



Implementation of Assignment-Assisted Video-Based Online Learning to Increase the Intelligent Character Values of Physics Teacher Candidates

Andi Arie Andriani, Riskawati, and Dewi Hikmah Marisda*

Physics Education, Faculty of Teacher Training and Education

Universitas Muhammadiyah Makassar, Makassar, Indonesia

*dewihikmah@unismuh.ac.id

Abstract

This research was motivated by the ineffectiveness of learning physics during the pandemic. Subject lecturers apply a solution to learning, namely implementing assignment-assisted video-based learning. This study aimed to increase the value of the intelligent character of physics teacher candidate students. This research is classroom action research that consists of two cycles. The research subjects were ten physics teacher candidates teaching optical physics courses. The research instruments used were student character observation sheets and intelligence tests. Data analysis techniques using descriptive statistical analysis. The results showed increased acquisition of intelligent character scores for physics teacher candidates in each cycle. The highest increase is in grade II in the range of 75-95. The conclusion that can be drawn from this research is that implementing assignment-assisted video-based online learning can increase the intelligence character scores of prospective physics teacher students and is at grade II in the range 75-95 (above average intelligence). This research provides an overview of learning innovations for teachers for classroom application in physics learning. By implementing learning videos, students were actively involved in constructing knowledge, attitudes, and skills both personally and in groups, so the implication of implementing video-based learning assignments was to create a young generation with character in the development of science, technology, and society, where students have been able to implement character values in applying online learning technology. In this case, the student has high integrity and character based on Islamic and Muhammadiyah values.

Keywords: assignments; online learning; smart character values; video-based

Received: 6 September 2023

Accepted: 6 November 2023

Published: 30 December 2023

DOI : <https://doi.org/10.20527/jipf.v7i3.10118>

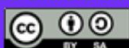
© 2023 Jurnal Ilmiah Pendidikan Fisika

How to cite: Andriani, A. A., Riskawati, R., & Marisda, D. H. (2023). Implementation of assignment-assisted video-based online learning to increase the intelligent character values of physics teacher candidates. *Jurnal Ilmiah Pendidikan Fisika*, 7(3), 448-458.

INTRODUCTION

University graduates are expected to have good qualities to compete in the

millennial era (Bayham & Fenichel, 2020; Wicaksana, 2016). Most students feel confident with the acquisition of



high scores on the diploma, but it turns out that their skills are still far from the expectations of the industrial world users of graduates (Abel & Deitz, 2015; Stewart & Wall, 2016; Xu, 2013). The success of students and graduates in entering the world of work is determined by their character (Olson, 2014; Sahin et al., 2017).

The facts in universities, especially in the Physics Education Study Program, show that many students are not yet aware of their failures. This is influenced by the weakness of intelligent character values, even though the application of character values has an important role in determining success. Based on the initial test through tests oriented towards intelligent character values, it was found that the intelligent character scores of Physics students were in the weak category, namely in the range of 21-40. With this problem, the lecturer who teaches the Optical Physics course and the team are trying to grow and develop the intelligent character values of education students. One alternative solution is implementing online learning with video-based assignments during a pandemic.

The problem in this research focuses on increasing students' intelligent character values by implementing online learning with video-based assignments. The theoretical benefit of this research is to add insight into implementing one of the videos in online learning, while practically, it increases student character values by implementing online learning with video-based assignments. As one of the media, the advantages possessed by video media are being able to convey messages properly and intact to students (Nisa et al., 2021), explain a process or stages of solving optical physics problems (Ma'ruf et al., 2020), overcome space and time limitations, be more realistic and can be repeated or stopped as needed, encourage and

increase motivation, instill attitudes or character and apply positive values that can influence thinking (Rusman, 2012).

The measure of the success of online learning is the interaction process (Marisda & Ma'Ruf, 2021) in educational situations to achieve learning goals (Suana et al., 2017). Therefore, a reciprocal relationship must be established to achieve a learning goal (Wachtler et al., 2016). The research results show that the implementation of learning during the pandemic using learning video media went well (Fadillah & Maryanti, 2021). The implementation of character education is also important in online learning. Education has two goals: guiding people to be smart and have good behavior. Great and skilled teachers can teach, educate, inspire, and act as a driving force in learning during a pandemic (Laila & Hendriyanto, 2021).

The research results of Nurafiati et al. (2021) found the problem that many students only excel in one aspect, so they have difficulty developing knowledge about web design after completing the lesson. Automatically, students' learning achievements cannot be known. So far, observations have been carried out classically, so the results of the observations are less effective. This is very difficult to do, considering the short learning time. This research reveals that the results recorded in video form can be saved and played back at any time to be assessed personally without time limits. Related to this, the novelty of this research is online learning based on video assignments given to students. It can provide knowledge for increasing intelligent character values, and there has never been research to observe character values through video assignments in physics learning. The involvement and activeness of students in learning are encouraged by providing assignments, where the material and

presentation in this video are relevant to developing the competence of physics education students. In the learning process, they practice presenting and discussing the assigned material.

The strategy for implementing character learning through multiple intelligences can accommodate the theory of the four pillars of education, which sees learning as a process. The four pillars are how to know, how to do, how to be, and how to live together (Sisdiana et al., 2019). Thus, multiple intelligences allow for internalized character education's success in a meaningful society. Thus, these character values can be used in everyday life (Nurafiati et al., 2021; Shofwan et al., 2019). What is new in this research is that this is the first time video-based learning has been applied to physics learning, especially in the physics education study program.

This research aims to provide an overview of the implementation of online learning with video-based assignments in increasing students' intelligent character scores and aims to find out what obstacles hinder the implementation of online learning with video-based assignments in increasing the intelligent character scores of prospective education teacher students. physics at Muhammadiyah University of Makassar.

METHOD

Action research can be viewed as a spiral cycle of planning, implementing actions, observing, and reflecting, which may be followed by the next spiral cycle (Sukayati, 2012). The research implementation was divided into two cycles, namely the first and second cycles. The classroom action research design is described in pictorial form, namely in Figure 1.

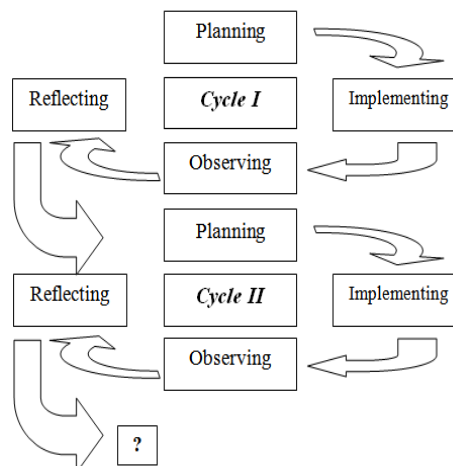


Figure 1 Classroom action research design

This Classroom Action Research was carried out in September 2021-January 2022, while the research location was at Muhammadiyah University Makassar. The subjects in this research were students majoring in Physics education who took the Optical Physics course, namely the Physics 7A class, totaling ten people. The researcher chose this subject because there were problems faced by semester 7A students, namely that physics learning is less effective in forming intelligent character values.

The classroom action research procedure consisted of two cycles. One cycle consisted of four meetings. The research procedure for one cycle was divided into four stages: planning, giving action, observing, and reflecting. Each stage can be described as follows:

Planning

- Design the form of assignments given to students that support online learning.
- Compile observation sheets to observe elements of student intelligent character values in the online learning process.
- Plan learning stages that are able to encourage student involvement in the online learning process.

- Prepare learning media to document learning activities that encourage student involvement.
- Prepare evaluation tools that will be given to students in the mid-semester exams and final semester exams.

Action

Learning video media with video-based assignments triggered students to construct character values. Video learning is one of the audio-visual-based learning media that is very suitable for learning physics (Priyadi et al., 2018). Students studied Physics material in videos, which were presented and discussed during online learning. Three learning methods were applied to increase the value of students' character education: assignments, presentations, and online discussions. In implementing online learning with video-based assignments, the following steps were taken:

- Show students the application and how to download video media.
- Divide sub-topics for each student to study and present during the learning process.
- Ask each student who has been given the assignment to download video media according to the specified physics sub-topic.
- Give assignments to create online discussion scenarios according to the material on video media.
- Ask students to present each subject in the online learning process according to the video media.
- Provide corrections, input, and additional information on the results of online student presentations.
- Ask students to develop sub-material from other learning sources, create discussion scenarios,
- Direct students to create assignment products in video form.

Observation

Observation activities were carried out to observe the implementation of online learning with video-based assignments, and the achievement of intelligent student character values indicators in the learning process. This study observed five elements of intelligent student character values: respect and politeness, self-confidence, discipline, communication, and responsibility. Disclosure of each element of character education value is based on the life skills indicators obtained through references. The indicators for each element of character education values can be observed because most of them are expressed as online learning activities.

Reflection

The results of observation activities on the value of character education were evaluated after the online learning process. In addition, the results recorded in the learning application were also evaluated. Weaknesses and obstacles found based on observation notes and recorded results need to be improved in cycle two, and existing strengths are recommended in cycle 2. Based on the weaknesses found in cycle 1, planning for cycle two was reorganized. Quantitatively, this research was marked by the achievement of the success target, namely that all indicators of intelligent character were completed at 70-100, and 70% of the intelligent character scores of the total students were at grade II or around 75-95.

Two data collection instruments were used to achieve the stated research objectives: observation sheets and intelligence tests. Observation sheets were used to determine indicators of the value of student character education in learning. The instrument for measuring students' intelligent character values is a Likert scale with four options. The

instrument was made according to the characteristics of intelligent character value indicators. By the research problem's limitations, six indicators were investigated: respect and politeness, self-confidence, discipline, communicativeness, and responsibility. The assessment of character values is shown by attitudes in online learning with scores: Very Good = 4, Good = 3, Not Good = 2, and Very Bad = 1.

Data collection was done through two techniques, namely, observation, to see the implementation of online learning with video-based assignments and all student activities in the ongoing online learning process so that obstacles can be found in its implementation. Second, through the SPM test, the score obtained is the result of an assessment of the intelligent character students achieve in the online learning process.

This study used descriptive statistical analysis. The scale used to determine student character scores and values in learning is a Likert scale with a score of 1 to 4. The value for one character indicator can be determined by comparing the score obtained with the maximum score multiplied by 100. Based on the score-to-value conversion formula, the value criteria for a character indicator can be determined. Score-to-grade conversion criteria (Riduwan, 2018) can be seen in Table 1.

Table 1 Score conversion criteria

Interval (%)	Criteria
0 - 20	Very weak
21 - 40	Weak
41 - 60	Fair
61 - 80	Strong
81 - 100	Very strong

Through analysis, the percentage of average intelligent character indicators can be used as a reference for taking action. Descriptive analysis was used to find more detailed information from one data group, including average value, median, mode, deviation, and variance.

RESULT AND DISCUSSION

The results of classroom action research Implementation of task-assisted video-based online learning was carried out for two cycles. Based on data analysis carried out in the second cycle, the average student character score was in the grade II category or above average intelligence. The development of character values is believed to be influenced by the treatment given in learning. By implementing video-based learning assignments, students were motivated to participate actively. They are actively involved in finding online learning resources, studying material for presentations, and presenting assigned learning material in the v-recorder application. Therefore, cycle II has been achieved, and there was no need to carry out cycle III. The data is presented in the histogram in Figure 2.

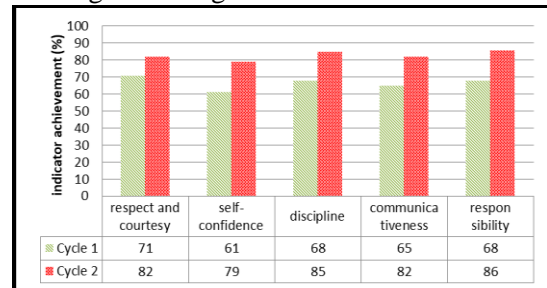


Figure 2 Intelligent character indicator histogram

The use of video media in online learning has a positive impact (Dhawan, 2020; Johnson et al., 2019), which can increase creativity (Aninnas & Wicaksono, 2022). Video is a learning application that supports online learning (Brame, 2016). As shown above, it proves an increase in intelligent character values as measured by five indicators: respect and politeness, self-confidence, discipline, communicativeness, and responsibility. Based on the picture above, it can be indicated that the highest increase was in the indicators of self-confidence and responsibility. This means that the plans that have been prepared in cycle two

have been implemented properly by observing the weaknesses observed in cycle 2, especially in the confidence indicator. Student self-confidence increases after being given video-based assignments independently in cycle 2. Video-based learning is easier for students to understand than learning that only presents text (Diwanji et al., 2015).

Using previous theory and research, self-confidence and responsibility have undergone significant improvement. Similarly, neither respect nor discipline/communication underwent significant change. This was because video-based assignments are given independently, so self-confidence increases. Giving assignments encourages students to

deepen concepts freely and trains students to learn independently and be responsible for their assignments. However, some students still lack discipline in submitting assignments, and the character of respect in online learning is not optimal because some students cannot use the correct language and do not dress politely when participating in online learning.

After implementing online learning with video-based learning assignments, students' intelligence levels were also measured. After observations in cycle 2, an intelligence test, known as SPM (Standard Progressive Matrices) was given. The results of the intelligence test can be seen in Table 2.

Table 2 Description of intelligent character

Interval score	Frequency	Percentage	Level of intelligence
29-36	1	>95	Grade I (superior intelligence)
22-28	7	75-95	Grade II (above average intelligence)
15-21	2	25-75	Grade III (average intelligence)
8-14	0	5-25	Grade IV (intelligence below average)
1-7	0	<5	Grade V (intelligence inhibited)

Based on Table 2, the calculation results obtained from the SPM test show that the highest frequency was seven people who were in the score interval 22-28. This indicates that students' intelligence level tends to be in the grade II category or above average intelligence. Overall, the average level of intelligence is also at grade II, meaning that intelligent character values have been found and have been observed by researchers, which are supported by the results of the SPM test. The increase in students' intelligent character scores after implementing video-based assignments is a discovery in this research, and the video application used in online learning can be a recommendation for learning other subjects.

As described in the research results above, the description of the implementation of online learning with video-based assignments is that an increase in the intelligent character scores of physics education students at the Muhammadiyah University of Makassar was obtained. The character values measured in this research include respect and politeness, self-confidence, discipline, communicativeness, and responsibility. The observations in cycle 1 showed that the intelligent character values after implementing video-based tasks were not yet complete, especially the self-confidence indicators. Based on the researcher's observations, group assignments were not optimal because only a few people were confident to present their videos in the online learning process. The deficiencies found

in cycle one were used as recommendations for developing action plans in cycle 2. In cycle 2, video-based assignments were given independently increasing the character's self-confidence.

Giving assignments encourages students to deepen concepts freely (Chau et al., 2015), trains them to learn to be independent and responsible for their duties (Marisda & Handayani, 2020), and is confident in presenting their duties to increase character values in learning. Assignments can also provide opportunities for students to receive information (Chu et al., 2019), apply information, and analyze that information. In physics learning, giving video-based assignments is very important. Which can inspire students to be more active in studying, foster a sense of responsibility, increase self-confidence, develop polite, communicative patterns in learning, and be skilled in thinking according to the tasks given.

By implementing learning videos, students are actively involved in constructing knowledge (Rokhim et al., 2022), attitudes, and skills personally and in groups. The involvement and activeness of students in learning is encouraged by giving assignments (Yuliansyah & Ayu, 2021), where the material and method of presentation in this video are relevant to developing the competence of physics education students (Retnowati et al., 2020). In addition, the journal Wisada (2019) shows that learning videos have very good qualifications, namely 96.5%. The achievement of qualifications is very good because the learning videos are added with background music, which can attract attention to learning (Wisada et al., 2019).

Using video applications such as video recorders helps carry out online learning. The creativity and ability of lecturers and students to use devices is

an important factor in using various learning applications to support lectures (Agusriadi et al., 2021). In addition, the success of online learning is also strongly influenced by the awareness and independence of learning among students (Dinmore, 2019), especially when working on video-based tasks in this research. Online learning is useful for learning activities as a supplement, complement, or substitute for material (Syafiq et al., 2021). Related to this opinion, online learning carried out by researchers includes three things, namely as a supplement, complement, or substitute whereas a supplement is because students are free to choose to access which material they want, and a complement is because students can complete their understanding of the material listed in the video recorder application. As well as functions as a substitute, because video recordings completely replaced face-to-face material during the Covid-19 pandemic (Singh et al., 2016).

There are many advantages and disadvantages to online learning, as stated by Suhery (2020): communication can be easier, schedules are more regular, the material can be repeated, and passive students become active. Meanwhile, the disadvantages include that online learning cannot touch aspects of affection for students. Connection constraints are also one of the reasons students fail to understand lecture material (Suhery et al., 2020). In line with research conducted by Nurfitri (2019), learning by screen recording has been proven to effectively help the process of personal observation. Using a screen recording application makes it easier for students to capture material so that it will also impact their competencies (Nurfitri, 2019; Simamora, 2020).

Character education values can be integrated into online learning to shape students' intelligent character.

Integrating intelligent character values into learning activities means combining, incorporating, and applying values, which can be done through the stages of planning, implementation, and evaluation. Therefore, with character education that is implemented systematically and continuously, students will become people with honest character and intelligence (Lase & Halawa, 2022). Intelligence is an important provision in preparing students for the future, such as the world of work, because one will more easily and successfully face all kinds of life's challenges, including challenges to succeed academically (Umari & Rosmawati, 2018). The weakness found in this research was that it is still difficult to observe all indicators of intelligent character in video assignment-based physics learning in a limited time. So, it is recommended to be more specific in measuring one of the indicators of intelligent character.

CONCLUSION

Based on the research results, it can be concluded that implementing online learning with video-based assignments can increase the value of the intelligent character of physics education students, who tend to meet very strong criteria.

In addition, based on the Standard Progressive Matrix (SPM) results, it was found that intelligent character values tend to be in the grade II category or above average intelligence. The obstacles that hinder implementing online learning with video-based assignments are that it is still difficult to observe character values in cycle 1, so it takes a long time to collect data. By implementing learning videos, students were actively involved in constructing knowledge, attitudes, and skills both personally and in groups, so the implication of implementing video-based learning assignments was to create a young generation with character

in the development of science, technology, and society, where students have been able to implement character values in applying online learning technology. In this case, the students have high integrity and character based on Islamic and Muhammadiyah values.

REFERENCES

- Abel, J. R., & Deitz, R. (2015). Agglomeration and job matching among college graduates. *Regional Science and Urban Economics*, *51*, 14–24. <https://doi.org/https://doi.org/10.1016/j.regsciurbeco.2014.12.001>
- Agusriadi, A., Elihami, E., Mutmainnah, M., & Busa, Y. (2021). Technical guidance for learning management in a video conference with the zoom and youtube application in the covid-19 pandemic era. *Journal of Physics: Conference Series*, *1783*(1), 0–6. <https://doi.org/10.1088/1742-6596/1783/1/012119>
- Aninnas, A., & Wicaksono, I. (2022). Pengaruh pemanfaatan video fenomena alam dalam pembelajaran ipa materi lapisan bumi terhadap kreativitas ilmiah siswa mts. *10*(1), 29–34.
- Bayham, J., & Fenichel, E. P. (2020). Impact of school closures for COVID-19 on the US health-care workforce and net mortality: a modelling study. *The Lancet Public Health*, *5*(5), e271–e278. [https://doi.org/10.1016/S2468-2667\(20\)30082-7](https://doi.org/10.1016/S2468-2667(20)30082-7)
- Brame, C. J. (2016). Effective educational videos: Principles and guidelines for maximizing student learning from video content. *CBE Life Sciences Education*, *15*(4), es6.1-es6.6. <https://doi.org/10.1187/cbe.16-03-0125>
- Chau, B. K. H., Sallet, J., Papageorgiou, G. K., Noonan, M. A. P., Bell, A. H., Walton, M. E., & Rushworth, M. F.

- S. (2015). Contrasting roles for orbitofrontal cortex and amygdala in credit assignment and learning in macaques. *Neuron*, 87(5), 1106–1118.
<https://doi.org/10.1016/j.neuron.2015.08.018>
- Chu, X., Gao, D., Cheng, S., Wu, L., Chen, J., Shi, Y., & Qin, Q. (2019). Worker assignment with learning-forgetting effect in cellular manufacturing system using adaptive memetic differential search algorithm. *Computers & Industrial Engineering*, 136(2), 381–396.
- 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>
- Dinmore, S. (2019). Beyond lecture capture: Creating digital video content for online learning – a case study Stuart. *Journal of University Teaching & Learning Practice Volume*, 16(1), 11.
- Diwanji, P., Simon, B. P., Marki, M., Korkut, S., & Dornberger, R. (2015). Success factors of online learning videos. 2014 *International Conference on Interactive Mobile Communication Technologies and Learning (IMCL2014)*.
<https://doi.org/10.1109/IMCTL.2014.7011119>
- Fadillah, I., & Maryanti, R. (2021). Application of learning videos and Quizizz in increasing students interest in learning English in middle schools. *Indonesian Journal of Multidiciplary*, 1(2), 329–336.
- Johnson, H. L., Dunlap, J. C., Verma, G., McClintonk, E., Debay, D. J., & Bourdeaux, B. (2019). Video-based teaching playgrounds: designing online learning opportunities to foster professional noticing of teaching practices. *TechTrends*, 63(1), 160–169.
- Laila, K., & Hendriyanto. (2021). *Menghadapi Kenormalan Baru dalam Dunia Pendidikan*. Direktorat Sekolah Dasar.
- Lase, F., & Halawa, N. (2022). Mendidik peserta didik dengan nilai nilai karakter cerdas jujur. *Educativo: Jurnal Pendidikan*, 1(1), 190–206.
<https://doi.org/10.56248/educativo.v1i1.28>
- Ma'Ruf, M., Handayani, Y., Marisda, D. H., & Riskawati, R. (2020). The needs analysis of basic physics learning devices based on hybrid learning. *Journal of Physics: Conference Series*, 1422(1).
<https://doi.org/10.1088/1742-6596/1422/1/012029>
- Marisda, D. H., & Handayani, Y. (2020). Model pembelajaran kolaboratif berbasis tugas sebagai alternatif pembelajaran fisika matematika. *Prosiding Seminar Nasional Fisika PPs Universitas Negeri Makassar*, 2, 9–12.
- Marisda, D. H., & Ma'Ruf, M. (2021). Situation analysis of mathematical physics learning with online learning during the COVID-19 pandemic. *Journal of Physics: Conference Series*, 1806(1), 15–20.
<https://doi.org/10.1088/1742-6596/1806/1/012034>
- Nisa, A. N. S., Ginanjar, A., & Hermanto, F. (2021). Analysis of the need for social studies learning media based on local advantages of semarang city. *IOP Conference Series: Earth and Environmental Science*, 747(1).
<https://doi.org/10.1088/1755-1315/747/1/012079>
- Nurafiaty, S., Rahayu, T., & Sugiharto, H. P. (2021). Strategy for strengthening character education in physical education learning at makassar city elementary education Level. *Journal of Human University* ..., 48(6).

- <http://jonuns.com/index.php/journal/article/view/622%0Ahttps://jonuns.com/index.php/journal/article/viewFile/622/619>
- Nurfitri, K. (2019). Peningkatan kompetensi web design peserta didik menggunakan metode “rekam layar” di lkp elite english school. *J-SAKTI (Jurnal Sains Komputer Dan Informatika)*, 3(2), 401. <https://doi.org/10.30645/j-sakti.v3i2.158>
- Olson, J. S. (2014). Opportunities, obstacles, and options: first-generation college graduates and social cognitive career theory. *Journal of Career Development*, 41(3). <https://doi.org/https://doi.org/10.1177/0894845313486352>
- Priyadi, R., Kusairi, S., & Indrasari, N. (2018). Desain dan pengembangan video pembelajaran gerak parabola sebagai fasilitas remediasi siswa design and development of parabolic motion learning videos as a student remediation facility. *Jurnal Pendidikan Matematika Dan Sains*, 4(1), 20–28.
- Retnowati, S., Riyadi, & Subanti, S. (2020). The stem approach: the development of rectangular module to improve critical thinking skill. *Online Journal of Education and Teaching (IOJET)*, 7(1), 2–15.
- Riduwan. (2018). *Dasar-dasar statistika* (P. D. Iswarta (ed.); 15th ed.). Alfabeta.
- Rokhim, D. A., Widarti, H. R., & Syafruddin, A. B. (2022). *Analysis of teaching material needs on corrosion topic electrochemical materials based on the stem-pjbl approach assisted by learning videos*. 10(1), 50–61.
- Rusman. (2012). *Belajar dan pembelajaran berbasis komputer mengembangkan profesionalisme guru abad 21*. Alfabeta.
- Sahin, A., Ekmekci, A., & Waxman, H. C. (2017). The relationships among high school STEM learning experiences, expectations, and mathematics and science efficacy and the likelihood of majoring in STEM in college. *International Journal of Science Education*, 39(11), 1549–1572. <https://doi.org/https://doi.org/10.1080/09500693.2017.1341067>
- Shofwan, I., Raharjo, T. J., Achmad Rifai, R. C., Fakhruddin, F., Sutarto, J., Utsman, U., Arbarini, M., Suminar, T., Mulyono, S. E., Kisworo, B., Malik, A., Yusuf, A., Ilyas, I., Desmawati, L., & Umanailo, M. C. B. (2019). Non-formal learning strategy based on tahfidz and character in the primary school. *International Journal of Scientific and Technology Research*, 8(10), 1987–1992.
- Simamora, R. M. (2020). The challenges of online learning during the covid-19 pandemic: an essay analysis of performing arts education students. *Studies in Learning and Teaching*, 1(2), 86–103. <https://doi.org/10.46627/silet.v1i2.38>
- Singh, V., Abdellahi, S., Maher, M. Lou, & Latulipe, C. (2016). The video collaboratory as a learning environment. *SIGCSE 2016 - Proceedings of the 47th ACM Technical Symposium on Computing Science Education*, 352–357. <https://doi.org/10.1145/2839509.2844588>
- Sisdiana, E., Sofyatiningrum, E., Krisna, F. N., & Rakhmah, D. N. (2019). Evaluasi pelaksanaan pembelajaran kurikulum 2013. In I. K. dewi Hermawan, N. Listiawati, & Y. Wirda (Eds.), *Kementerian Pendidikan Dan Kebudayaan (Cetakan pe)*. Pusat Penelitian Kebijakan Pendidikan dan Kebudayaan, Badan Penelitian dan Pengembangan, Kementerian Pendidikan dan Kebudayaan.

- Stewart, C., & Wall, A. (2016). Mixed signals: do college graduates have the soft skills that employers want? leadership and corporate social responsibility in sports view project soft skills in college graduates view project. *Competition Forum*, January 2016.
<https://www.researchgate.net/publication/316066488>
- Suana, W., Maharta, N., Nyeneng, I. D. P., & Wahyuni, S. (2017). Design and implementation of schoology-based blended learning media for basic physics i course. *Jurnal Pendidikan IPA Indonesia*, 6(1), 170–178.
- Suhery, Putra, T. J., & Jasmalinda. (2020). Sosialisasi penggunaan aplikasi zoom meeting dan google classroom pada guru di sdn 17 mata air padang selatan. *Jurnal Inovasi Penelitian*, 1(3), 129–132.
- Sukayati. (2012). *Pembelajaran Pecahan di Sekolah Dasar*. CV. Empat Pilar Pendidikan.
- Syafiq, A. N., Rahmawati, A., Anwari, A., & Oktaviana, T. (2021). Increasing speaking skill through youtube video as english learning material during online learning in pandemic covid-19. *Elsya : Journal of English Language Studies*, 3(1), 50–55.
<https://doi.org/10.31849/elsya.v3i1.6206>
- Umari, T., & Rosmawati, R. (2018). Analisis nilai-nilai karakter cerdas mahasiswa fkip universitas riau pekanbaru. *Jurnal Educhild: Pendidikan Dan Sosial*, 7(2), 118–126.
- Wachtler, J., Hubmann, M., Zöhrer, H., & Ebner, M. (2016). An analysis of the use and effect of questions in interactive learning-videos. *Smart Learning Environments*, 3(1).
<https://doi.org/10.1186/s40561-016-0033-3>
- Wicaksana, A. (2016). A change of perspective the pre-graduate expectations versus post-college experiences of theatre arts majors. *Https://Medium.Com/*, May.
<https://medium.com/@arifwicaksanaa/pengertian-use-case-a7e576e1b6bf>
- Wisada, P. D., Sudarma, I. K., & Yuda S, A. I. W. I. (2019). Pengembangan media video pembelajaran berorientasi pendidikan karakter. *Journal of Education Technology*, 3(3), 140.
<https://doi.org/10.23887/jet.v3i3.21735>
- Xu, Y. J. (2013). Career outcomes of stem and non-stem college graduates: persistence in majored-field and influential factors in career choices. *Research in Higher Education*, 54(3).
- Yuliansyah, A., & Ayu, M. (2021). The implementation of project-based assignment in online learning during covid-19. *Journal of English Language Teaching and Learning (JELTL)*, 2(1), 32–38.
<http://jim.teknokrat.ac.id/index.php/english-language-teaching/index>