explores the phenomenon of using digital platforms, perceptions, and problems students faced during online learning. The research was conducted over two semesters in the 202-2022 school year. The participants in this study were 100 students at MTs Miftahul Huda who were taken randomly from grade one to grade three.

Data collection techniques consisted of 1) Observations were made to observe the online learning process. The researcher became an observer in the online class nine teachers from grade 1 conducted to grade 3. Every activity that occurred in the online class was outlined in the researcher's notes. 2) The documents were taken from the teacher's teaching

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and learning reports for 2 semesters. 3) The questionnaire was addressed to students. This interview uses closed questions by presenting answer choices.

The questionnaire that was distributed to students consisted of three parts, namely 1) types of digital platforms consisting of 10 questions, 2) students' perceptions of the use of digital platforms in online learning consisting of 10 questions, and 3) problems faced by students related to the use of digital platforms consisting of 10 questions. The questionnaire was validated beforehand and given to 30 students at one of the Madrasah Tsanawiyah in Bekasi, different from the research location. The validation results show an average of 0.576 > 0.5 and a reliability of 0.687. It means it is reliable to be used as an instrument of this study. The questionnaire used a scale rating that put the chosen answer as yes or no. The data are presented as average values and percentages, then narrated according to additional data from observations and documents. The following is the component of the questionnaire for the analysis of students viewed on the digital platforms for online learning in Madrasah Tsanawiyah:

Table 1. The Questionnaire Components about Students Viewed on Digital Platform

No	Components		Indicators	Total
1	Types of digital	1.		10
	platforms		a. Zoom cloud meeting	
			b. Microsoft Team	
			c. Skype and WA video	
		2.	8	
			a. Email	
			b. WhatsApp	
			c. Telegram	
		3.	e e e e e e e e e e e e e e e e e e e	
			a. Google Classroom	
			b. Learning Management System	
			c. Learning websites from the government	
			d. Edmodo	
2	Students'	1.	I enjoy learning using digital platforms implemented by schools	10
	perception of		outside the classroom	
	digital Platforms	2.	I am more motivated to learn using digital platforms implemented by	
			schools outside the classroom	
		3.	The digital platform used allows me to understand the material being	
			taught	
		4.	I am often on time submitting assignments through digital platforms	
		5.	Parents always support the online learning environment	
		6.	The use of digital platforms has increased my self-learning	
		7.	Digital platforms still provide a sense of fun learning like face-to-face	
		_	learning	
		8.	Communication and interaction learning can be done	
		9.	I am happy and comfortable using the digital platform implemented by	
			the school	
		10.	Online learning situations using digital platforms can still have fun	
_	D 11 0 1		group discussions	4.0
3	Problems faced	1.	\mathcal{E}	10
	in using a digital	2.	I'm having trouble setting up a quota to study online	
	platform	3.	I can't understand the teacher's explanation, whether it's done via video	
			conference or messages in the group	
		4.	I do not have sufficient technological devices to study online	
		5.	I cannot operate technology applications	
		6.	While studying online, I experienced learning boredom	
		7.	Teachers always build interactive two-way communication	

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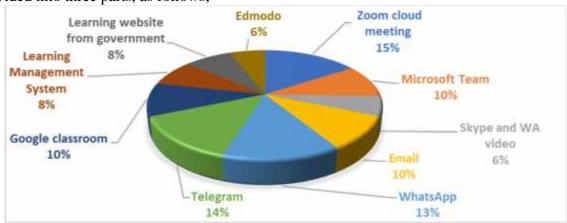
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- I prefer studying offline to online
- Using digital platforms such as learning websites is more difficult because I cannot ask the teacher directly
- 10. I find it difficult to have group discussions with colleagues when studying online

The data analysis process includes data collection, data reduction, data presentation and conclusion (Miles, Huberman, & Saldaña, 2014).

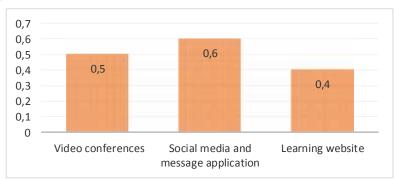
Results and Discussion

The result of data analysis is taken from the questionnaire presented using graphs. It is divided into three parts, as follows;



Graph 1. The Average Score of Digital Platforms for Online Learning

Graph 1 shows students' views on using digital platforms that are more suitable for their needs. In using video conferencing, students prefer to use zoom cloud meetings. At the same time, with the use of messaging applications such as social media, students prefer WhatsApp and telegram because it is easier and faster, and the use of WA or telegram is familiar to students. In learning websites, students prefer to use LMS or learning websites provided by the government. However, when viewed, the average score provided is relatively low. Online learning tends to take advantage of applications or platforms (Adnan, 2020) such as Zoom, followed by WhatsApp and Google Meet with the material described in several types of online presence.



Graph 2. The Types of Digital Platforms for Online Learning

As can be seen in graph 2, students prefer to use digital audiovisual platforms such as using video conferencing compared to website learning. While the digital application used to send messages is social media. While the students' perception and problem on a digital platform for online learning is presented using the average score as follow:

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Table 2. The Result Scale of Students' Perception of Digital Platforms

Tuble 2. The Result Scale of Stadents Terception of Digital Tautorins					
	Questions for Students' Perception of Digital Platform	Yes (%)	No (%)	SD	
1)	I enjoy learning using digital platforms implemented by schools outside the classroom	60%	40%	14,2	
2)	I am more motivated to learn using digital platforms implemented by schools outside the classroom	35%	65%	21,2	
3)	The digital platform used allows me to understand the material being taught	50%	50%	0	
4)	I am often on time submitting assignments through digital platforms	60%	40%	14,2	
5)	Parents always support the online learning environment	70%	30%	28,3	
6)	The use of digital platforms has increased my self-learning	40%	60%	14,2	
7)	Digital platforms still provide a sense of fun learning like face-to-face learning	50%	50%	0	
8)	Communication and interaction learning can be done	60%	40%	14,2	
9)	I am happy and comfortable using the digital platform implemented by the school	60%	40%	14,2	
10)	Online learning situations using digital platforms can still have fun group discussions	50%	50%	0	
	Average Score	53,5	46,5	12	

Table 2 explains that students' views of digital platforms still need to be higher because the average percentage obtained is 53.5. The presentation of the data shows that the digital platform used for learning has not been able to encourage learning motivation, the level of understanding of the material still needs to be higher, and students prefer face-to-face learning rather than online. Students also need to be more able to carry out group discussions in completing assignments from the teacher.

Table 2. The Result Scale of Problem Faced Using Digital Platforms in Online Learning

	Questions for Students' Perception of Digital Platform	Yes	No (%)	SD
		(%)		
1)	Internet networks are often an obstacle during online learning activities	30%	70%	28,3
2)	I'm having trouble setting up a quota to study online			
3)	I can't understand the teacher's explanation, whether it's done via video	25%	75%	35,35
	conference or messages in the group	50%	50%	0
4)	I do not have sufficient technological devices to study online			
5)	I cannot operate technology applications	50%	50%	0
6)	While studying online, I experienced learning boredom	60%	40%	14,2
7)	Teachers always build interactive two-way communication	40%	60%	14,2
8)	I prefer studying offline to online	50%	50%	0
9)	Using digital platforms such as learning websites is more difficult because	80%	20%	42,42
	I cannot ask the teacher directly	70%	30%	28,3
10)	I find it difficult to have group discussions with colleagues when studying			
	online	60%	40%	14,2
	Average Score	51,5	48,5	17,67

Table 3 shows that internet and quota requirements are the most common issues encountered when using digital platforms for online learning. In addition, teacher explanations, available technological devices that need to be improved, students who are frequently bored, and interactive communication that does not work well become the common issue. The data also shows that students prefer learning in class rather than online using digital platforms because they often need help asking teachers if they do video conferencing.

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Thus, these findings provide an understanding from a student's perspective that digital platforms must be adapted to the learning environment at home, family conditions, and the readiness of the teacher or students themselves. Distance learning impacts changes in individual learning readiness and preparation of institutional facilities (Sutiah et al., 2020; Mishra et al., 2020). That is because online learning requires online learning platform resources that are appropriate to the ability level of students and educational institutions (Arulogun, Akande, Akindele, & Badmus, 2020). So, online learning activities are more efficient with the use of familiar ICT by students (Bidarian et al., 2011; Holmgren, 2012; Shen et al., 2017). IT is becoming a significant framework for distance or online learning (Parra et al., 2021; Sailer et al., 2021). So, online learning activities are more efficient with the use of familiar ICT by students (Bidarian et al., 2011; Holmgren, 2012; Shen et al., 2017). IT is becoming a powerful framework for distance or online learning (Parra et al., 2021; Sailer et al., 2021).

Even other studies have found that Zoom is more recommended than Skype. Observations show that Skype often disconnects in the middle of the learning process. Other findings demonstrate Zoom's feasibility as a tool for qualitative data collection due to its relative ease of use, cost-effectiveness, data management features and security options (Archibald, Ambagtsheer, Casey, & Lawless, 2019; Erna, Asriani, Genisa, Muslaini, & Suhartini, 2022). Because one of the most important factors in online learning is the internet (Cuaca Dharma, Asmarani, & Dewi, 2017). So, the use of digital platforms for online classes requires a balance between quota facilities, internet networks, various other learning media, and learning activities that suit student needs (Komsiyah, 2021). Teachers and students can more easily interact in sync in the learning process by implementing the zoom meeting application in learning during this pandemic (Gunawan, Kristiawan, Risdianto, & Monicha, 2021).

The data findings conclude that digital platforms have not provided students with learning convenience, mainly when the conditions for using digital platforms are sudden. Students in junior high school still need to become familiar with various uses of technology applications. The teacher's data analysis of teaching report documents confirmed this conclusion. Meanwhile, from the results of online class observations, student activities tend to be passive. It can be seen when the teacher conducts questions and answers on zoom; students tend to be silent and not interactive. In addition, communication in the WA group is not interactive because students tend only to receive messages. There is no interactive question-and-answer process either with fellow students or the teacher. Students also tend to do other activities that are not related to learning, such as eating, drinking, daydreaming, or other activities, so their concentration is disturbed, and this has an impact on students' understanding of the material explained by the teacher (Firman, Sari, & Firdaus, 2021). So, teachers must understand students' environmental conditions at home, parental support, technology devices owned, psychological and physical problems that can occur in students, and appropriate teaching strategies. Furthermore, three different dimensions of how technology is integrated into schools should be of concern to all actors or implementers of the educational process, namely the social use of digital technology, design decisions made about these products, and the material resources that help them operate (Garcia & Nichols, 2021).

Conclusion

The data findings showed that various digital platforms did not necessarily provide convenience and were suitable for the needs of students in online classes. The use of digital

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platforms for online classes must consider the background conditions of the student's living environment, level of saturation and learning motivation, parental support, ability to provide technological devices, and availability of quotas. The readiness to use digital platforms for online learning must pay attention to students' perspectives because they are the main actors in online classes. It is, of course, to avoid the saturation of learning and the communication process between students and teachers. The findings showed that students preferred offline learning to online learning. At the same time, the preferred online applications are zoom and WA. The obstacles faced were the internet network, the ability to provide internet quota, and psychological challenges related to being active in class.

Recommendation

The results of this study recommend that educational institutions at the junior high school level utilize digital platforms that are appropriate to the level of abilities and conditions of students' families. Teachers also consider students' physical and psychological conditions when determining online class teaching strategies and digital platforms. However, these findings also serve as input for teachers that the student's background and the physical and psychological conditions of each student are different, so the teacher must still pay attention to this as the key to classroom management.

References

- Adnan, M. (2020). Online learning amid the COVID-19 pandemic: Students perspectives. *Journal of Pedagogical Sociology and Psychology*, 1(2), 45–51. https://doi.org/10.33902/JPSP.2020261309
- Amin, M. M., & Paiman, N. (2022). University English Language Teachers' Use of Digital Platforms for Online Teaching. *International Journal of Emerging Technologies in Learning (IJET)*, 17(20), 134–148. https://doi.org/10.3991/IJET.V17I20.31421
- Archibald, M. M., Ambagtsheer, R. C., Casey, M. G., & Lawless, M. (2019). Using Zoom Videoconferencing for Qualitative Data Collection: Perceptions and Experiences of Researchers and Participants. *International Journal of Qualitative Methods*, 18. https://doi.org/10.1177/1609406919874596
- Arulogun, O. T., Akande, O. N., Akindele, A. T., & Badmus, T. A. (2020). Survey dataset on open and distance learning students' intention to use social media and emerging technologies for online facilitation. *Data in Brief*, *31*, 105929. https://doi.org/10.1016/j.dib.2020.105929
- Bidarian, S., Bidarian, S., & Davoudi, A. M. (2011). A model for application of ICT in the process of teaching and learning. *Procedia Social and Behavioral Sciences*, 29, 1032–1041. Elsevier. https://doi.org/10.1016/j.sbspro.2011.11.336
- Bordalba, M. M., & Bochaca, J. G. (2019). Digital media for family-school communication? Parents' and teachers' beliefs. *Computers and Education*, 132, 44–62. https://doi.org/10.1016/j.compedu.2019.01.006
- Christensen, R., & Knezek, G. (2017). Readiness for integrating mobile learning in the classroom: Challenges, preferences and possibilities. *Computers in Human Behavior*, 76, 112–121. https://doi.org/10.1016/J.CHB.2017.07.014
- Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, quantitative, and mixed methods approaches fifth edition. New York: SAGE Publications Inc.

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Jurnal Penelitian dan Pengembangan Pendidikan https://e-journal.undikma.ac.id/index.php/pedagogy/index

https://e-journal.undikma.ac.id/index.php/pedagogy/index Email: paedagogy@undikma.ac.id

- Crowe, S., Cresswell, K., Robertson, A., Huby, G., Avery, A., & Sheikh, A. (2011). The case study approach. *BMC Medical Research Methodology*, 11, 100. https://doi.org/10.1186/1471-2288-11-100
- Cuaca Dharma, H. R., Asmarani, D., & Dewi, U. P. (2017). Basic Japanese Grammar and Conversation e-learning through Skype and Zoom Online Application. *Procedia Computer Science*, *116*, 267–273. https://doi.org/10.1016/J.PROCS.2017.10.055
- Deja, M., Rak, D., & Bell, B. (2021). Digital transformation readiness: perspectives on academia and library outcomes in information literacy. *Journal of Academic Librarianship*, 47(5). https://doi.org/10.1016/J.ACALIB.2021.102403
- Domingo, M. G., & Garganté, A. B. (2016). Exploring the use of educational technology in primary education: Teachers' perception of mobile technology learning impacts and applications' use in the classroom. *Computers in Human Behavior*, *56*, 21–28. https://doi.org/10.1016/J.CHB.2015.11.023
- Erna, N., Asriani, R., Genisa, A., Muslaini, F., & Suhartini, T. (2022). The Effectiveness of Media Zoom Meetings as Online Learning during the Covid-19 Pandemic. *ELT-Lectura*, 9(1), 48–55. https://doi.org/10.31849/ELT-LECTURA.V9I1.9108
- Firman, F., Sari, A. P., & Firdaus, F. (2021). Aktivitas Mahasiswa dalam Pembelajaran Daring Berbasis Konferensi Video: Refleksi Pembelajaran Menggunakan Zoom dan Google Meet. *Indonesian Journal of Educational Science (IJES)*, *3*(2), 130–137. https://doi.org/10.31605/IJES.V3I2.969
- Garcia, A., & Nichols, T. P. (2021). Digital platforms aren't mere tools —they're complex environments. *Phi Delta Kappan*, 102(6), 14–19. https://doi.org/10.1177/0031721721998148
- Gunawan, G., Kristiawan, M., Risdianto, E., & Monicha, R. E. (2021). Application of the Zoom Meeting Application in Online Learning During the Pandemic. *Education Quarterly Reviews*, 4(2). https://doi.org/10.31014/AIOR.1993.04.02.193
- Holmgren, R. (2012). Preparations for Practical Exercises in Vocational Education: Can ICT-based Distance Instruction be an Alternative to Face-to-face Instruction? An Empirical Contribution. *Procedia Social and Behavioral Sciences*, 46, 1152–1161. https://doi.org/10.1016/j.sbspro.2012.05.266
- Komsiyah, I. (2021). The Challenge of Zoom Cloud Meeting in Online Learning Process. *AL-ISHLAH: Jurnal Pendidikan*, 13(2), 829–835. https://doi.org/10.35445/ALISHLAH.V13I2.820
- Lai, J. W. M., & Bower, M. (2019). How is the use of technology in education evaluated? A systematic review. *Computers & Education*, 133, 27–42. https://doi.org/10.1016/J.COMPEDU.2019.01.010
- Lebedeva, M. (2020). Teaching Language in the Digital Era: Readiness and Expectations of Future Teachers. *ARPHA Proceedings*, *3*, 1405. https://doi.org/10.3897/AP.2.E1405
- Markovi, M., Pavlovi, D., & Mamutovi, A. (2021). Students' experiences and acceptance of emergency online learning due to COVID-19. *Australasian Journal of Educational Technology*, *37*(5), 1–16. https://doi.org/10.14742/AJET.7138
- Matukhin, D., & Zhitkova, E. (2015). Implementing Blended Learning Technology in Higher Professional Education. *Procedia Social and Behavioral Sciences*, 206, 183–188. https://doi.org/10.1016/j.sbspro.2015.10.051
- Miles, M., Huberman, A., & Saldaña, J. (2014). Sampling: Bounding the collection of data. In *Qualitative Data Analysis: A methods Sourcebook*. SAGE.

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- Mishra, L., Gupta, T., & Shree, A. (2020). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *International Journal of Educational Research Open*, 1, 100012. https://doi.org/10.1016/J.IJEDRO.2020.100012
- Parra, C. M., Gupta, M., & Mikalef, P. (2021). Information and communication technologies (ICT)-enabled severe moral communities and how the (Covid19) pandemic might bring new ones. *International Journal of Information Management*, *57*, 102271. https://doi.org/10.1016/j.ijinfomgt.2020.102271
- Rachmat, N. (2020). Analysis Of Effectiveness Of Online Learning Pandemic Covid-19 In Prosthetic Orthotic Major In Polkesta. *Interest: Jurnal Ilmu Kesehatan*, 9(2), 123–133. https://doi.org/10.37341/INTEREST.V9I2.198
- Rahmawati, A., & Sujono, F. K. (2021). Digital Communication through Online Learning in Indonesia: Challenges and Opportunities. *Jurnal ASPIKOM*, 6(1), 61–76. https://doi.org/10.24329/ASPIKOM.V6I1.815
- Sailer, M., Murböck, J., & Fischer, F. (2021). Digital learning in schools: What does it take beyond digital technology? *Teaching and Teacher Education*, *103*, 103346. https://doi.org/10.1016/j.tate.2021.103346
- Shen, C. W., Kuo, C. J., & Ly, P. T. M. (2017). Analysis of social media influencers and trends on online and mobile learning. *International Review of Research in Open and Distance Learning*, 18(1), 1–224. https://doi.org/10.19173/irrodl.v18i1.2640
- Sutiah, S., Slamet, S., Shafqat, A., & Supriyono, S. (2020). Implementation of distance learning during the covid-19 pandemic in faculty of education and teacher training. *Cypriot Journal of Educational Sciences*, *15*(5), 1204–1214. https://doi.org/10.18844/cjes.v15i5.5151