Original Article

The Use of Social Media Platforms WhatsApp and Telegram as Educational Tools During COVID-19 in Cameroon

Nforgwei Malvina Anyinyong¹, Ümmü Altan Bayraktar²

^{1,2} Faculty of Communication, Girne American University, Girne - North Cyprus Mersin-10 Turkey.

Received: 28 March 2022 Revised: 16 May 2022 Accepted: 23 May 2022 Published: 24 June 2022

Abstract - The advent of the Covid-19 pandemic led to Cameroon's educational sector revolution. This paper investigates the use of social media platforms WhatsApp and Telegram as educational tools in the Department of English Modern Letters of the Faculty of Arts, Letters and Social Sciences of the University of Yaounde 1, Cameroon, in the face of the Covid-19 pandemic. The paper aims to evaluate the use of these social media platforms and see how they have been exploited during the pandemic. Using the survey method to collect data, collected responses from 40 undergraduate students, level threes, using the research instrument google forms. The analysis revealed that the lecturers effectively use WhatsApp and Telegram as educational tools. Students are happy with using these two platforms even though they would have preferred others like zoom meetings, skype, and google classroom. However, the results contradict the results as the students say that the classes or lectures are not very effective. It shows that even though they accept the use of these media, their preferred choices would have been other tools that allow for more interaction between teachers and students. Their choice of WhatsApp and Telegram would be down to the fact that these platforms are accessible and do not consume a lot of internet data. However, the study has shown that these two media are the go-to media for online learning during the Covid-19 pandemic.

Keywords - Media and education, Covid-19, social media, Telegram, WhatsApp.

1. Introduction

Teaching, especially in the education sector, must be understood as an exchange between instructors and students, improving the learning experience and creating a positive setup. Learning, knowledge acquisition, or teaching is simply the transfer of knowledge from one person to another or group to another. Effective teaching and learning is a process of exchanging ideas, thoughts, knowledge, and information in such a way as to fulfill the purpose or intent in the best possible way. In other terms, it is nothing more than the teacher or lecturer's expression of views in a way that the recipient or student understands best.

In recent years, teaching and learning have witnessed a major shift in method and procedure, not less influenced by the Covid-19 pandemic. With the advent of Covid-19, the teaching and learning of language skills in the Department of English Modern Letters of the University of Yaounde 1 have shifted from traditional to blended or hybrid classrooms. Language skills are taught in the classroom and through elearning platforms. Media and education are intrinsically linked these days. Since the industrial revolution, one can claim that media use in education has not seen a break. It has affected the education field and knowledge transmission and acquisition in several ways.

The choice of selected university was since it is one of the most outstanding universities in the country with a great academic portfolio and lecturers offering courses in both English and French as compared to other existing universities. Also, being located in an urban area with an effective internet connection and a lack of the Anglophone crisis in Yaounde is suitable as a conducive study ground compared to universities in other English-speaking regions. The department of English modern letters was the focus because of its existing courses, which are completely in English, unlike the other departments in the university, which constitute both English and French courses. The department, however, has given opportunities to students to research the English language and other related English courses that help evaluate each student's academic potential.

The Covid-19 outbreak was never concentrated in a particular country. The outbreak in 2019 in Wuhan finally spread its wings to other countries, and the world at large affected the entire world at all levels of education. Education became standard, and students faced difficulties, especially in less developed countries coping with studies and adaptive methods of the online study system. The online study system made it possible for students worldwide to continue advancing, adapting, and being aware of new learning techniques and various online methods using social media platforms. The introduction of this learning system came with challenges; in some underdeveloped countries, internet connection and the constant availability of a stable network became a major problems. The media, however, has played a tremendous role in assisting the entire learning process and promoting a wide knowledge of the online learning system as

opposed to the higher rate of face-to-face education that has existed over the years. Students in various parts of the world can now boost or acquire a wider knowledge of the online system.

2. Background of the Study

Over the past few years, online learning has presented itself as a growing educational alternative for students and lecturers in the Department of English Modern Letters, who, due to the Covid-19 pandemic and time and space constraints, cannot attend face-to-face classes regularly. The advent of Covid-19 necessitated a change in perspective or an adaptation in how knowledge is dispensed in countries around the globe. The need to maintain learning standards or at least continue dispensing knowledge-led school authorities to adopt various means of ensuring this end. In Cameroon, particularly in the Department of English Modern Letters of the Faculty of Arts, Letters and Social Sciences of the University of Yaounde 1, the administration, under the distinguished patronage of the Rector and Dean of the Faculty, implemented online learning as the main way forward to beat Covid-19. It is a case of doing anything as long as it will ensure that students are taught.

As such, and due to the difficulties related to an internet connection, the lecturers opted for the easiest means possible to get information to students. It should be noted that students in Cameroon hardly have an internet connection and talk less about internet connection which can support modern educational tools like zoom meetings, skype or google classroom. As such, most lectures are held on social media platforms and applications. In the case of the Department of English Modern Letters, they opted for WhatsApp and Telegram for interactive classes. The choice of these two platforms is motivated by the fact that they are relatively cheap and accessible to almost all students.

Muilenburg and Berge (2005) inform that as the popularity of the internet grows, the same happens with the potential for online learning. However, they note that much evidence shows that no significant differences should be expected regarding the effectiveness of well-designed online learning compared with well-designed in-person learning. The input is that despite this observation, significant differences still exist in the way students perceive their online experiences during learning. It is evident to the extent that these students' perceptions are negative regarding their past, present, or future online learning experiences; the students' perceptions may contribute to such outcomes as higher dropout rates (Carr, 2000), low motivation of students to learn (Maltby & Whittle, 2000), and lower student satisfaction with the learning experience (Kenny, 2003). Still, these outcomes are not true for all students, in all situations, and at all times. Muilenburg and Berge (2005) determined the underlying constructs of student barriers to online learning. They found that eight factors constitute the major

barriers to students' online learning, viz (a) administrative issues. (b) social interaction, (c) academic skills, (d) technical skills, (e) learner motivation, (f) time and support for studies, (g) cost and access to the internet, and (h) technical problems. Independent variables that significantly affected student ratings of these barrier factors included: gender, age, ethnicity, type of learning institution, self-rating of online learning skills, the effectiveness of learning online, online learning enjoyment, prejudicial treatment in traditional classes, and the number of online courses completed. Also, Hasifa Binti 2020 explains literacy as an important tool in online studies with new technology. Setzer (2005) emphasizes that distance education keeps learning effective, while Thomson (2010) explains how online learning can meet the needs of gifted students to continue their studies. Savenye (2005) improved online courses to fit the learning process, Schneider. S, L (2020) Distance learning during covid-19 explaining its benefits. Pasani C.F (2020) challenges expressed on online learning, Mohammad. K,& kanait (2020)challenges Amid Covid-19.

Soliman (2014) informs that available literature shows that there are five types of e-learning, viz learner-led, instructor-led, embedded, facilitated, and tele mentored (Horton and Horton, 2003; Ilie and Pavel, 2006; Kokkosis, Charitopoulos, Prekas, and Athanasopoulou, 2006; Gulbahar, 2009). Soliman follows that while Learner-led e-learning provides course material to students (Horton, 2006, as cited in Esgi, 2013), facilitated e-learning allows student discussion via forums and chats related to an assignment (Ilie and Pavel, 2006). As for embedded e-learning, Soliman states that it is when teachers embed videos and web pages to enhance students' learning. The latter differs from instructorled e-learning, which consists of instructors' presentations via real-time webcast technology, which could include audio and video conferences, speaking, screen sharing, and whiteboard applications. Students' direct participation here is via audio, video or instant messages (Ruiz J.G.; Mintzer M.J.; Leipzig 2006 as cited in Esgi, 2013). Last but not least is the tele mentored e-learning, which involves a combination of distance learning and the use of technology. For example, students are given printed material, and instructors provide extra guidance and information about this material via video conferences, instant messages, and internet phones (Gulbahar, 2009). Datnow (2020) explains the role teachers play in online learning.

The study was conducted to provide a framework that aims to shed light on the gaps in the web-based distance education preparations of universities in Cameroon in the face of such situations that may be encountered in the future and thus minimize the interruptions in the education of students. In this context, during the pandemic, the most effective ways of reaching students who continue their education remotely in Cameroon, the social sharing platforms used, distance education methods, and students' feedback about web-based education, were evaluated.

3. Methodology

The data analyzed in this paper consist of the responses of 40 students of the undergraduate class of the Department of English Modern Letters of the Faculty of Arts, Letters, and Social Sciences of the University of Yaounde 1, Cameroon. The choice of the University of Yaounde 1 and the Department of English Modern Letters is motivated by several factors. First, the University of Yaounde 1 in Cameroon's mother university. Once there is any innovation, it is always considered before other universities. Secondly, there has been persistence in the use of online media for education since the Covid-19 pandemic, even though other universities have returned to normal physical classes. March 2019 - January 2021, with the increased rate of coronavirus patients and death, the need for such analysis and data obtained from a quantitative method approach help obtain the various analysis.

To obtain the responses from the students, a survey was designed consisting of seven questions with the potential of fulfilling the goals of the research endeavor. That is to say, the answers provided will be enough to give a complete understanding of what obtains in the field. For that reason, the survey questions were open and open-ended. The instrument used to collect the responses was Google Forms. After building the survey, a link was shared with the students through WhatsApp, got telephone contact with some students, and asked them to share the survey link with their mates. It was done, and we recorded 40 responses which serve as the basis for the analysis in this paper. Students voluntarily participated in the survey study. After the pilot test study, the Cronbach Alpha value, which indicates the reliability of the questionnaire, was found to be 0.64.

In this study, the questions were prepared for undergraduate students. Within the scope of the study, students who have experienced using social media platforms as an educational tool, which is the subject of the research, were included in the center. As seen in the analysis section, the quantitative analysis method was used to analyze the data. The results are presented in tables and graphs and explained in more detail.

4. Findings

The following section is dedicated to the findings. It presented findings from the quantitative analysis, showing the different percentages as the respondents answered the questions. The seven questions in the survey revealed the following:

Question one, which read: 'What new information technologies are you using during the Covid-19 pandemic in your school?', was answered by 40 students of the Department of English Modern Letters of the Faculty of Arts, Letters and Social Sciences of the University of Yaounde 1. The purpose of this question was to unearth

which social media platforms and new information technologies are effectively used for educational purposes. The students involved in the study in which the question was addressed suggestions that included a large number of multiple-choice options and most, if not all, of the new information technologies used for educational purposes. The chart below is a quantitative representation of informants' responses.

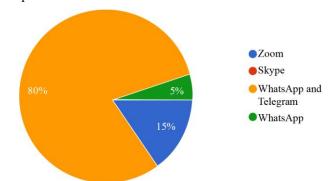


Chart 1. New Information Technologies Used for Educational Purposes

As evident on the chart, the students were given four options from which to choose. The options presented to the students were: Zoom, Skype, WhatsApp, Telegram, and WhatsApp. From these four options, 80% of the students said that their teachers used WhatsApp and Telegram as a medium to transmit knowledge when it was not possible to go to school due to Covid-19 restrictions. Further, 15% of the sampled students said they used zoom meetings as a learning platform. Furthermore, 5% of the students suggested that WhatsApp was the only new information technology that served as an alternative when they could not attend physical classes.

To find out what students think about using WhatsApp and Telegram as educational tools and get their opinions in this direction, the 'What do you think about the use of WhatsApp and Telegram as educational tools?' question has been asked. We selected the following options to get students' opinions: good, very good, bad, very bad, and neutral. The chart below contains the students' opinions.

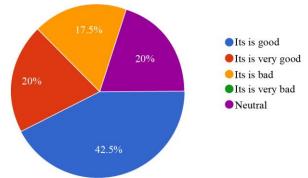


Chart 2. Grading The Use of WhatsApp and Telegram

According to the chart, it was observed that the students are happy with using these media platforms as educational tools. Firstly, it was observed that 42.5% of the students who took part in the survey said their opinion that using these media as educational tools is good. Secondly, 20% of the students indicated that they do not have any opinion. They cannot say whether the use of these platforms is positive or negative. Thirdly, another category of students thinks that the use of WhatsApp and Telegram is very good. This category of students made up 20% of the survey respondents. Finally, 17% of the respondents seemed to think that using these social media platforms is negative and should not be accepted. They are categorical in stating that the use of computers is bad. As observed from the chart, no student said using these social media platforms is bad. It means that the media platforms are manageable.

A further survey question was aimed at obtaining information about other educational tools the students may prefer. The question meant to elicit answers for this segment read thus: 'Would you prefer using different educational tools?'. The students were expected to answer 'yes' or 'no' as seen in the chart.

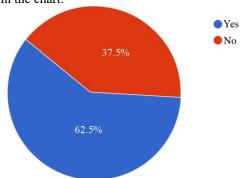


Chart 3. Respondents' Other Preference

The quantitative analysis of the responses revealed that 62.5% of the students would be glad to have different educational tools apart from the use of WhatsApp and Telegram. It was contrasted by 37.5% of the student population who thought there was no need to use other new information technologies for their studies. At this early stage of the analysis, it should be stated that there is some discrepancy when you look at responses to the questions and the current one. These discrepancies will be highlighted in the discussion section of the paper.

The students were asked a follow-up question to find out more about the platforms which could be used for learning according to the students. In this question, two things were expected from the respondents: they had to specify which other educational tool they would prefer and give a reason or reasons for such a choice. The question read thus: 'If you answered 'yes' to the previous question, which educational tools will you prefer and why?'. All respondents gave answers which are captured as observed below.

Table 1. Other Options and Reasons for Preference

Table 1. Other Options and Reasons for Preference		
Response	Educational Tool	Reason for
Number		Preference
1.	Zoom	//
	Physical classes	Because not all
2.		students are
		reasonable to be
		connected
3.	Skype and zoom	//
4.	Physical learning	//
5.	Physical learning	//
	Face-to-face contact	Because it
		enhances
6.		understanding
		between students
		and teachers.
7.	WhatsApp	//
	Physique	Physical classes for
8.		more
		understanding
9.	Zoom	//
10.	Zoom	//
11	Zoom, Skype, face	//
11.	cams	
12.	Google meet	//
13.	Google Classroom	//
14.	Anyone available	//
	WhatsApp	Because it is faster
15.		and easy to use
	I prefer physical	//
16.	classes	"
	//	Because not all
	,,	students have
		mobile data at all
		times to connect
		and attend class, I
		believe that with
17.		strict measures,
		students should
		attain their classes
		normally. It will be
		very beneficial for
		all
18.	Zoom meeting.	To save time and
10.	Zoom meeting.	be comfortable
		22 connormore
19.	Physical classes	Because they are
17.	1 my sicai ciasses	more effective
		more effective
20.	//	To avoid insults
۷٠.	<i>''</i>	from the teacher
	+	nom me teacher
21	Normal physical	It is because being
21.	Normal physical	It is because being
	classes	in class physically

		helps me understand more
		than online.
22.	//	Because it is easy to access and reach out to the teacher too
23.	Zoom	Because it takes a greater number of students at s time and is more interactive.
24.	Zoom	Because it takes a greater number of students and is more interactive.
25.	WhatsApp and Telegram.	Because it makes learning easy.
26.	//	No, because physical lecture has always been the best way to communicate with a lecturer
27.	WhatsApp	Because it is easy to use on all mobile phones
28.	//	I prefer Google classroom because it keeps your information safe
29.	Zoom	//

The respondents gave varied answers, as seen in the table. The table above shows that the students still like the traditional face-to-face classes, as seen in responses 2, 4, 5, 6, 8, 16, 17, 19, 21, and 26. Equally, some respondents preferred zoom meetings as a means of transmission. These are captured through responses 1, 3, 9, 10, 11, 18, 23, 24, and 29. Further, two respondents, responses 12 and 13, preferred the use of google classroom. Furthermore, two respondents chose skype as a better transmission medium, as seen in responses 3 and 11. Finally, one student, response 11, suggested that a face cam will be a good educational tool in the current Covid-19 educational environment. It shows that of the 40 respondents, 24 thought it would be better to use a different educational tool. Their different preferences are captured on the chart below in percentage form.

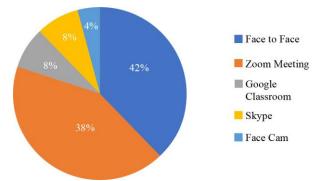
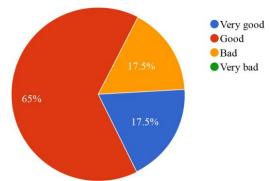


Chart 4. Other Preferred Educational Tools

As observed in the chart above, the best alternative to WhatsApp and Telegram, according to the respondents, is the traditional face-to-face learning method. These are represented by 42% of the students who would have opted for another or different educational tool. Zoom meetings follow slightly after the face-to-face method. 38% of the students prefer zoom meetings because they permit more interaction. Further, Google Classroom and Skype were both chosen by 8% of the student respondents. Finally, 4% of respondents prefer using Face Cam as an educational tool.

The students were further quizzed about their experience using WhatsApp and Telegram as educational tools. The question put through to the students to get their opinion read thus: 'What is your experience with the use of these media of knowledge transmission by your lecturers?'. The chart below reveals what the respondents think about using these platforms. The respondents were given the following choices: very good, good, very bad, and bad.



Chat 5. Respondents' Experience

The chart shows that an overwhelming 65% of the respondents affirmed that using the two social media platforms as educational tools is good. Further, 17.5% of the respondents said they were very good and bad, respectively. It shows that none of the students has had a bad experience with these platforms.

Teaching and learning need many things to be successful. Interpersonal experience, face-to-face interaction, physical movements, voice, etc. For this reason, within the scope of the study, the following questions were asked to the

students to find out how the teachers conveyed messages to their students using the two social media platforms examined: 'How do your teachers convey information (knowledge) using these platforms?'.

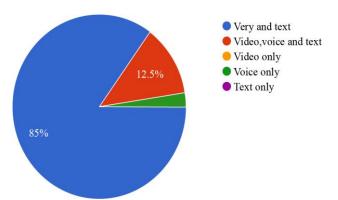


Chart 6. Means of Transmission of Knowledge

When asked what means the lecturers transmit information to the students on these social media platforms, 85% of the respondents indicated that the lecturers used voice and text. A further 12.5% suggested that the lecturers use video, voice, and text. The remaining 2.5% of respondents said that the lecturers transmit knowledge utilizing voice only.

Student satisfaction is one of the most important things determining an educational system's success. If the teaching methods are effective, students will emerge satisfied with their acquired knowledge. For this reason, the respondents were asked if lectures are effective when dispensed using these platforms. They asked: 'Are the lectures effective when you learn through these platforms?'. Their responses are captured in the pie chart below. It should be noted that these results may raise contradictions with the previous findings.

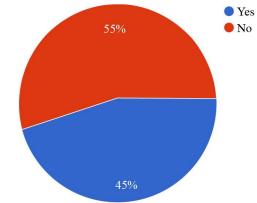


Chart 7. Effectiveness of Lectures Using WhatsApp and Telegram

The table above shows the opinion of respondents on the effectiveness of lectures at the University of Yaounde using social media platforms WhatsApp and Telegram during the Covid-19 pandemic. Their rating of the effectiveness of these

lectures is almost even. As the chart shows, 45% are satisfied with the use of the platforms and affirm that the lectures are effective, while 55% do not agree with the use of the platforms, stating that the lectures are not effective when these platforms are used. It casts doubts on the previous findings as most respondents had hitherto said that the platforms were their preferred educational tools during the Covid-19 pandemic.

4.1. Discussion of Findings

The results from the inquiry reveal several key issues:

- They reveal that the students love the inclusion of new information technologies into the bulk of educational tools available at their disposal.
- They reveal that despite the acceptance of WhatsApp and Telegram as means of transmission, they would be using different platforms if they had the opportunity.
- In addition, the findings reveal that speed and convenience are important factors in selecting educational tools for the participants.
- The results show that students will prefer to stay in the traditional face-to-face classroom despite technological advances. Given that one of the factors in this choice is the result of the country's economic situation, most students do not have a high-debt internet connection to use learning tools such as zoom meeting, which allows face-to-face interaction despite the distance between interactionists.

5. Conclusion

Distance education tools, which are used in the field of education, blended with digitalization, have turned into the only education tool in the process of the Covid-19 pandemic and have become environments for interaction. From this point of view, it is important to conduct research in this area based on the idea that distance education tools will increase in the future. This study, which includes the evaluation of the effectiveness of the use of distance education tools in the Covid-19 process by university students, should be supported by studies centered on teachers. Due to the pandemic process, it is possible to say that few studies have been conducted in the literature review in Cameroon, and this study can be a reference for future research.

The effectiveness of communication is the distinguishing feature of every society and activity. The Department of Modern Literature in English at the Faculty of Arts, Letters, and Social Sciences at Yaounde 1 University has adopted innovative methods to disseminate information in the face of the Covid-19 pandemic. As seen in the findings section, despite the inadequacies of the platforms adopted as educational tools, students were allowed to continue their education despite the difficulties brought about by the pandemic. It shows that if teachers are more innovative, they can improve their teaching methods to achieve maximum

results. Therefore, it will be interesting for another study to explore the possibilities of developing these platforms for optimal results. Therefore, we observed that using these social media platforms as a chat environment is much more important.

References

- [1] S. Carr, "As Distance Education Comes of Age, the Challenge is Keeping the Students," *Chronicle of Higher Education*, vol. 46, no. 23, pp. A39-A41, 2000.
- [2] J. Kenny, "Student Perceptions of the Use of Online Learning Technology in Their Courses," Ultibase Articles, 2003.
- [3] J. R. Maltby, and J. Whittle, "Learning Programming Online: Student Perceptions and Performance," Proceedings of the Ascilite, 2000.
- [4] L. Y. Muilenburg, and Z. L. Berge, "Student Barriers to Online Learning: A Factor Analytic Study," *Distance Education*, vol. 26, no. 1, pp. 29-48, 2005. *Crossref*, https://doi.org/10.1080/01587910500081269
- [5] E. Simon, "The Impact of Online Teaching on Higher Education Faculty's Professional Identity and the Role of Technology: The Coming of Age of the Virtual Teacher," University of Colorado, 2012.
- [6] N. A. Soliman, "Using E-Learning to Develop EFL Students' Language Skills and Activate their Independent Learning," Creative Education, vol. 5, no. 10, pp. 752-757, 2014. *Crossref*, https://doi.org/10.4236/ce.2014.510088
- [7] L. David, Learning Theories website, 2015. [Online]. Available: https://learning-theories.com/e-learning-theory-mayer-sweller-moreno.html
- [8] R. C. Clark, and R. E. Mayer, "E-Learning and the Science of Instruction: Proven Guidelines for Consumers and Designers of Multimedia Learning," John Wiley & Sons, 2016.
- [9] A. Datnow, "The Role of Teachers in Educational Reform: A 20-Year Perspective," *Journal of Educational Change*, vol. 21, no. 1, pp. 431-441, 2020. *Crossref*, https://doi.org/10.1007/s10833-020-09372-5
- [10] Pummy Sheoran, "Meditation as a Therapeutic Tool for Boosting Mental Health During COVID-19 Times," SSRG International Journal of Humanities and Social Science, vol. 8, no. 2, pp. 37-41, 2021. Crossref, https://Doi.Org/10.14445/23942703/IJHSS-V8I2P107
- [11] F. D. Davis, "Perceived Usefulness, Perceived Ease of Use and User Acceptance of Information Technology," *MIS Quarterly*, vol. 13, no. 3, pp. 319-340, 1989. *Crossref*, https://doi.org/10.2307/249008
- [12] F. A. A. Eksail, and E. Afari, "Factors Affecting Trainee Teachers' Intention to Use Technology: A Structural Equation Modeling Approach," *Education and Information Technologies*, vol. 25, pp. 2681-2697, 2020. *Crossref*, https://doi.org/10.1007/s10639-019-10086-2
- [13] E. Harrison, and M. McTavish, "i'Babies: Infants' and toddlers' emergent language and literacy in a digital culture of iDevices," *Journal of Early Childhood Literacy*, vol. 18, no. 2, pp. 163-188. 2018. *Crossref*, https://doi.org/10.1177/1468798416653175
- [14] S. Maulina et al., "Secondary School Mathematics Teachers' Views on E-Learning Implementation Barriers During the Covid-19 Pandemic: the Case of Indonesia," *Eurasia Journal of Mathematics, Science and Technology Education*, vol. 16, no. 7, 2020. Em1860. *Crossref*, https://doi.org/10.29333/ejmste/8240
- [15] A. N. Manson et al., "Home-Based Learning (HBL) Teacher Readiness Scale: Instrument Development and Demographic Analysis," *Sustainability*, vol. 13, no. 4, p. 2228, 2021. *Crossref*, http://Dx.Doi.Org/10.3390/Su13042228
- [16] A. Muhammad, and A. Kainat, "Learning Amid the COVID-19 Pandemic: Students' Perspectives," Journal of Pedagogical Sociology and Psychology, pp. 45-51, 2020.
- [17] C. F. Pasani, R. Amelia, and Z. Hassanhassan, "Covid-19 Impact in Indonesia's Education Sector: Challenges and Strategy," *Journal of Advanced Research in Dynamical and Control Systems*, vol. 12, no. 7, pp. 1722-1731, 2020. Crossref, https://doi.org/10.5373/JARDCS/V12SP7/20202281
- [18] S. Pusvyta, "Motivating Learning Using E-Learning," Journal of Ummul Quro, vol. 6, no. 2, 2015.
- [19] M. D. H. Raheim, "Indonesian University Students' Likes and Dislikes about Emergency Remote Learning during the COVID-19 Pandemic," *Asian Journal of University Education*, vol. 17, no. 1, pp. 1-18, 2020.
- [20] K. Ratheeswari, "Information Communication Technology in Education," *Journal of Applied and Advanced Research*, vol. 3, 2018. *Crossref*, https://doi.org/DOI: 10.21839/Jaar.2018.V3is1.169
- [21] M. F. Samat et al., "Online Distance Learning Amidst Covid-19 Pandemic Among University Students: A Practicality of Partial Least Squares Structural Equation Modelling Approach," *Asian Journal of University Education*, vol. 16, no. 3, pp. 220-233, 2020.
- [22] S. L. Schneider, and M. L. Council, "Distance Learning in the Era of COVID-19," *Archives of Dermatological Research*, vol. 313, pp. 389–390, 2021. *Crossref*, https://Doi.Org/10.1007/S00403-020-02088-9
- [23] Y. Shiue, "Investigating the Sources of Teachers' Instructional Technology use through the Decomposed Theory of Planned 534 Behavior," *Journal of Educational Computing Research*, vol. 36, no. 4, pp. 425-453, 2007.
- [24] Wildana Wargadinata et al., "Student's Responses on Learning in the Early COVID-19 Pandemic," *Journal of Education and Teachers Training*, vol. 5, no. 1, 2020. *Crossref*, https://doi.org/10.24042/tadris.v5i1.6153

- [25] W. C. Savenye, "Improving Online Courses: What is Interaction and Why Use It?," Distance Learning, vol. 2, no. 6, pp. 22-28, 2005.
- [26] J. C. Setzer, and L. Lewis, "Distance Education Courses for Public Elementary and Secondary school Students: 2002–03," National Center for Education Statistics, 2005.
- [27] L. D. Thomson, "Beyond the Classroom Walls: Teachers' and Students' Perspectives on How Online Learning Can Meet the Needs of Gifted Students," *Journal of Advanced Academics*, vol. 21, no. 4, pp. 662-712, 2010.