The Impact of Online Learning on Statistics Courses for Students of the Department of Development Economics, State University of Malang

Afifah Nur Asiah [a] , Nasikh [b] , Grisvia Agustin [c]

[a] afifah.nur.2204318@students.um.ac.id
[a, b, c] Faculty of Economics and Business, State University of Malang, Indonesia

Abstract

This study aims to determine the impact of online learning on student learning activities and understanding in online statistics courses. This study uses a qualitative approach. The informants of this study were students of the Economic Development Department, Class of 2020, at the Faculty of Economics and Business, Malang State University, which was determined using purposive sampling. Data collection techniques used structured interviews and documentation. Data analysis was carried out through three stages of activity, including data reduction, data presentation, and data verification. The results show that online learning in statistics courses harmed student learning activities and understanding. Learning activities are limited and hampered because of several obstacles, so students find them challenging to understand. The common understanding of students can be seen from the CPMK Statistics that has yet to be achieved.
Keywords: Online Learning, Learning Activities, Student Understanding

1. Introduction

The development of information and communication technology in the current era of globalization has influenced the learning process. Teachers have used access to technology to facilitate the learning process to improve the quality of education. Through the development of internet technology, almost anything is possible in the world of education. Currently, students can study anywhere and anytime online using existing internet facilities. Especially during a pandemic, a study-at-home policy was implemented so that schools and campuses implemented online learning to break the chain of transmission.

Online learning is learning by utilizing telecommunication and information technology at a distance, for example, the internet (Rosali & Tanggal, 2020). Online learning connects learning resources (databases, libraries, instructors) with learners (students) who are physically separated and far apart but can communicate, interact and collaborate directly (synchronously) or indirectly (asynchronously). Online learning is carried out by not interacting directly with educators (face-to-face). In other words, the learning process is online, so a suitable method is needed in every lesson.

Several higher education institutions are now adopting the e-learning learning model, commonly called online learning, including Malang State University, which also implements an online learning system. Various

kinds of media and applications can be used during the online learning process. These online media include WhatsApp, Google Classroom, Zoom Meeting, University E-Learning, SIPEJAR, and many others. This online learning system can cause students difficulties understanding the material, especially statistics processing and calculating. Studying statistics directly is difficult to understand and master, primarily online. Students must be more independent in finding material from other references, so they understand better. Many computational subjects are taught at the Department of Development Economics, Faculty of Economics and Business, the State University of Malang, such as accounting, economics and business mathematics, statistics, and econometrics.

As the results of a survey of four students from the Department of Development Economics who had taken online statistics courses (October 17, 2021), they stated that online learning was deemed ineffective to implement because there were still many obstacles that had to be faced such as lack of IT (technological) knowledge, signal difficulties. For some of their home areas, inadequate facilities and learning processes unsuitable for learning statistics could be more exciting and easier to understand. In learning statistics, clearer and more detailed explanations are needed so that direct interaction between students and lecturers is needed. Not only that, but students also need to ask questions between students and lecturers or look for other references whose discussion is almost the same as what is taught in order to understand the material provided.

One of the subjects taught in the Department of Development Economics is statistics which is taught with a weight of 3 credits. Statistics courses require direct interaction with educators because they require more understanding. Statistics has an important role and benefits in human life, especially in solving problems in everyday life, such as education, agriculture, society, medicine, pharmacy, biology, science, psychology, and so on. Therefore, it is necessary to know the impact felt by students if statistics courses are taught online, both on their learning activities and their students' understanding. Based on the problems and explanations raised, it is necessary to conduct research with the title "The Impact of Online Learning on Student Statistics Courses EKP FE UM."

2. Method

This study uses a qualitative research method aimed at digging up data according to the facts in the field so that it can describe the impact of online learning on learning activities and student understanding in statistics courses. The location in this research was carried out at the Faculty of Economics and Business, the State University of Malang, precisely located on Jl. Semarang 5, Malang City. The primary data source is obtained from informants using interview and documentation techniques. This case consisted of five key informants and five triangulation informants, namely students from the Department of Development

Economics, Faculty of Economics and Business, State University of Malang, class of 2020, who had taken online statistics courses. Furthermore, the data were analyzed using descriptive analysis techniques, namely the Analysis Interactive model from (Miles & Huberman, 1994), through several activities, namely data reduction, data presentation, and concluding/verification.

3. Results and Discussion

Based on data and research findings, it is known that the application of online learning in statistics courses impacts the learning activities and understanding of students majoring in the Development Economics class of 2020. This is due to different learning methods where online learning is carried out remotely via computers and other electronic devices supported by the internet. Students must try to receive and process information presented online (Danitos et al., n.d.). Not infrequently in the learning process, various obstacles hinder learning activities. As a result, students majoring in Development Economics class of 2020 need help participating in online learning in statistics courses.

At the beginning of learning, students from the Development Economics Department class of 2020 thought that statistics was difficult. Moreover, it must be carried out online. Besides that, students' statistical learning abilities also vary regarding early mathematical ability intelligence (hard skills) (Firmansyah, 2017). Various efforts have been made so that online learning in statistics courses can be carried out optimally so that students can develop their knowledge and abilities and realize learning objectives. All aspects of learning built by lecturers, teaching materials, learning resources, learning strategies and learning media will provide students with convenience and obstacles in learning (Firmansyah, 2017). Therefore, applying online learning in statistics courses will also impact students majoring in the Development Economics class of 2020.

3.1. Impact on Learning Activities

The impact of implementing online learning on learning activities in statistics courses was felt by students majoring in the Development Economics class of 2020. Activities that students in online learning can carry out to fulfill the Learning Outcomes of Statistics Courses (CPMK Statistics) can be limited. In this case, there need to be more appropriate learning methods and learning media for online learning in statistics courses. On the other hand, there is also a need for more student activity and participation in online learning in statistics courses. This is in line with research that states that one of the impacts of online learning on students is that students become passive, less creative and less productive (Argaheni, 2020). The more activities students carry out in learning, the better the learning process will occur.

The application of online learning must pay attention to various aspects, one of which is using appropriate learning methods to be applied in order to help students learn (Ningsih, 2020). This method is adapted to learning activities that will be carried out synchronously or asynchronously. This is in line with the implementation of online learning in the statistics course for the Development Economics Students class of 2020. Several methods are used in synchronous learning, including discussion, question-and-answer methods,

material reviews, and group presentations. While asynchronously by providing material such as power points, discussion columns, assignments, and practice questions.

Even though these methods can support online learning activities for statistics courses, students majoring in the Development Economics class of 2020 still need help in the learning process. For example, when given assignments and practice questions during asynchronous lectures. They must work independently according to their respective abilities. This method is considered ineffective because students need clarification when working on questions and making assignment mistakes. This is because students have yet to be explained the material, so they do not have a good understanding of the concept of the material before doing the practice questions. In addition, there are also no examples of questions and their discussion so that students have an idea of the application of theory in solving problems. The material should be given to students accompanied by an explanation from the lecturer, especially when the material is related to numbers (Dzalila et al., 2020). The study's results also stated that students' ability to solve problems or questions given by lecturers during online learning was lacking (Susilowati, 2020).

Likewise, during the group presentation method, students majoring in Development Economics class of 2020 could have been more optimal in carrying out their learning activities, both when they were presenters and in the audience. It can be seen from the unpreparedness of students because they do not master the material, so they only read material from source books or PPT. The presentation becomes dull and less enjoyable. A presenter must be able to master the material well in order to be able to convey the material and answer or respond to participants well (Rizqia Amalia & Azwar Uswatun, 2019). This is because students must explore their academic understanding independently of statistical material, which is quite challenging.

On the other hand, students in the audience also needed to properly pay attention to the presentation. They were reluctant to ask questions even though they needed help understanding the material presented. The reason is that the audience needs clarification about the material presented by the unprepared presenter so that the audience cannot receive the material properly. The presenter does not understand, let alone the audience who listens. As a result, learning objectives cannot be achieved. This is by the results of online learning research that only works effectively in the presentation method in the online learning process because there are many obstacles (Puspitorini et al., 2021).

Meanwhile, when the lecturer used the discussion and question and answer method, students majoring in Development Economics class of 2020 did not actively participate; only several students participated in the discussion. The primary purpose of the discussion method is to solve a problem, answer questions, and add and understand student knowledge (Moma, 2017). The cause of students' passivity when discussing online is their unwillingness to express their opinions for fear of being wrong. The discussion method is more about exchanging ideas, information, thoughts or understanding among discussion participants, including the lecturer (Saputra, 2015). This is following research findings which reveal that not all students dare to express opinions by asking questions, they are worried that their friends will think they are stupid (Vera, 2020).

Not only learning methods learning media also have a significant role in educational institutions, including the application of online learning (Katmiasih et al., 2021). Various media are used by the Development Economics students class of 2020 to support the implementation of online learning in statistics courses. The media used in synchronous online learning is Google Meet, while asynchronously using the Learning Management System (SIPEJAR) of the State University of Malang, padlet, and YouTube. These media are used because they are straightforward to operate in distance learning activities and are free of charge. In addition, it can also be accessed via the web or download applications that can be used on PCs, laptops or smartphones. Through technology, learning media will be more easily and optimally used in the learning process (Dzakwan et al., 2021).

These learning media can certainly support online learning activities. A combination of various media is needed to run online learning well (Mulyono, 2020). However, students majoring in Development Economics

class of 2020 often need help with several obstacles that hinder their learning activities. For example, using the learning management system (SIPEJAR) at the State University of Malang sometimes must be corrected and accessed. As a result, students can only open the material provided once they are late in submitting assignments. Not only that, but they also need help to fill in attendance at lectures. This is due to the large number of students accessing SIPEJAR simultaneously and causing the server to go down, considering that all students at Malang State University use SIPEJAR. As well as the results of a survey conducted in the study(Fitri Andarukmi et al., 2021) showed that geography education students felt they were less effective at using SIPEJAR in the learning process. In terms of the delivery of lecture material, students also feel less effective.

Another obstacle is using Google Meet, it is common for students to be unable to enter the room. Then it fails to share the screen when the lecturer is explaining or during a presentation, so it takes longer to try until it succeeds. Sometimes the volume needs to be heard clearly or suddenly disappears. Some students in areas with poor signals find it challenging to connect. This is because one of the weaknesses of Google Meet requires a stable internet network (Sawitri, 2020). Not only that, but using Google Meet also requires a reasonably large data package. As a result of these constraints learning activities become hampered. This is in line with research which mentions the shortcomings of Google Meet as an e-learning medium for youth, namely when sharing screens feels heavy and slow. A computer with better hardware specifications is needed so that the presentation will run more smoothly (Yulistyanti et al., 2021). In addition, also in (Aisyah et al., 2021) also mentions that the weakness of Google Meet is that there is no data-saving feature, and it requires a stable signal.

Besides that, online learning activities will certainly involve student activity and participation. Based on the results of the data obtained, the activity of students majoring in Development Economics class of 2020 in online learning of statistics courses is relatively low. This can be seen from only a few students actively participating in learning activities such as discussions. Moreover, these students are the same from the first to the last meeting. While some passive students never participate in learning. This happens because students are bored participating in learning. In addition, students are also reluctant to express their opinions. In line with the finding that the fundamental problem in applying the discussion method in lectures is that not many students are active but are more spectators, do not often exchange information, let alone understand each other's information, so that critical thinking skills and interpersonal skills are challenging to achieve (Saputra, 2015).

Likewise, in learning activities during group presentations, students who serve as presenters need more time to be ready to deliver the material. They do not master the material presented, so it is like rereading the material in a book. Student-centred presentations are believed to provide a better learning experience. They are not easily forgotten because students actively participate in learning (Rizqia Amalia & Azwar Uswatun, 2019). This is because students have to study and prepare material independently, which is quite a lot of statistical material and difficult to understand. When lecturers ask questions to test the extent to which they have mastered the material they convey, they need help to answer entirely correctly. As a result, other students, as the audience, need help to receive information properly, leading to confusion. As a result, during the question and answer session, the audience was silent and did not know what questions to ask. In line with (Puspitorini et al., 2021), the online presentation process will not be as effective as a live presentation in class because there are many obstacles in online presentations. For example, it does not guarantee that all students pay attention because, in online lectures, students sometimes close the camera so that students can carry out other activities besides online lectures or the network because not all students have a stable network.

Then when asynchronous learning is given assignments and practice questions, students only do what is based on their abilities. They do not try harder to find other sources and understand them; in other words, 'the important thing is done. Some students did not try and only asked their friends for answers. This is in line with research which states that due to online learning with a technological approach, students sometimes give answers to each other with their friends or copy answers from other people (Hidayati, 2021). The reason is that they need a better understanding of the concept of the material before doing the assignments and practice

questions, so it is difficult. As a result, they choose to do this without going through the learning process properly. Research results show that students need help with assignments online (Mulyono, 2020). This is also supported by research which states that in online learning, lecturers give more assignments, provide less in-depth material, and often give assignments without prior explanation of the material (Widodo & Nursaptini, 2020)

Thus, online learning has an unfavourable impact on the learning activities of students majoring in the Development Economics class of 2020 in statistics courses. These impacts include the limited learning methods and media used and the low active role of students in learning activities. In line with the opinion that online learning cannot run optimally due to limitations in communicating, interacting, and being creative, both caused by internet access networks and other obstacles, students must be able to adapt to new things (Astuti & Restiadi, 2020). This can slow down the formation of values in the learning process (Wigdado, 2015).

3.2. Impact on Student Understanding

Online learning in statistics courses impacts the understanding of students majoring in the Development Economics class of 2020. Their understanding of learning statistics courses can be said to be low. As a result of learning activities that are carried out less optimally, their understanding is also less than optimal. This can be seen from their understanding of the Learning Outcomes of the Statistics Course (CPMK Statistics). Learning outcomes are competencies obtained through appreciating knowledge, attitudes, skills, competencies, and learning experiences (Henra et al., 2021). Students must understand learning outcomes and what knowledge and skills they will acquire and achieve after studying a material (Maryono et al., 2018).

Based on the data obtained, students from the Department of Development Economics class of 2020 said they needed to understand the statistics course material fully; they had yet to achieve CPMK Statistics. In line with research on the implementation of online lectures at Diponegoro University, where learning outcomes are not optimal (Kartika et al., 2021). In the first CPMK point, students majoring in Development Economics class of 2020 can distinguish descriptive and inferential statistics and collect and compile data. This is evidenced by their ability to answer and explain correctly during the interview. The primary material at the beginning of this lesson is still easy to understand and has also been taught at school. As a result, students can receive and understand the material well. If students can explain, give examples and conclude a learning material reasonably, students can be said to understand (Masruro et al., 2021).

While on the second CPMK point, not all students majoring in Development Economics class of 2020 can calculate parameters or statistics, analyze them and conclude. This can be seen from the answers during the interview, where they needed help to explain properly and correctly. Some students answered that they needed help understanding. This is due to the level of material difficulty, which is getting higher than before, and also learning that is packaged briefly in online learning, making learning less effective. This is in line with research which states that online learning causes learning to be less efficient, making it more difficult for students to understand the material provided by lecturers (Fadhila Andini, 2020). This is also supported by the research results of Economics Education students Class of 2018 unable to master and understand the material given in online statistics courses (Yunitia, 2022).

Then, the third CPMK point regarding the ability of students majoring in Development Economics class of 2020 to apply analytical tools, namely using essential statistical software such as the Statistical Package for Social Science (SPSS), is nil. SPSS is a statistical program application that can process statistical data quickly and precisely (Dzakwan et al., 2021). This application has features that are easy to operate in processing statistical data. Even though there are various facilities, students majoring in Development Economics class of 2020 still need help to operate this software. The reason is that students need to become more familiar with SPSS and learn and practice using the software without easy-to-understand instructions and tutorials. This is in

line with research which states that the consequences of online practice make it limited to being able to practice it in each other's homes (Ririen & Hartika, 2021). Some students have yet to be taught.

Furthermore, on the fourth point of CPMK, students of the Department of Development Economics class of 2020 are also unable to interpret the results of the analysis and formulate economic policies that can be taken based on empirical data, which is processed using appropriate statistical methods. They argued that the lack of understanding was due to the lack of explanation, only given material and assignments. The results of the research state that in online learning, it is difficult to understand and master the subject matter because the teacher does not explain or is not clear (Megawanti et al., 2020). In addition, the difficulty for students to understand lecture material provided online is also due to teaching materials in the form of reading which are challenging to understand (Sadikin & Hamidah, 2020). Students need explanations directly from the lecturer because the material and assignments are insufficient (Ririen & Hartika, 2021).

Meanwhile, on the other hand, it was found that the final score for the Statistics course for students majoring in Development Economics class of 2020 was inversely proportional to their level of understanding. This can be seen from the excellent and satisfactory final scores, where they get A- and A grades. This is because, in online learning, the scope of the assessment is taken from the value of the assignments given and done by students. In other words, the assessment is carried out using a results-based approach. As a result, assessing the student's understanding process needs more attention. This is in line with research findings that the final assessment obtained by the subject is not directly proportional to his understanding of the concept (Faradila, 2018). Likewise in, the results of similar research, namely the implementation of online lectures at Diponegoro Univerarifsity, cannot be said to be successful because the increase in student GPA is not in line with competency achievements according to student scientific disciplines, which tend to decrease (Kartika et al., 2021). If this continues, there will be a growing perception that online graduate students need to be more competent.

Based on some of these descriptions, it can be seen that the impact of online learning on the understanding of students majoring in Development Economics class of 2020, namely the final score for the statistics course, is inversely proportional to the level of understanding they have. This shows that the achievements of the Statistics Course (CPMK Statistics) still need to be fulfilled. Students majoring in Development Economics class of 2020 need to understand fully and can solve problems in statistics material. When asked to assess their level of understanding based on their perceptions, they stated that their level of understanding was only at number five or, in other words, of all statistical material, only half of which they could understand. As a result, this also impacts subsequent lectures when students majoring in the Development Economics class of 2020 take econometrics courses.

4. Conclusion

Based on the results and discussion that has been presented, it can be concluded that the application of online learning in statistics courses harms the learning activities and understanding of students of the 2020 Development Economics Department. Student learning activities are limited and less effective, impacting student understanding. The use of learning methods such as discussions, questions and answers, material reviews, and group presentations online has yet to elicit active student participation, listening, and understanding of the material properly, so the learning process does not run optimally. Likewise, online learning media such as Google Meet, Sipejar, Padlet, and YouTube often need help with several obstacles, such as signal difficulties, Sipejar errors, and Google Meet cannot be accessed, which hinders learning activities.

As a result, this also impacts the common understanding of students in statistics courses. Learning activities that are not optimal also cause learning outcomes to be not optimal. The final score for the statistics course for the Development Economics Students class of 2020 is inversely proportional to their level of understanding. In this case, students majoring in Development Economics Class of 2020 have not fulfilled the Statistics Course Achievements (CPMK Statistics). Only the introductory material at the beginning of learning that they understand and master is differentiating descriptive and inferential statistics and collecting and compiling data. Meanwhile, students need to understand fully and can solve problems in other statistical materials. Sadly, this has a further impact, students experience difficulties in taking the next course, namely econometrics, because they need a better understanding of statistics courses as a fundamental provision of econometrics material.

REFERENCES

Aisyah, S., Ivayana Sari, D., Matematika, P., & PGRI Bangkalan, S. (2021). EFEKTIVITAS PENGGUNAAN PLATFORM GOOGLE MEET TERHADAP HASIL BELAJAR SISWA. In Mathematic Education Journal)MathEdu (Vol. 4, Issue 1). http://journal.ipts.ac.id/index.php/

Argaheni, N. B. (2020). SISTEMATIK REVIEW: DAMPAK PERKULIAHAN DARING SAAT PANDEMI COVID-19 TERHADAP MAHASISWA INDONESIA A Systematic Review: The Impact of Online Lectures during the COVID-19 Pandemic Against Indonesian Students. PLACENTUM Jurnal Ilmiah Kesehatan Dan Aplikasinya, 8(2), 2020.

Astuti, A. D., & restiadi, D. (2020). Prospek Pendidikan Nasional Pasca Pandemi Covid- 19" Fakultas Ilmu Pendidikan-Universitas Negeri Malang.

Danitos, R., Sejarah, J., Ilmu Sosial, F., & Negeri Padang, U. (n.d.). Persepsi Mahasiswa Sejarah Terhadap Pembelajaran Online di Jurusan Sejarah Universitas Negeri Padang. 2021.

Dzakwan, N., Eka Murtinugraha, R., & Arthur, R. (2021). Efektivitas Penggunaan E-Modul Pada Mata Kuliah Statistika Di Program Studi Pendidikan Teknik Bangunan Fakultas Teknik Universitas Negeri Jakarta. https://doi.org/10.47028/j.risenologi.2021.61b.249

Dzalila, L., Ananda, A., & Zuhri, S. (2020). PENGARUH PEMBELAJARAN DARING PADA MASA PANDEMI COVID-19 TERHADAP TINGKAT PEMAHAMAN BELAJAR MAHASISWA (Vol. 8, Issue 2).

Fadhila Andini, N. (2020). Dampak Pembelajaran Daring Bagi Mahasiswa Masa Pandemi Covid-19.

Faradila, A. (2018). KETERKAITAN PENCAPAIAN NILAI AKHIR DENGAN PEMAHAMAN KONSEP MATEMATIS MAHASISWA CALON GURU.

Firmansyah, M. A. (2017). ANALISIS HAMBATAN BELAJAR MAHASISWA PADA MATA KULIAH STATISTIKA.

Fitri Andarukmi, N., Lintang Penatas, D., Situmorang, E., Hartono, I. P., Wahyuningsih, N., Kholid, R., Salsalvibilla, Z., & Wagistina, S. (2021). EFEKTIVITAS PEMBELAJARAN VIRTUAL BAGI MAHASISWA PENDIDIKAN GEOGRAFI UNIVERSITAS NEGERI MALANG. Jurnal Pendidikan Geografi Undiksha, 9(1), 36–43. https://doi.org/10.23887/jjpg.v9i1.30142

Henra, K., Tayibu, N. Q., & Masliah, I. N. (2021). Pengaruh Pembelajaran Daring Asynchronous Terhadap Tingkat Pemenuhan CPMK Statistika. JIPM (Jurnal Ilmiah Pendidikan Matematika), 10(1), 100. https://doi.org/10.25273/jipm.v10i1.8537

Hidayati, K. (2021). KESULITAN GURU MATEMATIKA DENGAN MEMANFAATKAN TEKNOLOGI

DALAM ASSESMENT PADA PEMBELAJARAN DARING. In Indonesian Journal of Applied Science and Technology (Vol. 2, Issue 3).

Kartika, A., Kismartini, K., & Rahman, A. Z. (2021). IMPLEMENTASI KEBIJAKAN KULIAH DARING DI UNIVERSITAS DIPONEGORO. www.fisip.undip.ac.id

Katmiasih, O. :, Harahap, M. S., & Harahap, S. D. (2021). ANALISIS DAMPAK PENERAPAN GOOGLE CLASSROOM DALAM PEMBELAJARAN DARING SEMASA PANDEMI. In Mathematic Education Journal)MathEdu (Vol. 4, Issue 2). http://journal.ipts.ac.id/index.php/

Maryono, I., Amanda, S., Dewi, L., Syaf, A. H., Matematika, P. P., Tarbiyah, F., Keguruan, D., & Sunan, U. (2018). PENCAPAIAN KEMAMPUAN PEMBUKTIAN DAN KEPERCAYAAN DIRI MAHASISWA MELALUI METODE MOORE. Jurnal Analisa, 4(2), 72–82. http://journal.uinsgd.ac.id/index.php/analisa/index

Masruro, U., Surur, M., & Munawwir, Z. (2021). Pengaruh Pembelajaran Daring terhadap Pemahaman Mahasiswa pada Masa Pandemi Covid-19 Prodi Pendidikan Ekonomi Semester Genap Tahun Pelajaran 2020/2021.

Megawanti, P., Megawati, E., & Nurkhafifah, S. (2020). PERSEPSI PESERTA DIDIK TERHADAP PJJ PADA MASA PANDEMI COVID 19.

Miles, M. B., & Huberman, A. M. (1994). Qualitative Data Analysis: An Expanded Sourcebook (2nd ed.).

Moma, L. (2017). PENGEMBANGAN KEMAMPUAN BERPIKIR KREATIF DAN PEMECAHAN MASALAH MATEMATIS MAHASISWA MELALUI METODE DISKUSI DEVELOPING MATHEMATICAL CREATIVE THINKING AND PROBLEM SOLVING ABILITY THROUGH DISCUSSION METHOD.

Mulyono, W. D. (2020). RESPON MAHASISWA TERHADAP PEMBELAJARAN DARING PADA MASA PANDEMI COVID-19. In Technology, Education And Mechanical Engineering (Vol. 4, Issue 1).

Ningsih, S. (2020). Persepsi Mahasiswa Terhadap Pembelajaran Daring Pada Masa Pandemi Covid-19. JINOTEP (Jurnal Inovasi Dan Teknologi Pembelajaran): Kajian Dan Riset Dalam Teknologi Pembelajaran, 7(2), 124–132. https://doi.org/10.17977/um031v7i22020p124

Puspitorini, P., Wijaya Kusuma, J., Nurmala Dewi, I., Robinson Sihombing, P., Bina Bangsa, U., & Pusat Statistik, B. (2021). Metode Presentasi Secara Daring di Universitas Bina Bangsa Pada Masa Pandemi Covid-19. 7(3), 700–704. https://doi.org/10.31949/educatio.v7i3.1201

Ririen, D., & Hartika, D. (2021). Identifikasi Kesulitan Belajar Mahasiswa pada Mata Kuliah Statistika Selama Masa Pandemi Covid-I9. Jurnal Ilmiah Universitas Batanghari Jambi, 21(1), 148. https://doi.org/10.33087/jiubj.v21i1.1236

Rizqia Amalia, A., & Azwar Uswatun, D. (2019). ANALISIS RESPON MAHASISWA DALAM PENERAPAN GROUP WORK RULES PADA METODE PRESENTASI DI PROGRAM STUDI PENDIDIKAN GURU SEKOLAH DASAR.

Rosali, E. S., & Tanggal, D. (2020). AKTIFITAS PEMBELAJARAN DARING PADA MASA PANDEMI COVID-19 DI JURUSAN PENDIDIKAN GEOGRAFI UNIVERSITAS SILIWANGI TASIKMALAYA. In Geography Science Education Journal (GEOSEE) (Vol. 1). http://jurnal.unsil.ac.id/index.php/geosee/index

Sadikin, A., & Hamidah, A. (2020). Pembelajaran Daring di Tengah Wabah Covid-19. BIODIK, 6(2), 214–224. https://doi.org/10.22437/bio.v6i2.9759

Saputra, E. (2015). PERANAN METODE DISKUSI DALAM PEMBENTUKAN KARAKTER MAHASISWA MELALUI MATA KULIAH PENDIDIKAN KEWARGANEGARAAN (PKn). In TINGKAP: Vol. XI.

Sawitri, D. (2020). Penggunaan Google Meet Untuk Work From Home Di Era Pandemi Coronavirus Disease 2019 (Covid-19).

Susilowati, E. (2020). Bagaimana Pembelajaran Daring di Tengah Wabah Covid 19 melalui. In Jurnal Pendidikan Matematika Raflesia (Vol. 05, Issue 03). https://ejournal.unib.ac.id/index.php/jpmr

Vera, N. (2020). Strategi Komunikasi Dosen Dan Mahasiswa Dalam Meningkatkan Kualitas Pembelajaran

Daring Selama Pandemik Covid-19 (Vol. 08, Issue 02).

Widodo, A., & Nursaptini, N. (2020). Problematika Pembelajaran Daring dalam Perspektif Mahasiswa. ELSE *(Elementary School Education Journal) : Jurnal Pendidikan Dan Pembelajaran Sekolah Dasar*, 4(2), 100. https://doi.org/10.30651/else.v4i2.5340

Wigdado, J. (2015). Persepsi Mahasiswa dalam Implementas E-Learning Menggunakan WEB di Jurusan Teknologi Pendidikan Universitas Negeri Semarang.

Yulistyanti, D., Farkhatin, N., & Mustari, D. (2021). PENGGUNAAN APLIKASI SEBAGAI MEDIA E-LEARNING REMAJA DI KARANG TARUNA USING THE APPLICATION AS A YOUTH E-LEARNING MEDIA IN KARANG TARUNA. JOURNAL OF EMPOWERMENT, 2(1). https://jurnal.unsur.ac.id/index.php/JE

Yunitia, N. (2022). ANALISIS KESULITAN BELAJAR DARING PADA MATA KULIAH STATISTIKA PROGRAM STUDI PENDIDIKAN EKONOMI ANGKATAN 2018 UNIVERSITAS JAMBI.