**The Effectiveness of Video-Based Learning Media to Increase Student Economic Learning Outcomes During the Covid-19 Pandemic****Cheristiyanto<sup>✉</sup>**

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**Keywords***Learning Media; Learning Outcomes; Videos***Abstract**

The COVID-19 pandemic provides valuable lessons for the world of education, especially Indonesia's readiness for the learning process. Adjustment of the learning process that was previously in the form of face-to-face to internet-based learning. This study aims to determine the effectiveness of using video-based learning media in improving high school students' learning outcomes of Economics. The research method used is a descriptive research method with a survey approach. We collect data in this study, namely observation, interviews, and documentation, which were then analyzed by calculating the percentage of sample answers and tested using various theories. The sample in this study was determined according to the research needs of 119 respondents. This study shows the average respondent's answer is 4, 04 or categorized agree. Thus, based on the analysis conducted, video-based learning media improved student economic learning outcomes in high school during the COVID-19 pandemic. Video-based learning media is a practical learning resource during the covid-19 pandemic that makes it easy for students to understand economic learning materials. during the Covid-19 Pandemic. This research also contributes to similar research in the context of developing online learning media during the pandemic and digital era.

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## INTRODUCTION

Social distancing restrictions are affecting the spread of the virus pandemic around the world (Downie, 2012). In December 2019, Covid-19 was identified in the province of Wuhan, China for the first time. The greatest fear occurred when the World Health Organization (WHO) stated that Covid-19 caused a pandemic in the world with a projected very fast transmission, (Bozkurt et al., 2020). Since the announcement of the pandemic by WHO, all countries in the world have carried out early mitigation as an effort to slow the spread of the virus. The implementation of the Health protocol is the main thing to be implemented and the world's governments make policies as a response to the virus by closing public places that cause crowds and even temporarily closing educational institutions. This policy is expected to be one of the right efforts to slow the spread of the virus (Owusu et al., 2020)

The COVID-19 pandemic has had a huge impact on various aspects, not only in terms of education, but also in economic, social, political aspects and has an impact on individuals, especially emotional and psychological., (Miller, 2020). This has led to a change in the situation after educational institutions reopened compared to before the Covid-19 pandemic (Aristovnik et al., 2020). Education has become the foundation of every nation's development; therefore, its sustainability is essential for the growth and development of all countries. Education over the centuries has been hit by several challenges ranging from changing school curricula to closing Educational Institutions due to demonstrations by students or staff, outbreaks of disease, and/or instability in the government of a country whose education system resides in (Owusu et al., 2020).

The government and various educational institutions initiated various policies worldwide to suppress the spread of the virus by providing continuous socialization. The temporary closure of educational institutions is the right step in reducing the number of

spreads considering that schools are one of the most dominant means of gathering places, (Goulas & Megalokonomou, 2020). This step was also carried out by the Indonesian government through circular letter No. 4 of 2020 concerning the Implementation of Education Policies in the Emergency Period for the Spread of Corona Virus Disease (Covid-19) issued by the Ministry of Education and Culture. The learning process is carried out online or distance learning from their respective homes. (Nuriansyah, 2020). However, with changes in the learning process, of course, it creates new problems in the educational environment. The government's effort in overcoming the problem of distance learning is to use technology that is developing rapidly. These problems are in the form of disagreements about what is taught, how the learning process is, and what media is used in learning that will have an impact on achieving or not learning objectives. (Zhang et al., 2020). There are various opinions that focus on highlighting the weakness or unevenness of online learning facilities, understanding the media context and the uneven distribution of information technology systems as the main supporters. (Ali, 2020).

The existence of the Covid-19 pandemic requires teachers to develop their competencies, especially in mastering information technology. The transition from face-to-face learning to distance learning or online learning requires teachers to have additional skills to support learning during the pandemic. So, there are new problems in the context of learning during the pandemic. Unpreparedness in implementing online education seems to become a major problem for teachers suddenly, so inevitably, they have to adjust quickly and increase competence in using digital technology (Asmuni, 2020). In addition to teachers, problems are also faced by students and even parents of students because some do not have the equipment to support online learning, such as mobile phones, laptops, and so on (Elfahmi, 2020).

Online learning requires electronic

equipment as the primary means in the learning process. Online learning is done by combining various types of learning resources, such as images, documents, videos, audio, to facilitate the delivery of material in the learning. Attractive material packaging is the teacher's initial capital so that learning objectives are conveyed to students (Rigianti, 2020). However, if education is packaged with various media, it will also be a problem for students with limited internet resources (quota). The importance of choosing the media used is one of the best alternatives to make it easier for students to follow the online learning process and have a good understanding of the study material. The online learning pattern is a new learning method that allows students to be more active in participating in learning given the students' fast adaptability in the fields of science and technology which are the main resources. (Sakkir et al., 2020).

One of the media that can be used in the online learning process to increase students' learning motivation is video-based learning media. Learning video media is one of the most influential media in delivering learning material. Ease of use that can be accessed anywhere and anytime provides convenience for students. The demands of teachers in applying a variety of media today are vital. Learning using multimedia becomes effective and efficient and can improve student learning outcomes (Shalikhah, 2017). Strengthening digital literacy competencies for teachers is important in order to improve teacher competencies in providing teacher skills and creativity in the learning process (Jaenudin et al., 2021). Responding to this, teacher organizations collaborate with educational institutions to provide training in the context of teacher competency development to provide views on how learning strategies, media are used and provide enlightenment for teachers in the online learning process, (Zhang et al., 2020). Increasing teacher competence in the learning process will provide exciting learning variations and offer a comfortable atmosphere for students in obtaining the knowledge provided.

Based on the description above, this study aims to determine the video-based learning media in improving students' economic learning outcomes. This research also confirms previous research related to implementing effective learning media used during the COVID-19 pandemic.

## METHODS

The research method used in this study is a descriptive research method with a survey approach. Descriptive research is a characteristic of research that can reveal various social and natural phenomena in people's lives specifically (Sukmadinata, 2007). The survey approach was used to obtain information related to the impacts faced as a result of the COVID-19 pandemic on teaching and learning activities experienced by teachers, especially economics teachers in Central Java.

Determination of the number of samples selected using purposive sampling method. In qualitative research, purposive sampling technique is a method used to determine the purpose of research with no limitation on the number of respondents, but in accordance with the information to be obtained. It was collecting data using a questionnaire that is packaged using a google form to facilitate collecting respondent data. The instrument used was a questionnaire related to using video-based learning media to support the online learning process to improve student learning outcomes during the Covid-19 pandemic.

## RESULTS AND DISCUSSION

The Covid-19 pandemic gives the impression of the importance of adaptation for the progress of the times marked by technological developments. In the field of education, the pandemic has resulted in very significant changes in the learning process. Various efforts have been made to provide proper education during the pandemic. The online education process makes educators strive to use multiple media that are effectively used. One of the

recommended media is video-based learning media because it explains the material being taught and makes it easier for students to understand the material.

The results of data analysis in this study involving respondents who are teachers or educators in high schools show varying results regarding the use of video-based learning media used in the learning process. The findings were obtained based on several questions posed to 119 economics professors related to the effectiveness of using video-based learning media in online learning during the pandemic to improve student learning outcomes.

There are 8 questions in confirming the use of online learning media as media used to improve learning outcomes. (Q1) The teacher conveys the material in an easy-to-understand language through the video presented (Q2) The teacher uses adequate learning resources (in the form of: tables/pictures/charts/case stories) in the video, (Q3) I understand the material using videos (Q4) The available videos are very helpful in online learning (Q5) The teacher gives students the opportunity to discuss after seeing the learning video (Q6) Discussions in online learning allow me to exchange ideas and comments with classmates, (Q7) It is important for me to understand

subject matter of online learning. (Q8) Online learning by using provides more experience than ordinary learning,

Based on some of these questions, you can view the results of tabulating data on the use of video-based learning media to improve student learning outcomes. Based on the Table 1, it shows that from getting an average answer in the range of 4.04 with a statement agreeing. In question 1, the number of respondents who answered strongly agree was 34 people, agreed 74 enough 11 while disagreeing and strongly disagreed 0. Next question 2, the number of responses who responded strongly agreed was 20 people, agreed 74, quite 15, disagreed eight and strongly disagreed two people. Question 3 shows respondents who answered strongly agree there were 30 respondents, agreed 81, quite 6, while the scale did not agree and strongly disagreed one person each. In question 4, it shows that respondents chose 36 answers strongly agree, agree 67, quite 11, disagree four people and strongly disagree one person. Question 5 shows as many as 20 people choose strongly agree, 77 approve, 20 are sufficient, and those who answered disagree and strongly disagree with one person.

Furthermore, question 6 shows that 29 people choose strongly agree, agree 72, qui-

**Table 1.** Results of Data Analysis of Respondents Effectiveness of Video-Based Learning Media

No	Indicator	Optional Scale					Average	Conclusion
		1	2	3	4	5		
1	Q1	0	0	11	74	34	4.19	Agree
2	Q2	2	8	15	74	20	3.86	Agree
3	Q3	1	1	6	81	30	4.16	Agree
4	Q4	1	4	11	67	36	4.12	Agree
5	Q5	1	1	20	77	20	3.96	Agree
6	Q6	2	5	11	72	29	4.02	Agree
7	Q7	0	4	12	80	23	4.03	Agree
8	Q8	2	5	11	72	29	4.02	Agree
Average						4.04	Agree	

Source: Primary data processed, 2021

te 11, disagree five, and strongly disagree 2. Question 7 shows that 23 people answered strongly agree, 80 agree, 12 enough, disagree four and strongly disagree, consent 0. For question 8, 29 people responded strongly agree, 72 approve, 11 entirely, 5 disagree, and 2 strongly disagree. The percentage of respondents' answers can be seen in the image below. Question 7 shows that there are 23 people who answered strongly, agree 80, quite 12, disagree 4 and strongly disagree 0. For question 8 it is known that there are 29 people who answered strongly agree, 72 agree, 11 quite, 5 disagree and 2 strongly disagree. To find out the percentage of respondents' answers can be seen in the image below. Question 7 shows that there are 23 people who answered strongly, agree 80, quite 12, disagree 4 and strongly disagree 0. For question 8 it is known that there are 29 people who answered strongly agree, 72 agree, 11 quite, 5 disagree and 2 strongly disagree. To find out the percentage of respondents' answers can be seen in Figure 1.

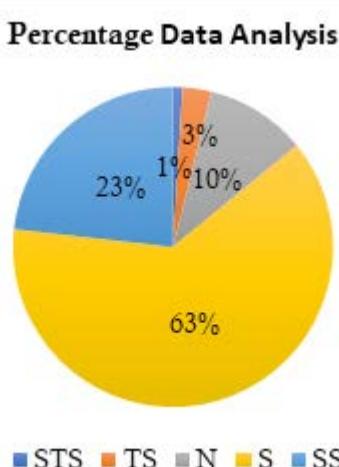
Based on Figure 1, it is known that the percentage of respondents' answer choices in the questionnaire given is 63% of respondents choosing to agree with the offered questionnaire, 23% choosing strongly agree, 10% of respondents choosing moderate or neutral, 3% answering disagree and 1% answering strongly disagree. These results show that the majority of respondents agree that educational videos

are a medium that can be used in the learning process to improve student learning outcomes. Additionally, the results of the data analysis showed that the majority of respondents agreed, which was indicated by an average response of 4.04 out of 119 respondents. These results indicate that the use of video-based learning media is effectively used in the online learning process to improve student learning outcomes.

Video-based learning media is one of the interactive learning media that can stimulate students' learning motivation, especially in understanding the material being taught. As is the case with research conducted by Princess & Goddess (2020), the use of video provides convenience in understanding the material being taught. Learning media and providing a stimulus to motivation and learning outcomes can increase students' independence. Learning videos are effectively used as a tool in the implementation of learning to increase students' independence (Nuritha & Tsurayya, 2021). This is in accordance with research conducted by Novita et al. (2019), which mentions that video learning media has a positive and significant influence in improving student learning outcomes. In addition, research conducted by Yunita & Wijayanti (2017) also mentioned, learning outcomes had significant differences between students who received treatment using instructional video media and students who did not use instructional video media. Based on research results and discussion supported by previous research, it shows that the use of video-based learning media can improve student learning outcomes in positive and significant ways.

### Learning Media

Media are all physical tools used to convey teaching materials' content (Taufiq et al., 2014). The use of media as a tool for the learning process as a communication facility in learning to achieve goals, (Marpanaji et al., 2018). Learning media are all tools used to convey or provide information from planned sources so as to produce a conducive



**Figure 1.** Percentage of data analysis  
Source: Primary data processed, 2021

learning environment in the learning process, (Munadi, 2013). The use of learning media in the learning process can generate motivation and have a psychological influence on student learning, (Salam et al., 2020). Learning media is an intermediary tool, a tool in the learning process to stimulate students' thoughts, image attention, and willingness to enhance efficiency in achieving learning objectives (Daryanto, 2011; Sanaky, 2013). From the above description it can be concluded that learning media is a tool that can generally be used in the form of visual aids, namely pictures, CD cassettes, cameras, slide films, computers and tools that can convey concrete experiences, motivations to learn, and improve the assimilation and retention of learning by students.

### **Online Learning**

Online learning methods or Online Learning Models (OLM), initially as a learning method by utilizing computer-based learning (CBL), in the learning process (Kuntarto, 2017). Online learning can be a flexible method to use and provide opportunities for students to be more active in participating in the learning process. (Dhawan, 2020). Furthermore, online learning is defined as a learning model that provides new experiences in learning that can be designed with synchronous and asynchronous learning using various devices such as smartphones, computers, laptops and other devices. The use of various media devices is certainly supported by an internet network that can make it easier for students to learn independently or anywhere to interact in the learning process with teachers and other students. (Singh & Thurman, 2019). Conventional communication in the classroom is the most important thing missing in online learning. Students only communicate with each other digitally and never see their peers in person. They share ideas, knowledge and information in real time, some of which are missing in the world of digital learning (Adnan & Anwar, 2020). The online-based education model, which includes teaching and learning, has been studied for decades, resulting in rese-

arch that focuses on producing various theories, models, standards and evaluation criteria in online learning or online-based education, (Hodges et al., 2020). Thus, online learning (in a network) or online learning is a learning model that combines technology in the form of the Internet, which is applied in the learning process and is flexible because it is not fixed in the same place..

### **Learning Outcomes**

In the digital era, the emphasis on learning focuses on increasing student interest in the learning process. They improve the learning result of students related to the skills in the use of remote learning platforms. (Elmabaredy et al., 2020). Learning outcomes are referred to as expected results after completing their studies with what has been obtained, known, understood and can demonstrate knowledge of learning outcomes. (Gudeva et al., 2012). The achievement of student learning outcomes is considered through three main components as the basis for assessment, namely cognitive, affective and psychomotor which are contained in the taxonomy of Bloom and Krathwohl's development results, (Mintz & Tal, 2016). Learning outcomes are often associated as a benchmark for practical education and the satisfaction of one's expectations. (Hasnidar & Elihami, 2019). Based on the description above, it can be synthesized that learning outcomes are a measure or achievement of students after carrying out the learning process that can be used as a reference for evaluating student learning in specific lessons.

### **Learning Video**

Video media is evidence of technological advances that have positively influenced humans and their culture and provide convenience in getting various information, knowledge, and even entertainment (Busyaeri et al., 2016). Learning videos are media in the form of videos that are used to help students achieve learning objectives. Learning videos are live image recordings to convey learning materials to obtain learning objectives (Ario

& Asra, 2019). Specially designed learning videos can be used as effective learning media. Media with video tends to be more transparent and easier to remember and understand because it uses more than one type of sense (Purwanti, 2015). According to Munadi, video media characteristics, namely overcoming the limitations of distance and time, videos can be repeated if necessary to increase clarity, the messages conveyed are fast and easy to remember, and develop students' thoughts and opinions (Fadillah & Bilda, 2019). Thus, the learning video is one of the media that can be used in the learning process and has the advantage of being easy to use, and the material presented is easy to understand and understand. Based on the theoretical framework above, this study identifies the use of video-based learning media in improving student learning outcomes during the pandemic. The results of data analysis showed that the use of video-based media contributed greatly in facilitating students' understanding of the material being taught. The use of learning videos is considered the most effective medium in online learning because there is an explanation of the learning material. In line with this, the increasingly massive use of technology is a major change in the direction of education in the future. Thus, this research can contribute to further and similar research in order to improve media development along with the times and technology.

## CONCLUSION

The Covid-19 pandemic has had a huge impact on various aspects, especially changes in the education aspect. The learning process is initially carried out directly or face to face. However, after the pandemic occurred, the learning process was carried out with a distance education pattern at home, known as online learning. Unpreparedness in the online learning process is a problem for teachers and students. The demand to adapt in using digital technology is an important thing. Teachers must have competence in designing interesting

learning during a pandemic. This is done so that students are able to follow the learning process well in a situation full of uncertainty. Video-based learning media is one of the effective media used in the online learning process. Besides being easily accessible, video-based learning media are also equipped with material explanations and attractive displays. So that students are interested in participating in the learning process and easy to accept the material being taught. This is in accordance with the results of this study, namely from 119 respondents who are also teachers, they gave a positive response, namely 63% or the average respondent's answer was 4.04 which means choosing to agree that video-based learning media can improve economic learning outcomes for high school students during the Covid pandemic-19. The importance of mastering digital competencies in providing the right learning media to help students in online learning. This research can contribute to further and similar research in order to improve media development along with the times and technology.

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## REFERENCES

- Adnan, M., & Anwar, K. (2020). Online learning amid the COVID-19 pandemic. *Students' perspectives*, 2(1), 2–8.
- Ali, W. (2020). Online and Remote Learning in Higher Education Institutes: A Necessity in light of COVID-19 Pandemic. *Higher Education Studies*, 10(3), 16. <https://doi.org/10.5539/hes.v10n3p16>
- Ario, M., & Asra, A. (2019). Pengembangan Video Pembelajaran Materi Integral Pada Pembe-

- lajaran Flipped Classroom. *AKSIOMA: Jurnal Program Studi Pendidikan Matematika*, 8(1), 20–31. <https://doi.org/10.24127/ajpm.v8i1.1709>
- Aristovnik, A., Keržič, D., Ravšelj, D., Tomazević, N., & Ume, L. (2020). Impacts of the COVID-19 Pandemic on Life of Higher Education Students: A Global Perspective. *Sustainability*, 12(8438), 1–34. <https://doi.org/10.3390/su12208438>
- Asmuni, A. (2020). Problematika Pembelajaran Daring di Masa Pandemi Covid-19 dan Solusi Pemecahannya. *Jurnal Paedagogy*, 7(4), 281. <https://doi.org/10.33394/jp.v7i4.2941>
- Bozkurt, A., Jung, I., Xiao, J., Vladimirschi, V., Schuwer, R., Egorov, G., Lambert, S. R., Al-freih, M., Pete, J., Olcott, D., Rodes, V., Aranciaga, I., Bali, M., Alvarez, A. V., Roberts, J., Pasurek, A., Raffaghelli, J. E., Panagiotou, N., Coëtlogon, P. De, ... Paskevicius, M. (2020). A global outlook to the interruption of education due to COVID-19 Pandemic: Navigating in a time of uncertainty and crisis. *Asian Journal of Distance Education*, 15(1), 1–126. <https://doi.org/10.5281/zenodo.3878572>.
- Busyaeri, A., Udin, T., & Zaenudin, A. (2016). Pengaruh Penggunaan Video Pembelajaran Terhadap Peningkatan Hasil Belajar Mapel Ipa Di Min Kroya Cirebon. *Al Ibtida: Jurnal Pendidikan Guru MI*, 3(1), 116–137. <https://doi.org/10.24235/al.ibtida.snj.v3i1.584>
- Daryanto. (2011). *Media Pembelajaran*. PT SaranaTutorial Nurani Sejahtera.
- Dhawan, S. (2020). Online Learning: A Panacea in the Time of COVID-19 Crisis. *Journal of Educational Technology Systems*, 49(1), 5–22. <https://doi.org/10.1177/0047239520934018>
- Downie, B. (2012). Effects of school closure on incidence of pandemic influenza in Alberta, Canada. *Thorax*, 67(11), 949. <https://doi.org/10.1136/thoraxjn1-2012-202054>
- Elfahmi, R. (2020). Upaya Peningkatan Kompetensi Guru Dalam Menerapkan Pembelajaran Daring Masa Pandemi Covid 19 Di Sma Negeri 3 Seunagan. *Bionatural: Jurnal Ilmiah Pendidikan Biologi*, VII(2), 45–52. <https://ejournal.stkipbbm.ac.id/index.php/bio/article/view/536>
- Elmabaredy, A., Elkholly, E., & Tolba, A. A. (2020). Web-based adaptive presentation techniques to enhance learning outcomes in higher education. *Research and Practice in Technology Enhanced Learning*, 15(1). <https://doi.org/10.1186/s41039-020-00140-w>
- Fadillah, A., & Bilda, W. (2019). Pengembangan video pembelajaran matematika berbantuan aplikasi sparkoll videoscribe. *Jurnal Gantang*, 4(2), 177–182. <https://ojs.umrah.ac.id/index.php/gantang/article/view/1369>
- Goulas, S., & Megalokonomou, R. (2020). School attendance during a pandemic. *Economics Letters*, 193, 109275. <https://doi.org/10.1016/j.econlet.2020.109275>
- Gudeva, L. K., Dimova, V., Daskalovska, N., & Trajkova, F. (2012). Designing Descriptors of Learning Outcomes for Higher Education Qualification. *Procedia - Social and Behavioral Sciences*, 46, 1306–1311. <https://doi.org/10.1016/j.sbspro.2012.05.292>
- Hasnidar, H., & Elihami, E. (2019). Pengaruh Pembelajaran Contextual Teaching Learning Terhadap Hasil Belajar PKn Murid Sekolah Dasar. *Mahaguru: Jurnal Pendidikan Guru Sekolah Dasar*, 1(1), 42–47.
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). Remote Teaching and Online Learning. *Educause Review*, 1–15. [https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-](https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning%0Ahttps://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-)
- Jaenudin, A., Pitaloka, L. K., & Melati, I. S. (2021). Digital Literacy as A Teacher Solution in Learning The Digital Era and Pandemic Covid-19. *Economic Education Analysis Journal*, 10(1), 1–11.
- Kuntarto, E. (2017). Keefektifan Model Pembe-

- lajaran Daring Dalam Perkuliahan Bahasa Indonesia di Perguruan tinggi. *Journal Indonesian Language Education and Literature*, 3(1), 53–65.
- Marpanaji, E., Mahali, M. I., & Putra, R. A. S. (2018). Survey on How to Select and Develop Learning Media Conducted by Teacher Professional Education Participants. *Journal of Physics: Conference Series*, 1140(1). <https://doi.org/10.1088/1742-6596/1140/1/012014>
- Miller, E. D. (2020). The COVID-19 Pandemic Crisis: The Loss and Trauma Event of Our Time. *Journal of Loss and Trauma*, 25(6–7), 560–572. <https://doi.org/10.1080/15325024.2020.1759217>
- Mintz, K., & Tal, T. (2016). The place of content and pedagogy in shaping sustainability learning outcomes in higher education. *Environmental Education Research*, 24(2), 207–229. <https://doi.org/10.1080/13504622.2016.1204986>
- Munadi, Y. (2013). *Media Pembelajaran (Sebuah Pendekatan Baru)*. Referensi.
- Novita, L., Sukmanasa, E., & Pratama, M. Y. (2019). Penggunaan Media Pembelajaran Video terhadap Hasil Belajar Siswa SD. *Indonesian Journal of Primary Education*, 3(2), 64–72.
- Nuriansyah, F. (2020). Efektifitas Penggunaan Media Online Dalam Meningkatkan Hasil Belajar Pada Mahasiswa Pendidikan Ekonomi Saat Awal Pandemi Covid-19. *Jurnal Pendidikan Ekonomi Indonesia*, 1(2), 61–65. <https://ejournal.upi.edu/index.php/JPEI/article/view/28346>
- Nuritha, C., & Tsurayya, A. (2021). Pengembangan Video Pembelajaran Berbantuan Geogebra untuk Meningkatkan Kemandirian Belajar Siswa. *Jurnal Cendekia : Jurnal Pendidikan Matematika*, 5(1), 48–64. <https://doi.org/10.31004/cendekia.v5i1.430>
- Owusu, F. C., Koomson, C. K., & Hanson, D. (2020). The Impact of Covid-19 on Learning - The Perspective of the Ghanian Student. *European Journal of Education Studies*, 7(3), 88–101. <https://doi.org/10.5281/zenodo.3753586>
- Purwanti, B. (2015). Pengembangan Media Video Pembelajaran Matematika dengan Model Assure. *Jurnal Kebijakan Dan Pengembangan Pendidikan*, 3(1), 42–47. <http://ejurnal.umm.ac.id/index.php/jmkpp/article/view/2194>
- Putri, L. A., & Dewi, P. S. (2020). Media Pembelajaran Menggunakan Video Atraktif pada Materi Garis Singgung Lingkaran. *Mathema: Jurnal Pendidikan Matematika*, 2(1), 32. <https://doi.org/10.33365/jm.v2i1.568>
- Rigianti, H. A. (2020). Kendala Pembelajaran Daring Guru Sekolah Dasar Di Kabupaten Banjarnegara. *Elementary School: Jurnal Pendidikan dan Pembelajaran Ke-SD-An*, 7(2), 297–302. <https://doi.org/https://doi.org/10.31316/esjurnal.v7i2.768>
- Sakkir, G., Dollah, S., & Ahmad, J. (2020). Favorite E-Learning Media in Pandemic Covid-19 Era (Universitas Muhammadiyah Sidenreng Rappang). *Jurnal Studi Guru dan Pembelajaran*, 3(3), 480–485. <https://www.e-journal.my.id/jsgp/article/view/435>
- Salam, R., Akib, H., & Daraba, D. (2020). Utilization of Learning Media In Motivating Student Learning. 226(Icss), 1100–1103. <https://doi.org/10.2991/icss-18.2018.232>
- Sanaky, H. A. (2013). *Media Pembelajaran Interaktif Inovatif*. Kaukaban Dipantara.
- Shalikhah, N. D. (2017). Media Pembelajaran Interaktif Lectora Inspire sebagai Inovasi Pembelajaran. *Warta LPM*, 20(1), 9–16. <https://doi.org/10.23917/warta.v19i3.2842>
- Singh, V., & Thurman, A. (2019). How Many Ways Can We Define Online Learning? A Systematic Literature Review of Definitions of Online Learning (1988-2018). *American Journal of Distance Education*, 33(4), 289–306. <https://doi.org/10.1080/08923647.2019.1663082>
- Sukmadinata, N. S. (2007). *Metode Penelitian Pendidikan*. PT. Remaja Rosdakarya.

- Taufiq, M., Dewi, N. R., & Widiyatmoko, A. (2014). Pengembangan media pembelajaran ipa terpadu berkarakter peduli lingkungan tema “konservasi” berpendekatan science-edutainment. *Jurnal Pendidikan IPA Indonesia*, 3(2), 140–145. <https://doi.org/10.15294/jpii.v3i2.3113>
- Yunita, D., & Wijayanti, A. (2017). Pengaruh Media Video Pembelajaran Terhadap Hasil Belajar Ipa Ditinjau dari Keaktifan Siswa. *SIOHUMANIORA: Jurnal Ilmiah Ilmu Sosial Dan Humaniora*, 3(2), 153–160. <https://doi.org/10.30738/sosio.v3i2.1614>
- Zhang, W., Wang, Y., Yang, L., & Wang, C. (2020). Suspending Classes Without Stopping Learning: China’s Education Emergency Management Policy in the COVID-19 Outbreak. *Journal of Risk and Financial Management*, 13(3), 55. <https://doi.org/10.3390/jrfm13030055>