

# Pancasila And Citizenship Education E-Module Teaching Materials Using Google Classroom for Improving the Quality of Learning

# Dinda Azzahra<sup>1\*</sup>, Rocky Arfan<sup>2</sup>, Isnarmi Moeis<sup>3</sup>, Junaidi Indrawadi<sup>4</sup>, Surya Dharma<sup>5</sup> 🕩

<sup>1,2</sup> Master Program in Pancasila and Civic Education, Padang State University, Padang, Indonesia

<sup>3,4</sup> Department of Pancasila and Civic Education, Padang State University, Padang, Indonesia

<sup>5</sup> Department of Pancasila and Civic Education, Medan State University, Medan, Indonesia

#### ARTICLE INFO

Article history: Received December 25, 2022 Accepted March 12, 2023 Available online April 25, 2023

## Kata Kunci:

Bahan ajar, Pendidikan Pancasila, E-Modul, Transformasi Pendidikan

# Keywords:

Teaching Materials, Pancasila Education, E-Modules, Educational Transformation



This is an open access article under the <u>CC BY-SA</u> license.

Copyright © 2023 by Author. Published by Universitas Pendidikan Ganesha.

## ABSTRACT

# ABSTRAK

The decline in the quality of learning has a destructive impact on the ability to think, the quality of education, and the quality of the human resources produced. The learning process, educators, and teaching materials are sources of inequality often encountered. This study aims to analyze the feasibility and capabilities of Civics teaching materials using Google Classroom to improve the quality of learning. This type of research is developed using the ADDIE model. Data was collected through direct observation, interviews, documentation and questionnaires. The data collection instrument used a questionnaire. The research subjects are teachers, media experts, and material experts. The test subjects were students. Data analysis was carried out descriptively in the form of percentages. The research results are that the E-module used as teaching material for Pancasila and Citizenship Education (PPKn) subjects can get a very good score of 90%. Material experts give these results a score of 88%, media experts score 82%, and teachers score 90% based on criteria that can be used in the field. It was concluded that e-modules designed and integrated with Google Classroom could interest students in the teaching and learning process.

Menurunnya kualitas pembelajaran berdampak destruktif terhadap kemampuan berpikir, kualitas pendidikan, dan kualitas sumber daya manusia yang dihasilkan. Proses pembelajaran, pendidik, dan bahan ajar merupakan sumber ketimpangan yang sering dijumpai. Penelitian ini bertujuan untuk menganalisis kelayakan dan kemampuan bahan ajar PPKn menggunakan Google Classroom untuk meningkatkan kualitas pembelajaran. Jenis penelitian ini yaitu pengengambangan dengan menggunakan model ADDIE. Data dikumpulkan melalui observasi langsung, wawancara, dokumentasi dan angket. Instrument pengumpulan data menggunakan kuesioner. Subjek penelitian yaitu guru, ahli media, dan ahli materi. Subjek uji coba yaitu siswa. Analisis data dilakukan secara deskriptif dalam bentuk persentase. Hasil penelitian yaitu E-modul yang digunakan sebagai bahan ajar mata pelajaran Pendidikan Pancasila dan Kewarganegaraan (PPKn) dapat memperoleh nilai sangat baik sebesar 90%. Ahli materi memberikan hasil tersebut skor 88%, ahli media memberikan skor 82%, dan guru memberikan skor 90% berdasarkan kriteria dapat digunakan di lapangan. Disimpulkan bahwa e-modul yang dirancang dan dipadukan dengan Google Classroom dapat membuat siswa tertarik dalam proses belajar mengajar.

# 1. INTRODUCTION

The 21st century has seen a substantial increase in technology development in the education sector. Aside from the high standards for graduates, the learning process is essential to making sure that students know, understand, and can use the theory and practice they are given (Maharani, 2015; Mertha Adnyana & Sudaryati, 2022). Technology has advanced and significantly changed the educational landscape in the twenty-first century. Apart from the demands for the quality of graduates, the learning process is an integral part of realizing students who know, understand, and can apply the theory and practice given (Dziuban et al., 2018; Nenotaek et al., 2019; Saad & Zainudin, 2022). Online learning makes it simpler for instructors and students to access the offered content at any time and location (Ichsan et al., 2020; Kristanto et al., 2017; Megeid, 2014). E-learning that is widely used, namely Edmodo, Quizzes, and Google Classroom (Al-Maroof, R. A. S., & Al-Emran, 2018; Heggart & Yoo, 2022; Tarteer et al., 2021). Using these applications in the learning process has positively impacted students' capacity to recognize and

absorb all the material provided, ease of access and use puts e-learning in great demand (Mertha Adnyana & Sudaryati, 2022).

Nowadays, the increasing information technology in the field of education is separate from the ability of educators (teachers) to adjust to the trends that have been taking place. As a result, students' learning experiences are, in fact, of worse quality. The tedious learning process impacts students' motivation to learn (Meşe & Sevilen, 2021; Pratiwi & Wuryandani, 2020; Saad & Zainudin, 2022). Data released by the Ministry of Education, Culture, Research, and Technology shows that 77.85% of teachers at the primary school level, 28.33% in junior high schools, and 23.04% at the high school or vocational level are unable to take advantage of e-learning applications and are unable to become a good teacher. Thus, the standards set as an educator and competence in controlling the classroom have yet to fully work according to their role (Durrani et al., 2022; Hanesty et al., 2020; Silva et al., 2018).

In line with the facts in the field, academic units still need to meet the quality standards of education related to the learning process and its management personnel. Preliminary study at SMK Swasta Wira Kesuma Jaya show that educators need to use technological assistance in the learning process, and the minimum completeness still needs to be fulfilled. This finding indicates that learning outcomes have yet to be maximized. Through creating engaging, focused, and fascinating teaching resources, there is a need for awareness and assistance connected to the use of technology in PPKn courses for both students and educators that will ideally improve the standard of PPKn learning in these institutions (Kitchen & Berk, 2016). One option is to utilize Google Classroom because utilizing it is simple, affordable, and accessible at any time, making it worthwhile to use (Ginanjar et al., 2019; Hartnett & Koury, 2012; Kumar et al., 2020). Several studies have revealed *that* Google classroom provides an interactive and exciting nuance in teaching and learning (Ma'arif & Murdiono, 2021; Nursyahrina et al., 2021; Suryani et al., 2021).

Other Research revealed that students who used Google Classroom to learn improved learning outcomes (Amrina & Sundari, 2021; Nainggolan & Manalu, 2021; Windu, 2021). Furthermore, research explained that the use of google classrooms significantly increased student learning outcomes by 21.7%, learning motivation by 39.3%, and the contribution of motivation and learning outcomes reached 43.7% (Suhayati, 2021). Hence, it is feasible to be applied. Research shows a significant influence between the use of google classrooms on student responsibilities and learning outcomes (Guswara, 2020; Kurniawati et al., 2019). The use of google classrooms in significantly increased students' ability to receive learning and completeness (Alimin & Saad, 2019; Hapsari & Pamungkas, 2019). Thus, using Google Classroom as a means of learning is worth considering on an ongoing basis.

Considering the problems at SMK Swasta Wira Kesuma Jaya, it is essential to investigate how Google Classroom might enhance learning by enhancing the quality of teaching resources that are interactive and problem-solving. This study aims to investigate, identify, and assess the feasibility and capacity of PPKn e-module teaching materials used in Google Classroom to improve learning at SMK Swasta Wira Kesuma Jaya. The ADDIE approach was used in this study. It can offer ideas and information about how to use information technology in the field of education, particularly how to improve students' capacity to absorb the teachings being taught.

#### 2. METHOD

Research and Development (RnD) research design focuses on creating a product before determining its efficacy through testing (Darwin et al., 2021). The ADDIE Model is used in the study method. ADDIE, is an acronym for a five-step process: Analysis, Design, Development, Implementation, and Evaluation (Dwi Lestari & Putu Parmiti, 2020). The model was chosen because it meets the conformity of development standards which include analysis, design, development, implementation, and evaluation (Mulyatiningsih & Nuryanto, 2014). This research involves teachers who teach PPKn subjects and students at SMK Swasta Wira Kesuma Jaya, material experts, and online media validation experts as research subjects while learning media (teaching materials) are electronic modules (e-modules) with structural and functional materials between the central and regional governments as research objects. The data in this study was collected through direct observation, interviews with teachers, media experts, and material experts, the dissemination of questionnaires to students and teachers, documentation of research results, and questionnaires of needs related to learning activities and the development of teaching materials filled out by students. Four different instruments were used in this study, including the validation questionnaire for teachers, students, media experts, and material experts. The grid's specifics are shown in table 1.

The equation utilized for data analysis in this study was the total number of respondents' answer scores divided by the highest score possible on all instruments multiplied by 100%. The Likert scale used data analysis and eligibility criteria based on the percentages obtained by the following criteria: a)

Category 4, i.e., 80% - 100% (Very Decent); b) Category 3, i.e., 66% - 79% (Eligibility); c) category two, i.e., 56% - 65% (Less Decent) and d) category one, i.e., <55% (Very Less Decent). The results of the student assessment analysis were measured using the same categories and percentages with different qualifications, namely Very Interesting (4), Interesting (3), Less Attractive (2), and Very Less Attractive (1). Data analysis techniques using qualitative and quantitative descriptive analysis. Electronic assessment questionnaire of modules based on goals showed in Table 1.

Material Expert Validation Assessment			
Variable	Indicators	Question Item	Number of questions
Content	A. Suitability of the Material with KD	1,2,3	•
Validation	B. Accuracy of the Material	4,5,6,7,8,9,10,1	
	C. supporting Learning Materials	12,13,14,15,16,17	25
	D. Material Updates	18,19,20,21	
Serving	A. Presentation technique	1,2	33
Validation	B. Serving Supporters	3,4,5,6,7,8,9,10	
	C. Presentation of Learning	11	
	D. completeness of presentation	12,13	
Media Expert Validation Assessment			
Design Validation	A. Physical size of the module	1,2	
	B. Module skin layout	3,4,5,6	33
	C. Typography skin module	7,8,9,10	
	D. Illustration of drawings on modules	11,12,13,14,15, 16	
	E. Audio clarity on modules	22,23,24,25,26, 27	
_	F. Video clarity	30,31,32,33	
Teacher assessment of teaching materials			
Eligibility	A. Suitability of the Material with KD	1,2,3	
aspects of	B. Accuracy of the Material	4,5,6,7,8,9,10,1	
Contents	C. supporting Learning Materials	12,13,14,15,16, 17	
	D. Material Updates	18,19,20,21	35
Durantation	A. Presentation technique	1,2 2,4,5,6,7,0,10	
Presentation	B. Serving Supporters	3,4,5,6,7,8,9,10	
Aspects	C. Presentation of Learning	11 12 12 14	
Droduct Trial	D. completeness of presentation	12,13,14	
Product Inal	Assessment in students	1	
Dicplay	Image clarity	1	
Aspects	The attractiveness of the image	2,3,4 E	
Aspects	Compatibility of the image with the material	5	
	Compatibility of the material	0 7 0 0 10 11	
	Fiese of understanding the material	12	
		12	
Aspects of	Systematic Accuracy	13,14	25
Material	Sentence clarity	15,16	25
Presentation	Clarity of symbols and lambing	17	
	Clarity of terms	18	
	Compatibility of the example with the material	19	
	Ease of learning	20,21	
Benefit	Interest in using the material	22	
	Increased motivation	23,24,25	

## **Table 1.** Electronic Assessment Questionnaire Of Modules Based On Goals

# 3. RESULT AND DISCUSSION

#### Result

This research was conducted directly at SMK Wira Kesuma Jaya, on Jl Perintis Kemerdekaaan Gang Namorat No 99. This vocational school is located in the village, so information technology needs to be improved. SMK Wira Kesuma Jaya has two majors, network computer engineering (TKJ) and

multimedia, with 14 teachers with an average education of Strata 1. This vocational school is the only school that stands in Jati Kesuma Village. The identification results showed that there were 38 students registered with details in the TKJ class X (21 people), class XI (10 people), and class XII (7 people). At the same time, the multimedia department was still nil because the new department was opened.

The results of field identification show that the learning media applied at SMK Wira Kesuma Jaya in PPKn subjects only uses power points (ppt) which are accompanied by the Whatsapp application but need to be carried out regularly. Besides the fact that educators (teachers) have yet to gain experience in the material being managed and taught, teachers need to understand the use and development of learning media to produce interactive and creative learning. As a result, students are reluctant to learn new things due to the condition of educators who cannot attract attention and become examples. Learning through Goggle Classroom is optional because the competence and knowledge of teachers are classified as failing science and technology, so the use of slightly more advanced media is challenging to understand. The material studied, assessment indicators, and expected competence after the learner has completed the learning. Given these issues, it is possible to implement the creation of instructional materials in the form of electronic modules combined with the usage of Google classrooms.

Pancasila and Civic Education (PPKn) teaching materials are essential to improving the quality of PPKn learning and helping students complete it within a certain period. At this stage, an electronic feasibility assessment of the module (e-module) is carried out using the ADDIE model, described as follows. First, *Analysis (A)*. At this point, it aims to pinpoint the issues SMK Wira Kesuma Jaya is now facing. Performance analysis, which is an analysis that tries to clarify the issues schools have so far encountered, is responsible for carrying out this stage. The findings demonstrate that SMK Wira Kesuma Jaya has never used Google Classroom or electronic modules. The following stage involves doing a requirements analysis, which identifies the requirement for creating usable learning resources that students may use to enhance both the quantity and quality of their education. Even if they are not face-to-face, using Google Classroom as a learning space encourages student interaction and produces a secure, inviting, and helpful learning environment. Using Google Classroom for learning media development is crucial for a successful, imaginative, and cutting-edge learning process.

Second, *Design (D)*. In this section, adjustments are made to the problem and establish solutions related to the problem. The design process is set to obtain an overview concerning the product to be developed, with specific specifications applied at this stage. In the design of developing teaching materials through e-modules, what must be done is to ensure that e-modules can be used in Google Classroom and that the e-module creation application used is the book creator application. Third, *Development (D)*. At this point, it is known that the score received in the e-module assessment given is 88 per cent. This is because the development or development of the results of the development of e-module learning media designed using the book creator application, assessed by validators, namely media expert validation and material expert validation, is carried out to state that the material in the e-module is following the material contained in the package book. Meanwhile, the validation of media experts takes the form of validation that rates e-modules. It is well known that 82 per cent of the offered e-assessment module's score was achieved. It meets the criteria and is highly suitable for field use. Displays the e-contents modules and the Cover display Figure Figure 1.



Figure 1. Cover Display and E-Module Contents

Dinda Azzahra / Pancasila And Citizenship Education E-Module Teaching Materials Using Google Classroom for Improving the Quality of Learning

*Fourth, Implementation (1).* At this point, SMK Wira Kesuma Jaya is implementing learning media for both teachers and students. The associated subject instructor conducts an assessment in the first phase, followed by a small-scale trial with the students and a large-scale trial. The instructor who graded the provided e-module gave it a 90 per cent rating in the category "extremely feasible to use in the classroom as teaching material." Then, using two stages of trials, small and large-scale trials, the e-module will be practised in class. The small-scale trial involved at least 30 students (respondents) from SMK Istiqlal Deli Tua. The results obtained by the module learning media product are very feasible with a percentage of 88%. The results of large-scale product testing involved 51 students (respondents) consisting of 30 people from SMK Swasta Istiqlal Deli Tua and 21 from SMK Wira Kesuma Jaya. As a result, the e-module learning media product is very feasible to apply, reaching a percentage of 90%.

Fifth, *Evaluation (E)*. At the final stage, an evaluation is carried out related to the entire process, from analysis to implementation. At this stage, revisions are carried out, developing input and suggestions from various parties, including teachers and students, regarding the designed e-module. Student and teacher responses were obtained suggestions so that every PPKn learning can use e-modules because e-modules are reasonably practical among students. Improvements are needed regarding KDP teachers who teach and are not relevant to their subjects because many educators need good competence. Thus, the standard for being a teacher who can control the classroom cannot only be by teaching the classroom but must have good competence in carrying out his role.

#### Discussion

Instructional media is an essential part of realizing good-quality learning. The more attractive the learning media used, the more students will be able to follow and interpret the material provided, which has implications for improving the quality of learning (Amelia & Harahap, 2021; Azizul et al., 2020; Syahrial et al., 2019). In addition to supporting learning media, the ability and expertise of educators in building a creative learning atmosphere make the information exchange process also better, and this is because teachers not only teach but must be able to provide a comfortable, safe, and quality learning atmosphere by learning outcomes (Filivani & Agung, 2021; Holmqvist, 2019; Susilowati, 2021; Zunidar et al., 2021). Several studies reveal that the better the role of teachers in building a learning atmosphere, the better the quality of learning achieved and produced (Heckie et al., 2012; Ma'arif & Murdiono, 2021; Sukerteyasa, 2021; Turmuzi & Hikmah, 2021).

At SMK Wira Kesuma Jaya, teachers who teach PPKn subjects need to gain relevant knowledge, so learning achievement is meager. Looking at the obstacles faced by the development and use of e-modules is very appropriate to be used as a learning medium because of the ease of access anytime, anywhere, and by anyone (Sugihartini & Jayanta, 2017; Syahrial et al., 2019). The media is beneficial in improving students' understanding (Melda et al., 2021; Mutia et al., 2020). Choosing the right and practical media has implications for students' ease of taking lessons. In addition, the choice of Google Classroom as a platform to implement e-modules as teaching materials is very appropriate, in addition to being easy to use, useful in governance, and accessible to everyone. Google Classroom helps students and educators deliver virtual face-to-face learning and is accompanied by the ease of use of supporting elements such as e-modules, videos, online exams, and group assignments (Saregar et al., 2021; Suhayati, 2021; Suparno et al., 2022; Zuriah, 2020). The utilization of Google Classroom aims to give students a comfortable learning environment.

Google Classroom is a learning application that involves the internet network in the process and can be used by students and teachers who enter the classroom (Ghofur, 2018; Johnston, 2017; Kriswibowo et al., 2017; Marbun & Sinaga, 2021). Classes in Google Classroom are actual classes in virtual lectures. To join google *classroom*, each individual must have a *G-mail, document, and google drive* account to help educators to create more creative and practical online classes (Hartnett & Koury, 2012; Yates & Twigg, 2017). Anyone using Google Apps for Education, a collection of cost-free productivity tools that includes Gmail, Docs, and Drive, can access the app. According to numerous research, using Google Classrooms as learning spaces can enhance student learning results (Ma'arif & Murdiono, 2021; Sukerteyasa, 2021; Windu, 2021); learning motivation (Suhayati, 2021; Turmuzi & Hikmah, 2021), and improve the quality of learning obtained. Google Classroom is very feasible to use if the teacher can operate it well (Nuryatin et al., 2023; Ramadhani et al., 2019).

Through online media, particularly Google Classroom, the teaching and learning process is facilitated by numerous advantages and conveniences. The research discovered a substantial difference between self-study modules' problem-solving and critical-thinking skill analyses and online learning via Google Classroom (Sombria et al., 2023). Online learning boosts the critical thinking skills of students in comparison to the modular approach. Moreover, incorporating and deploying e-modules in the learning process might motivate students to study, which has implications for enhancing quality and learning

outcomes. E-modules are simple to comprehend, simple to use, visually appealing, and straightforward to recall during the learning process (Kimianti & Prasetyo, 2019; Priantini & Widiastuti, 2021; Syahrial et al., 2021). The videos in the e-module would enhance students' comprehension, and the integration with Google Classrooms will make it easier for students to access the content anywhere, at any time. In addition to the use of google classrooms, e-modules are one of the learning media that are very helpful in developing teaching materials because, based on Dale's learning experience cone theory, states that the higher the location of a type of media in the cone, the higher the degree of abstraction (Filivani & Agung, 2021; Melda et al., 2021; Mutia et al., 2020; Sugihartini & Jayanta, 2017).

Through the cone, Edgar Dale shows the quality contained in the e-module in it presents media in the form of images and videos that show a figure of 30% with a visual engagement rate; then, in the e-module, there are *talking stick games*, and it means that students are involved in role-playing and show the number 90%. So, e-modules are feasible and recommended for improving students' learning experience because students can quickly receive lessons visually and involve learners in the learning process. In the digital era, teachers are needed who can change the classroom atmosphere to be innovative by utilizing learning media through technological sophistication (Parini, 2022)(Silalahi & Hutauruk, 2020; Sukerteyasa, 2021; Supraweti, 2021). Creative learning media helps improve students' understanding, including the quality of learning obtained (Filivani & Agung, 2021; Holmqvist, 2019; Mossberger et al., 2007; Zaliluddin et al., 2021).

## 4. CONCLUSION

The results demonstrate that using Google Classrooms to provide e-modules can enhance the learning experience for students at SMK Swasta Wira Kesuma Jaya. Because of this, the e-module used as teaching material for the Pancasila and Citizenship Education (PPKn) subject was able to provide excellent scores of up to 90%, which shows that the e-module designed and used in conjunction with the Google Classroom can pique students' interest in the teaching and learning process. Future study relating to the usage of e-modules on various teaching platforms is required, focusing on Pancasila and Civic Education (PPKn).

# 5. ACKNOWLEDGE

The author would like to thank classmates for the 2022 PPKn UNP Masters Program and PT. Mega Science Indonesia for proofreading the manuscript, so it is fit for publication

#### 6. REFERENCES

- Al-Maroof, R. A. S., & Al-Emran, M. (2018). Students acceptance of google classroom: An exploratory study using PLS-SEM approach. *International Journal of Emerging Technologies in Learning*, 13(6), 112– 123. https://doi.org/10.3991/ijet.v13i06.8275.
- Alimin, F. G., & Saad, M. S. M. (2019). The Effectiveness of Google Classroom as an Instructional Media: A Case of State Islamic Institute of Kendari, Indonesia. *Journal of Humanities and Social Sciences*, 7(2). https://doi.org/10/18510/hssr.2019.7227.
- Amelia, D. P., & Harahap, A. (2021). Application of Interactive Multimedia-Based Mathematics Learning Media to Increase Students' Interest in Learning. *Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences*, 4(2), 3153–3161. https://doi.org/10.33258/birci.v4i2.2040.
- Amrina, R., & Sundari, H. (2021). Learning from Home Environment: Academic Writing Course for EFL Undergraduates through Google Classroom Application. *Studies in English Language and Education*, 8(2), 710–725. https://doi.org/10.24815/siele.v8i2.18374.
- Azizul, A., Riski, W. Y., Fitriyani, D. I., & Sari, I. N. (2020). Pengembangan Bahan Ajar Komik Digital Pada Mater Gerak. Vox Edokasi: Jurnal Ilmiah Ilmu Pendidikan, 11(2). https://doi.org/10.31932/ve.v11i2.829.
- Darwin, M., Mamondol, M. R., Sormin, S. A., Nurhayati, Y., Tambunan, H., Sylvia, D., & Gebang, A. A. (2021). *Quantitative approach research method* (T. S. T. ed. & Ed) (reds); 1st ed). CV Media Sains Indonesia.
- Durrani, U. K., Al Naymat, G., Ayoubi, R. M., Kamal, M. M., & Hussain, H. (2022). Gamified flipped classroom versus traditional classroom learning: Which approach is more efficient in business education? *International Journal of Management Education*, 20(1), 100595. https://doi.org/10.1016/j.ijme.2021.100595.

- Dwi Lestari, H., & Putu Parmiti, D. P. P. (2020). Pengembangan E-Modul IPA Bermuatan Tes Online Untuk Meningkatkan Hasil Belajar. *Journal of Education Technology*, 4(1), 73. https://doi.org/10.23887/jet.v4i1.24095.
- Dziuban, Graham, C. R., Moskal, P. D., Norberg, A., & Sicilia, N. (2018). Blended Learning: The New Normal and Emerging Technologies. *International Journal of Educational Technology in Higher Education*, *15*(3), 1–16.
- Filivani, P. N., & Agung, A. A. G. (2021). Developing E-Book Contained Character Values in PPKn Lesson Content Grade V Elementary School. *Journal of Education Technology*, 5(1). https://doi.org/10.23887/jet.v5i1.32047.
- Ghofur, A. (2018). Using Google Classroom On Inquiry Based Learning to Improve Students'learning Participation. *Jurnal Penelitian Pendidikan*, *10*(2), 1503–1509.
- Ginanjar, A., Putri, N. A., Nisa, A. S., Hermanto, F., & Mewangi, A. B. (2019). Implementasi Literasi Digital Dalam Proses Pembelajaran Ips Di Smp Al-Azhar 29 Semarang. *Harmony*, *4*(2), 99–105.
- Guswara, A. M. (2020). The Contribution of Google Classroom Application and Motivation to The Learning Outcomes of Web Programming. *Educational Technology*, 4(4), 1–9. https://doi.org/10.23887/jet.v4i4.29896.
- Hanesty, E., Neviyarni, N., & Karneli, Y. (2020). Factors affecting student learning motivation during the Covid-19 pandemic. *International Journal of Applied Counseling and Social Sciences*, 02(1), 100– 107. https://doi.org/10.24036/005404ijaccs.
- Hapsari, S. A., & Pamungkas, H. (2019). Pemanfaatan Google Classroom Sebagai Media Pembelajaran Online Di Universitas Dian Nuswantoro. WACANA: Jurnal Ilmiah Ilmu Komunikasi, 18(2). https://doi.org/10.32509/wacana.v18i2.924.
- Hartnett, E., & Koury, R. (2012). Using Google Apps Through the Electronic Resource Life Cycle. *Collection Management*, *37*(1), 47–54. https://doi.org/10.1080/01462679.2012.629600.
- Heckie, D., Jati, P., & Mediatati, N. (2012). Upaya Peningkatan Hasil Belajar PPKn Melalui Aplikasi Quizizz. *Journal of Education Action Research*, 6(3), 383–389. https://doi.org/10.23887/jear.v6i3.50348.
- Heggart, K., & Yoo, J. (2022). Getting the most from google classroom: a pedagogical framework for tertiary educators. *Australian Journal of Teacher Education*, 43(3), 140–153. https://doi.org/10.14221/ajte.2018v43n3.9.
- Holmqvist, M. (2019). Lack of qualified teachers: a global challenge for future knowledge development. In *in teacher education in the 21st century* (bll 1–13). https://doi.org/10.5772/intechopen.83417.
- Ichsan, I. Z., Rahmayanti, H., Purwanto, A., Sigit, D. V, Kurniawan, E., Dewi, A. K., & Marhento, G. (2020). COVID-19 and e-learning: changes in science and environment learning strategies in junior high schools. *JINoP: Journal of Learning Innovation*, 6(1), 50–58. https://doi.org/10.22219/jinop.v6i1.11791.
- Johnston, A. Y. & M. (2017). The impact of school-based assessment for qualifications on teachers' conceptions of assessment. 638–654. https://doi.org/10.1080/0969594X.2017.1295020.
- Kimianti, F., & Prasetyo, Z. K. (2019). Pengembangan E-Modul Ipa Berbasis Problem Based Learning Untuk Meningkatkan Literasi Sains Siswa. *Kwangsan: Jurnal Teknologi Pendidikan*, 7(2), 91. https://doi.org/10.31800/jtp.kw.v7n2.p91--103.
- Kitchen, R., & Berk, S. (2016). Educational technology: an equity challenge to the common core. *Journal for Research in Mathematics Education*, 47(1), 3–16. https://doi.org/10.5951/jresematheduc.47.1.0003.
- Kristanto, A., Mustaji, & Mariono, A. (2017). The development of instructional materials e-learning based on blended learning. *Journal International Education Studies*, 10(7), 10–17. https://doi.org/10.5539/ies.v10n7p10.
- Kriswibowo, A., Harsanto, B. T., & Kurniasih, D. (2017). Upaya Meningkatkan Kinerja Pegawai Kantor Perpustakaan Dan Arsip Daerah Kabupaten Banyumas. *Jurnal Dinamika Governance*, 7(2). https://doi.org/10.33005/jdg.v7i2.1205.
- Kumar, J. A., Bervell, B., & Osman, S. (2020). Google classroom : insights from Malaysian higher education students ' and instructors ' experiences. *Education and Information Technologies*, 25. https://doi.org/10.1007/s10639-020-10163-x.
- Kurniawati, M., Santanapurba, H., & Kusumawati, E. (2019). Penerapan Blended Learning Menggunakan Model Flipped Classroom Berbantuan Google Classroom Dalam Pembelajaran Matematika Smp. *EDU-MAT: Jurnal Pendidikan Matematika*, 7(1), 8–19. https://doi.org/10.20527/edumat.v7i1.6827.
- Ma'arif, M., & Murdiono, M. (2021). Pengaruh Pemanfaatan Aplikasi Google Classroom Terhadap Karakter Kemandirian dan Hasil Belajar Peserta Didik di Sekolah Menengah Pertama. *Belantika Pendidikan*, 4(1), 21–28. https://doi.org/10.47213/bp.v4i1.104.

- Maharani, Y. S. (2015). Efektivitas Multimedia Pembelajaran Interaktif Berbasis Kurikulum 2013. *Indonesian Journal of Curriculum and Educational Technology Studies*, *3*(1), 31–40. https://doi.org/10.15294/ijcets.v3i1.8683.
- Marbun, J., & Sinaga, S. J. (2021). Pemanfaatan Aplikasi Google Classroom dalam Meningkatkan Efektivitas Belajar Mahasiswa Berbasis Daring di Masa Pandemik Covid-19. *Jurnal Basicedu*, *5*(5), 3299– 3305. https://doi.org/10.31004/basicedu.v5i5.1326.
- Megeid, N. S. A. (2014). E-Learning versus Blended Learning in Accounting Courses. *Quarterly Review of Distance Education*, 15(2), 35–55.
- Melda, F., Hilda Putri, D., & Hamka Air Tawar Barat, J. (2021). Development of microbiology learning animation videos for biology students at padang state university. *International Journal of Progressive Sciences and Technologies (IJPSAT, 26*(1), 46–53. https://doi.org/10.52155/ijpsat.v26.1.2938.
- Mertha Adnyana, I. M. D., & Sudaryati, N. L. G. (2022). The potency of green education-based blended learning in biology students at the Hindu University of Indonesia. *BIO-INOVED: Jurnal Biologi-Inovasi Pendidikan*, 4(1), 1–9. https://doi.org/10.20527/bino.v4i1.11047.
- Meşe, E., & Sevilen, Ç. (2021). Factors influencing EFL students' motivation in online learning: A qualitative case study. *Journal of Educational Technology & Online Learning*, 4(1), 11–22. https://doi.org/10.31681/jetol.817680.
- Mossberger, K., Tolbert, C. J., & McNeal, R. S. (2007). *Digital citizenship: The Internet, society, and participation*. MIt Press.
- Mulyatiningsih, E., & Nuryanto, A. (2014). Metode penelitian terapan bidang pendidikan.
- Mutia, L., Gimin, G., & Mahdum, M. (2020). Development of blog-based audio-visual learning media to improve student learning interests in money and banking topic. *Journal of Educational Sciences*, 4(2), 436. https://doi.org/10.31258/jes.4.2.p.436-448.
- Nainggolan, A. P., & Manalu, R. B. B. (2021). Pengaruh Penggunaan Google Classroom Terhadap Efektifitas Pembelajaran. *Journal Coaching Education Sports*, 2(1), 17–30. https://doi.org/10.31599/jces.v2i1.515.
- Nenotaek, B., Sujadi, I., & Subanti, S. (2019). The Difficulties in Implementing Scientific Approach for Mathematics Learning. *International Journal of Educational Research Review*. https://doi.org/10.24331/ijere.628448.
- Nursyahrina, H., Retami, L. H., Pratama, R., Salsabil, S. P., & Ihsan, M. T. (2021). The use of google classroom in english teaching and learning process at senior high school level. *Jurnal Riset Dan Inovasi Pembelajaran*, 1(2), 123–133. https://doi.org/10.51574/jrip.v1i2.41.
- Nuryatin, A., Rokhmansyah, A., Hawa, A. M., Rahmayanti, I., & Nugroho, B. A. (2023). Google Classroom as an Online Learning Media for Indonesian Language Learning During COVID-19 Pandemic. *Journal* of Language Teaching and Research, 14(1), 255–262. https://doi.org/10.17507/jltr.1401.27.
- Parini, P. (2022). Application of cai method in tajwid science learning media applications multimedia based. JURTEKSI (Jurnal Teknologi Dan Sistem Informasi, 8(2), 203–208. https://doi.org/10.33330/jurteksi.v8i2.1595.
- Pratiwi, V. D., & Wuryandani, W. (2020). Effect of Problem Based Learning (PBL) Models on Motivation and Learning Outcomes in Learning Civic Education. *JPI (Jurnal Pendidikan Indonesia)*, 9(3), 401. https://doi.org/10.23887/jpi-undiksha.v9i3.21565.
- Priantini, D. A. M. M. O., & Widiastuti, N. L. G. K. (2021). How Effective is Learning Style Material with Emodules During The COVID-19 Pandemic? *Jurnal Ilmiah Sekolah Dasar*, 5(2), 307–314. https://doi.org/10.23887/jisd.v5i2.37687.
- Ramadhani, R., Umam, R., Abdurrahman, A., & Syazali, M. (2019). The effect of flipped-problem based learning model integrated with LMS-google classroom for senior high school students. *Journal for the Education of Gifted Young Scientists*, 7(2), 137–158. https://doi.org/10.17478/jegys.548350.
- Saad, A., & Zainudin, S. (2022). A review of Project-Based Learning (PBL) and Computational Thinking (CT) in teaching and learning. *Learning and Motivation*, 78(December 2021), 101802. https://doi.org/10.1016/j.lmot.2022.101802.
- Saregar, A., Cahyanti, U. N., Misbah, Susilowati, N. E., Anugrah, A., & Muhammad, N. (2021). Core learning model: Its effectiveness towards students' creative thinking. *International Journal of Evaluation* and Research in Education, 10(1), 35–41. https://doi.org/10.11591/ijere.v10i1.20813.
- Silalahi, T. F., & Hutauruk, A. F. (2020). The Application of Cooperative Learning Model during Online Learning in the Pandemic Period. *Budapest International Research and Critics Institute: Humanities and Social Sciences*, *3*(3), 1683–1691. https://doi.org/10.33258/birci.v3i3.1100.
- Silva, A. B. Da, Bispo, A. C. K. de A., Rodriguez, D. G., & Vasquez, F. I. F. (2018). Problem-based learning: A proposal for structuring PBL and its implications for learning among students in an

undergraduate management degree program. *REGE Revista de Gestão*, 25(2), 160–177. https://doi.org/10.1108/REGE-03-2018-030.

- Sombria, K. J. F., Celestial, D. L., Jalagat, C. G. M., & Valdez, A. G. (2023). Online Learning Through Google Classroom: Effects on Students Critical Thinking Skills in Chemistry. *ASEAN Journal of Science and Engineering Education*, *3*(2), 193–210. https://doi.org/10.17509/ajsee.v3i2.49794.
- Sugihartini, N., & Jayanta, N. L. (2017). Pengembangan E-Modul Mata Kuliah Strategi Pembelajaran. Jurnal Pendidikan Teknologi dan Kejuruan, 14(2). https://doi.org/10.23887/jptk-undiksha.v14i2.11830.
- Suhayati, U. (2021). Pengaruh Pembelajaran Daring Dengan Menggunakan Aplikasi Google Classroom dan Motivasi Terhadap Hasil Belajar Siswa. *Jurnal Teknologi Pendidikan Dan Pembelajaran*, 8(1), 1–16.
- Sukerteyasa, I. P. (2021). Upaya Meningkatkan Hasil Belajar PPKn Peserta Didik Melalui Penerapan Model PBL Pada Materi Peran Indonesia Dalam Perdamaian Dunia Di Kelas XI IPS 4 SMA Negeri 2 Denpasar. Jurnal Pendidikan Kewarganegaraan Undiksha, 9(1), 81–88. https://doi.org/10.23887/jpku.v9i1.31430.
- Suparno, S., Hermanto, H., Sukinah, S., Prabawati, W., Putri Sarwendah, A., Rasita Dewi, G., & Mumpuniarti, M. (2022). Handling behavior problems of children with special educational needs based on teacher analysis. *Journal of Education and Learning (EduLearn, 16*(4), 484–492. https://doi.org/10.11591/edulearn.v16i4.20484.
- Supraweti, E. (2021). Penggunaan Media Pembelajaran Google Clasroom Untuk Menigkatkan Kemampuan Siswa Pada Mata Pelajaran Ppkn Dengan Materi Hak Asasi Manusia. *EDUTECH: Jurnal Inovasi Pendidikan Berbantuan Teknologi*, 1(3), 210–219. https://doi.org/10.51878/edutech.v1i3.676.
- Suryani, Y., Ningrum, A. R., Hidayah, N., & Dewi, N. R. (2021). The effectiveness of blended learning-based scaffolding strategy assisted by google classroom toward the learning outcomes and students' self-efficacy. *IOP Conference Series: Earth and Environmental Science*, 12031. https://doi.org/10.1088/1742-6596/1796/1/012031.
- Susilowati, E. (2021). Comparison of WhatsApp and Google Classroom Group Online Learning Models to Student Learning Outcomes. *Journal of Medives: Journal of Mathematics Education IKIP Veteran Semarang*, 5(1), 61. https://doi.org/10.31331/medivesveteran.v5i1.1436.
- Syahrial, Asrial, Kurniawan, D. A., & Piyana, S. O. (2019). E-Modul Etnokontruktivisme: Implementasi Pada Kelas V Sekolah Dasar Ditinjau Dari Persepsi, Minat Dan Motivasi. *JTP Jurnal Teknologi Pendidikan*, *21*(2), 165–177. https://doi.org/10.21009/jtp.v21i2.11030.
- Syahrial, S., Asrial, A., Kurniawan, D. A., & Damayanti, L. (2021). Comparison of Print Modules and E-Modules to the Tolerance Character of Students. *International Journal of Elementary Education*, 5(2), 298. https://doi.org/10.23887/ijee.v5i2.34351.
- Tarteer, S., Badah, A., & Khlaif, Z. N. (2021). Employing google classroom to teach female students during the COVID-19 Pandemic. *Computers in the Schools*, *38*(4), 300–321. https://doi.org/10.1080/07380569.2021.1988318.
- Turmuzi, M., & Hikmah, N. (2021). Hubungan pembelajaran daring google classroom pada masa COVID-19 dan motivasi belajar terhadap hasil belajar mahasiswa pendidikan matematika. *Jurnal Cendekia: Jurnal Pendidikan Matematika*, *05*(02), 1512–1523. https://doi.org/10.31004/cendekia.v5i2.667.
- Windu, I. G. N. A. (2021). Peningkatan Hasil Belajar Siswa pada Mata Pelajaran Pkn dengan Pembelajaran Direct Instruction berbantukan Google Classroom. *Jurnal Pendidikan Edutama*, 8(2), 1–14. https://doi.org/10.30734/jpe.v8i2.1715.
- Yates, E., & Twigg, E. (2017). Developing creativity in early childhood studies students. *Thinking Skills and Creativity*, 23. https://doi.org/10.1016/j.tsc.2016.11.001.
- Zaliluddin, D., Bastian, A., & Ramdani, A. (2021). Media Development Learning Game Al-Qur'an Interactive Multimedia Based. *Proceedings of the 1st International Conference on Islam, Science and Technology, ICONISTECH 2019.* https://doi.org/10.4108/eai.11-7-2019.2297421.
- Zunidar, S., S., & Abdul, H. K. (2021). Development of Contextual Teaching Learning Model Based on Blended Learning. *Proceedings of the 6th Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2021, 591*(2). https://doi.org/10.2991/assehr.k.211110.054.
- Zuriah, N. (2020). Strategy for implementing blended learning with google classroom during the COVID-19 pandemic era in higher education. *Proceedings of the International Conference on Community Development (ICCD 2020, 477, 559–563. https://doi.org/10.2991/assehr.k.201017.124.*