

# THE EFFECTIVENESS OF USING ZOOM MEETINGS AND GOOGLE CLASSROOM ON LEARNING ENGLISH IN THE ERA OF THE COVID 19 PANDEMIC

Suryadi

STKIP Situs Banten suryadi@stkipsitusbanten.ac.id

First received: May 6, 2022

Final proof received: June 13, 2022

#### Abstract:

The goal of this study was to see how effective Zoom Meetings and Google Classroom are for English language learning in the wake of the Covid 19 pandemic. A survey method is used in the research design. The data for the study was collected using a questionnaire as a data collection tool. A random sample of 53 students was chosen by adjusting the conditions, and the research objective of learning English using Zoom was less effective, with many obstacles encountered, as evidenced by analysis of survey data from respondents, but students believe that learning using Google Classroom was more effective and simple. As a result, it can be concluded that using Google Classroom is more effective and preferred by students because it did not deplete the internet. Researchers also recommend that teachers use Google Classroom for online learning during a pandemic.

Keywords: Zoom meeting, Google Classroom, Learning English

## **INTRODUCTION**

An unidentified source for severe pneumonia has been reported in Wuhan's adult population since December 2019, when the city became the provincial capital and a major transportation hub in China. Many of the early instances included the Huanan wholesale seafood market, which also dealt in live animals. Respiratory specimens from patients were sent to reference labs for etiological investigations as part of the monitoring system, which had been activated following the spread of SARS. Huanan Seafood Market was shuttered on January 1st after China alerted WHO of the outbreak on December 31st (Singhal, 2020). A new coronavirus known as SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) was found in Wuhan, Hubei Province, China, in December 2019. The virus quickly spread to other parts of the world, including China. Public health, clinical and scientific groups in China were fast to recognize the new virus and to communicate the virus's genome sequence with scientists around the world. January 30, 2020, was declared a Public Health Emergency of International Concern by the World Health Organization (WHO). (PHEIC). The novel coronavirus-caused sickness was officially named Coronavirus Disease 2019 by the WHO on February 12th, 2020. COVID-19 (Zu, 2020).

Within a few months, millions of individuals around the world, including students in higher education, were profoundly affected by the COVID-19 pandemic, which was caused by a novel coronavirus. Students' contentment with many aspects of their lives during the epidemic, as well as their outlooks on the short and long term future, are explored in systematic and relevant ways in this comprehensive global study (Aristovnik et al., 2020). They were mainly unhappy, worried, and irritated about their future profession and academic challenges. Online learning, which must be completed by students across Indonesia's education system from elementary school to university, has an impact on Indonesian education that has been acclimated to facial expression learning in the classroom (Ismawati & Prasetyo, 2020). A significant amount of help is required in the fields of communication and information technology for e-learning to work. (Suharjito & Halim, 2015).

With distant learning, selecting a medium that can convey the

learning process in accordance with objectives is critical. Synchronous learning is one way to use distance education. Students and teachers work together in real time via the internet in a method known as synchronous learning. Synchronous learning can be implemented utilizing teleconferences that are set up in such a way that they can be carried out. Useful application for teachers and students to communicate with each other in person. This tool, called Zoom Cloud Meeting, allows students to participate remotely in online meetings and video conferencing sessions using a computer, a laptop, or their smartphone as their primary mode of communication. Using this program, you may hold a virtual meeting with up to 1000 people at once (Ismawati & Prasetyo, 2020). Learning naturally occurs in a learning environment which consists of two situations, synchronous learning (dependent time and place) and asynchronous (independent time and place) learning (Smaldino et al., 2008).

In order to accommodate a wide range of learners, distance education is meant to be accessible to people of all ages, educational backgrounds, and locations. In this way, the limits of distance, place, and time can be transcended in the learning process through distant learning. It is because of these differences that remote learning has its own set of unique qualities. Face-to-face interaction isn't possible, thus learning can't proceed as smoothly as it would in a setting where teachers and students may interact in person. Teacher-student isolation is caused by a student's long distance from their school or by their proximity to their school, yet they cannot participate in direct learning activities because of this. The term "e-learning" refers to a broad range of activities and technologies, including computer-based education, online education, virtual classrooms, virtual schools, and virtual zoom (Windhiyana, 2020). As network, computer, and other kinds of technology have advanced, online learning has placed greater emphasis on learning resources and student communication throughout

the learning process. (Prasetya, 2021).

The problem of limited distance learning that is not in direct contact, learning is equipped with the use of media that allows interaction between teachers and learners to enable the learning process to be more effective and efficient. Teachers and learners do not have to be in the same place. Learners can determine their own learning time anytime, anywhere, according to their learning speed and style. The main learning media in distance learning was initially only a module, but along with the development of information and communication technology, learning media emerged using computers, audio, video, non-printed media, multimedia, internet and others. This online learning can be done synchronous and asynchronous. In the conditions of the Covid-19 pandemic, all education stakeholders must undertake distance learning or online learning. Synchronous learning with ZOOM and asynchronous media using google classroom media is an alternative in online learning.

Based on the background of the problem that the researcher conveyed, the researcher wanted to know the effect of synchronous learning with ZOOM and asynchronous media with google classroom media. Several studies have been carried out to determine synchronous and asynchronous learning, for example, Narayana (2016) research was conducted at STMIK STIKOM Bali in 2016, Narayana research on the analysis of the results of using synchronous and asynchronous learning methods, this study found that the results in the use of Synchronous and Asynchronous learning methods where there is a point difference of where the Synchronous learning method for the final score is better than the Asynchronous learning method. Subsequent research is the implementation of virtual class-based e-learning using the synchronous learning method in learning at Kuningan University (Novantara, 2018). This research resulted in student learning through Virtual Class Learning having high mobility, low price and more interactivity (between users/students, users/students with programs and users/students with. This study is different from Novantara's previous research (2018).

The current study looks at how effective Zoom Meetings and Google Classroom are for learning English during a pandemic, as well as the challenges that come with using them. It also looks at the benefits of using Zoom Meetings and Google Classrooms for learning English during a pandemic. Researchers hope to learn about the challenges and benefits of learning English using Zoom Meeting and Google Classroom during the COVID-19 pandemic through this study. This study can be defined as following inquiries: 1) How effective is Zoom meeting and Google Classroom method in learning English? 2) What are the difficulties faced by students in using Zoom meeting and Google Classroom method in learning English? 3) What are the advantages of using Zoom meeting and Google Classroom method in learning English?.

#### METHOD

This research uses quantitative research. Quantitative research is an attempt to uncover universal inner truths and principles form of relationship between variables or phenomena (Narayana, 2016). Characteristics in quantitative research are technique Data analysis using quantitative techniques (statistics) objectively (Creswell, 2010). In comparison, this type of research uses a survey method. This method of conducting research involves using a questionnaire as a tool to conduct research on a large or small population, but the information studied is based on data from a sample drawn from the population in order to determine the prevalence, distribution, and relationship between sociological and psychological variables (Sugiyono, 2013).

Survey data was employed in this study's research instrument. Google Form has been used to create the survey in order to make it more accessible to students in the senior high school. If you'd like to discover more about how synchronous (zooming) and asynchronous (Google Classroom) education affects your ability to learn English, this survey is for you. It employs a Likert scale to gather information. For gauging attitudes, views, and perceptions, the Likert scale is a good choice (Sugiyono, 2013).

As far as general characteristics go (age, gender, ethnicity, educational background and so on), a good sample is substantially similar to the target population in the most significant general features (Dornyei & Griffee, 2007). The sample for this study was selected at random using the random sampling method. Probability sampling relies heavily on random sampling. As though drawing numbers from a bucket, the sample is selected at random from the population (for example, by numbering each member and then asking the computer to generate random numbers). Because the selection is based simply on chance and probability, there are no non-essential or subjective criteria to take into account. This is why it is important to have a large enough sample to include people with features that are representative of the overall community. Despite the fact that this is rarely entirely attained, random samples are almost always more representative than non-random samples (Dornyei & Griffee, 2007). A total of 200 students in the 2020/2021 school year were included in this study. An online survey was used to gather data, and the resulting averages will be used to assess the effectiveness of Zoom Meetings and Google Classroom for English language instruction in the wake of the Covid-19 pandemic. The percentage of the score that was acquired was used as a data analysis technique in this study.

### FINDINGS AND DISCUSSION

The Effectiveness of Using Zoom Meetings and Google Classroom on Learning English in The Era of The Covid 19 Pandemic.

After obtaining the data, the researcher analyzed the data and calculated using the Likert If scale the form of a positive statement was given a score of 5, 4, 3, 2, 1. The form of the answer strongly agrees, agree, slightly disagree, disagree, and strongly disagree with the score order from 5 to 1. In the midst of the Covid-19 pandemic, the survey asked students about their thoughts on synchronous and asynchronous methods of teaching English in the classroom, each of which had ten statements in total. This blended learning platform for education allows teachers to create, exchange, and categorize assignments without the usage of paper (Mayasari et al., 2019).

Furthermore, the answer to the first research question about How effective is Zoom meeting and Google Classroom method in learning English. Based on the results of the student survey, learning English using zoom is less effective, there were many obstacles faced, this can be proven by 50% of students experiencing internet signal problems, draining 60% of internet quota and learning online using zoom meetings was not easy and ineffective 60 %, but on the contrary, students think that learning using google classroom was more effective and easier, this was proven by the results of student surveys; 1) students stated that learning using google classroom was easy and effective 44%, 2) google classroom did not drain internet quota 45%, 3) google classroom was not hampered by internet signal interference 45%. A number of advantages over the typical classroom teaching approach are provided by Google Classroom, which makes it easier for teachers to swiftly create and manage assignments, give feedback, and communicate with their students online or via blended learning (Sukmawati & Nensia, 2019).

As a result, Google Classroom can be said to be effective in virtual classroom learning because students can receive, display, and access announcements, materials, and assignments more efficiently (Permata & Bhakti, 2020). Google Classroom has been hailed as

one of the most user-friendly platforms for teaching and learning because of its accessibility, flexibility, and customization (Alim et al., 2019; Suwastini et al., 2021). In addition, many studies have found that Google Classroom can be problematic for both teachers and students. When it came to online learning, students were found to have connection issues, be unprepared to use the platform, and be unprepared to learn on their own (Abidin & Saputro, 2020; Suhroh & Cahyono, 2021; Zakaria, 2021).

No.	The effect of synchronous learning using zoom meeting	Strongly Agree	Agree	Slightly Disagree	Disagree	Agree
1.	During the COVID-19 pandemic, I studied online	46 (23%)	126 (63%)	28 (14%)	0 (0%)	
2.	During the Covid-19 pandemic, I studied online using Zoom meetings.	0 (0%)	84 (42%)	82 (41%)	34 (17%)	0 (0%)
3.	During the Covid-19 pandemic, online learning activities were skillfully executed.	6 (3%)	80 (40%)	89 (44%)	16 (8%)	9 (5%)
4.	Learning online by using Zoom meeting during the Covid-19 pandemic was hampered by internet signals.	100 (50%)	80 (40%)	10 (5%)	5 (2,5%)	5 (2,5%)
5.	Learning online using Zoom meeting makes interactions between students and teachers more interesting.	16 (8%)	67 (33,5%)	95 (47,5%)	10 (5%)	12 (6%)
6.	Learning online using Zoom meeting is easier and more effective.	9 (4,5%)	59 (29,5%)	96 (48%)	25 (12,5%)	11 (5,5%)

Table. 1 The results of the calculation of the first variable questionnaire

7.	Learning online using Zoom meeting drains Internet quota.	120 (60%)	60 (30%)	10 (5%)	5 (2,5%)	5 (2,5%)
8.	Learning online during the Covid-19 pandemic using Zoom meeting, delivering material is easier to receive.	12 (6%)	58 (29%)	90 (45%)	25 (12,5%)	15 (7,5%)
9.	I don't know how to use Zoom meeting to learning online.	11 (5,5%)	49 (24,5%)	55 (27,5%)	70 (35%)	15 (7,5%)
10.	I don't have a laptop or gadgets to learning online using Zoom meeting at home.	10 (5%)	45 (22,5%)	55 (27,5%)	60 (30%)	30 (15%)

Table. 2 The results of the calculation of the second variable questionnaire

No.	The effect of synchronous learning using zoom meeting	Strongly Agree	Agree	Slightly Disagree	Disagree	Agree
1.	During the COVID-19 pandemic, I studied online	60 (30%)	90 (45%)	25 (12,5%)	15 (7,5%)	10 (5%)
2.	During the Covid-19 pandemic, I studied online using Zoom meetings.	70 (35%)	110 (55%)	10 (5%)	5 (2,5%)	5 (2,5%)
3.	During the Covid-19 pandemic, online learning activities were skillfully executed.	15 (7,5%)	95 (47,5%)	70 (35%)	15 (7,5%)	5 (2,5%)
4.	Learning online by using Zoom meeting during the Covid-19 pandemic was hampered by internet signals.	70 (35%)	30 (15%)	80 (40%)	10 (5%)	10 (5%)

5.	Learning online using Zoom meeting makes interactions between students and teachers more interesting.	17 (7,5%)	56 (28%)	90 (45%)	29 (15%)	8 (4%)
6.	Learning online using Zoom meeting is easier and more effective.	88 (44%)	85 (42,5%)	5 (2,5%)	12 (6%)	10 (5%)
7.	Learning online using Zoom meeting drains Internet quota.	50 (25%)	40 (20%)	90 (45%)	12 (6%)	8 (4%)
8.	Learning online during the Covid-19 pandemic using Zoom meeting, delivering material is easier to receive.	11 (5,5%)	40 (20%)	122 (61%)	20 (10%)	7 (3,5%)
9.	I don't know how to use Zoom meeting to learning online.	3 (1,5%)	10 (5%)	50 (25%)	107 (53,5%)	30 (15%)
10.	I don't have a laptop or gadgets to learning online using Zoom meeting at home.	10 (5%)	43 (21,5%)	55 (27,5%)	70 (35%)	22 (11%)

Table.3 The results of the calculation of the third variable questionnaire

No.	The effect of synchronous learning using zoom meeting	Strongly Agree	Agree	Slightly Disagree	Disagree	Agree
1.	During the COVID-19 pandemic, I studied online	46 (23%)	126 (63%)	28 (14%)	0 (0%)	0 (0%)
2.	During the Covid-19 pandemic, I studied online using Zoom meetings.	8 (4%)	40 (20%)	120 (60%)	20 (10%)	12 (6%)

			r			
3.	During the Covid-19 pandemic, online learning activities were skillfully executed.	9 (4,5%)	105 (52,5%)	70 (35%)	10 (5%)	6 (3%)
4.	Learning online by using Zoom meeting during the Covid-19 pandemic was hampered by internet signals.	5 (2,5%)	71 (37,5%)	100 (45%)	20 (10%)	4 (5%)
5.	Learning online using Zoom meeting makes interactions between students and teachers more interesting.	5 (2,5%)	75 (37,5%)	90 (45%)	20 (10%)	10 (5%)
6.	Learning online using Zoom meeting is easier and more effective.	10 (5%)	95 (47,5%)	78 (39%)	10 (5%)	7 (3,5%)
7.	Learning online using Zoom meeting drains Internet quota.	5 (2,5%)	79 (39,5%)	90 (45%)	20 (10%)	6 (3%)
8.	Learning online during the Covid-19 pandemic using Zoom meeting, delivering material is easier to receive.	8 (4%)	60 (30%)	95 (47,5%)	26 (13%)	11 (5,5%)
9.	I don't know how to use Zoom meeting to learning online.	10 (5%)	79 (39,5%)	90 (45%)	13 (6,5%)	8 (4%)
10.	I don't have a laptop or gadgets to learning online using Zoom meeting at home.	20 (10%)	90 (45%)	70 (35%)	12 (6%)	8 (4%)

For the second research question, the researcher tries to find out the research questions. What are the difficulties faced by students in using Zoom meeting and Google Classroom method in learning English?. To answer the second research question, the researcher processed the survey result data that learning English using zoom meetings (Synchronous) and Google classroom (Asynchronous) contained many problems including; Internet signal was hampered by 50% and drains internet quota of 60%. These two obstacles were often faced by students in online learning using Synchronous (zoom meetings). Education institutions can work with the telecom industry to help students and instructors by providing free or subsidized internet subscriptions as part of their corporate social responsibility because online learning is technology-driven and requires access to the Internet. Educators should focus their research efforts on the development of a standardized online learning paradigm that can be used across all academic fields (Adedoyin & Soykan, 2020). It is the interaction between the professor and students, as well as the interaction between the lecturer and students, that determines the success of online learning (Aristovnik et al., 2020).

Learning English using Zoom meeting and Google classroom during the Covid-19 pandemic made students prefer writing material, this can be proven from the results of student surveys, 52.5% of students like writing material, writing material can learn using google classroom which is more effective and does not drain internet quota. In a synchronous classroom, students can see themselves as part of a real class, but they are actually online in a virtual one. The term "virtual classroom" is often used to describe synchronous (Pakpahan & Fitriani, 2020). However, it must be argued that not all learning can be effectively translated into an online learning environment; so, the benefits of online learning outweigh the disadvantages. (Fitriani et al., 2020).

#### CONCLUSION

Based on the results of this investigation, the following can be concluded: utilization Zoom Meeting is a brand-new tool created in this age of Social Distancing, which necessitates distance learning for students. Because students who don't have access to wi-fi frequently encounter problems with the network or internet signal, teachers opted to conduct Zoom Meetings instead, which was deemed ineffective. As a result, teachers and students found the Zoom Meeting application's synchronous learning features to be practical and efficient for students, who could communicate with each other in real time via video rather than in writing or via chat. As a result, it is an appropriate medium for educational purposes (Hagien et al., 2020). Since the Covid-19 pandemic has forced students to learn online, Zoom Meeting has been used extensively. Despite the fact that Zoom Meeting was deemed less successful, this program was considered more efficient and practical for students. Therefore, it was believed that the Zoom Meeting application would be beneficial to students in terms of online and based learning, and it appears that this is the case. Because of this, students and teachers must have a strong understanding of one other during a pandemic via remote learning. That's a COVID-19. We must accept COVID-19 as a pandemic phenomenon. Because of this phenomena, every school has been encouraged to embrace technology-based learning and a step towards the Industry 4.0 revolution has been taken.

The purpose of this study was to see how effective Zoom and Google Classroom were at teaching English during the COVID-19 pandemic. Several recommendations are made based on the previous conclusions. First, the researcher recommends that all English teachers use Google Classroom to teach English during the COVID-19 pandemic because it is more efficient in terms of using internet quota. The second recommendation is that researchers continue their work at all levels of junior high schools and universities to further develop online learning media.

# ACKNOWLEDGEMENTS

I am grateful to Drs. H. Ahmad Sugeng, M.Pd. Head of STKIP Situs Banten and Head of LPPM STKIP Situs Banten who have supported the implementation of this research, who have successfully supported this research.

#### REFERENCES

- Abidin, Z., & Saputro, T. M. E. (2020). Google Classroom as a Mathematics learning space: Potentials and challenges. Journal of Physics: Conference Series, 2, 1–6. https://doi.org/https://doi. org/10.1088/1742- 6596/1567/2/022094
- Adedoyin, O. B., & Soykan, E. (2020). Covid-19 pandemic and online learning: the challenges and opportunities. Interactive Learning Environments. https://doi.org/10.1080/10494820.2020.1813180
- Alim, N., Linda, W., Gunawan, F., & Saad, M. S. (2019). The effectiveveness of Google Classroom as an instructional media : a case of state islamic Institute of Kendari , Indonesia. Humanities & Social Sciences Reviews, 7(2), 240–246. https://doi.org/https://doi.org/10.18510/ hssr.2019.7227 THE
- Aristovnik, A., Keržič, D., Ravšelj, D., Tomaževič, N., & Umek, L. (2020). Impacts of the COVID-19 pandemic on life of higher education students: A global perspective. Sustainability (Switzerland), 12(20), 1–34. https://doi.org/10.3390/su12208438
- Creswell, J. W. (2010). Research Design: Pendekatan Kualitatif, Kuantitatif, dan Mixed. Pustaka Pelajar: Yogyakarta.
- Dornyei, Z., & Griffee, D. T. (2007). Research Methods in Applied Linguistics. Oxford University Press.
- Fitriani, Y., Fauzi, I., & Sari, M. Z. (2020). Motivasi Belajar Mahasiswa Pada Pembelajaran Daring Selama Pandemik Covid-19. Jurnal Kependidikan: Jurnal Hasil Penelitian Dan Kajian Kepustakaan Di Bidang Pendidikan, Pengajaran Dan Pembelajaran, 6(2), 165–175.
- Haqien, D., Rahman, A. A., & Sejarah, P. (2020). Pemanfaatan Zoom Meeting Untuk Proses Pembelajaran Pada Masa Pandemi Covid-19. Jurnal SAP (Susunan Artikel Pendidikan). Universitas IndraPrasta PGRI Jakarta, 5(1). https://doi.org/10.30998/sap.v5i1.6511
- Ismawati, D., & Prasetyo, I. (2020). Efektivitas Pembelajaran Menggunakan Video Zoom Cloud Meeting pada Anak Usia Dini Era Pandemi Covid-19. Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini, 5(1), 665. https://doi.org/10.31004/obsesi.v5i1.671
- Mayasari, F., Dwita, D., Jupendri, J., Jayus, J., Nazhifah, N., Hanafi,

K., & Putra, N. M. (2019). Pelatihan Komunikasi Efektif Media Pembelajaran Google Classroom Bagi Guru Man 2 Model Pekanbaru. Jurnal Pengabdian UntukMu NegeRI, 3(1), 18–23. https://doi. org/10.37859/jpumri.v3i1.1155

- Narayana, I. W. G. (2016). Analisis Terhadap Hasil Penggunaan Metode Pembelajaran Synchronous Dan Asynchronous. Seminar Nasional Teknologi Informasi Dan Multimedia 2016 STMK AMIKOM Yogyakarta 6-7 Februari 2016, 6–7.
- Novantara, P. (2018). Implementasi E-Learning Berbasis Virtual Class Dengan Menggunakan Metode Synchronous Learning Pada Pembelajaran Di Universitas Kuningan. Buffer Informatika, 4(1), 1–7. https://doi.org/10.25134/buffer.v4i1.1290
- Pakpahan, R., & Fitriani, Y. (2020). Analisa pemanfaatan teknologi informasi dalam pembelajaran jarak jauh di tengah pandemi virus corona covid-19. Journal of Information System, Applied, Management, Accounting and Research (JISAMAR), 4(2), 30–36.
- Permata, A., & Bhakti, Y. B. (2020). Keefektifan Virtual Class dengan Google Classroom dalam Pembelajaran Fisika Dimasa Pandemi Covid-19. JIPFRI (Jurnal Inovasi Pendidikan Fisika Dan Riset Ilmiah), 4(1), 27–33. https://doi.org/10.30599/jipfri.v4i1.669
- Prasetya, R. E. (2021). Engagement Strategies in Electronic Tools English Online Learning: Higher Education Context. IJEE (Indonesian Journal of English Education), 8(2), 309–326. https://doi.org/10.15408/ijee. v8i2.22358
- Singhal, T. (2020). A Review of Coronavirus Disease-2019 (COVID-19). In Indian Journal of Pediatrics (Vol. 87, Issue 4, pp. 281–286). https:// doi.org/10.1007/s12098-020-03263-6
- Smaldino, S. E., Lowther, D. L., & Russel, J. D. (2008). Instructional Technology and Media for Learning (Ninth Edition). NJ: Pearson Education inc.
- Sugiyono. (2013). Metodelogi Penelitian Kuantitatif, Kualitatif Dan R&D. Bandung:Alfabeta.
- Suharjito, S., & Halim, M. (2015). Learning Management System Development With Application of Asynchronous Learning Method in STMIK IBBI Medan. CommIT (Communication and Information Technology) Journal, 9(2), 83. https://doi.org/10.21512/commit.

v9i2.936

- Suhroh, F., & Cahyono, B. Y. (2021). The Perspective of Indonesian Teachers on the Google Classroom Usage in Blended Teaching. Jurnal Pendidikan: Teori, Penelitian, Dan Pengembangan, 5(10), 1495. https://doi.org/10.17977/jptpp.v5i10.14139
- Sukmawati, S., & Nensia, N. (2019). The Role of Google Classroom in ELT. International Journal for Educational and Vocational Studies, 1(2), 142–145. https://doi.org/10.29103/ijevs.v1i2.1526
- Suwastini, N. K. A., Nalantha, I. M. D., & Dantes, G. R. (2021). The Effectiveness of Google Classroom Media in Teaching English for Tourism at a Tourism and Business Institute. IJEE (Indonesian Journal of English Education), 8(2), 259–280. https://doi.org/10.15408/ijee. v8i2.21932
- Windhiyana, E. (2020). Dampak Covid-19 Terhadap Kegiatan Pembelajaran Online Di Perguruan Tinggi Kristen Di Indonesia. Perspektif Ilmu Pendidikan, 34(1), 1–8. https://doi.org/10.21009/pip.341.1
- Zakaria. (2021). Online learning in master educational administration program : student's perception. International Journal of Educational Management and Innovation, 2(2), 240–248. https://doi.org/10.12928/ ijemi.v2i2.3749
- Zu, Z. Y. (2020). Coronavirus Disease 2019 (COVID-19): A Perspective from China. In Radiology (Vol. 296, Issue 2). https://doi.org/10.1148/ radiol.2020200490