

# The Character of Students' Love for Their Homeland on Electronic Modules Assisted by Assemblr Edu in Learning

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## ARTICLE INFO

## ABSTRAK

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This is an open access article under the <u>CC BY-SA</u> license. Copyright © 2023 by Author. Published by Universitas Pendidikan Ganesha. Permasalahan saat ini yaitu karakter cinta tanah air masih rendah. Rendahkan karakter cinta tanah air berdampak pada perilaku siswa yang tidak baik. Dalam pembelajaran dibutuhkan berbagai jenis media untuk mendorong siswa belajar. Tujuan dari penelitian ini adalah untuk menganalisis pengaruh siswa terhadap karakter cinta tanah air dengan menggunakan modul elektronik. Penelitian ini menggunakan jenis penelitian kuantitatif. Subyek penelitian diambil sebanyak 19 orang dari masing-masing kelas. Metode pengumpulan data menggunakan observasi, dan angket. Instrumen yang digunakan dalam penelitian ini adalah lembar angket. Penelitian ini menggunakan teknik acak sederhana. Analisis data yang digunakan adalah uji T, uji regresi dan uji statistik deskriptif. Hasil penelitian menunjukkan bahwa terdapat pengaruh antara penggunaan e-modul dengan karakter cinta tanah air pada siswa. Disimpulkan bahwa penggunaan emodul dapat meningkatkan karakter cinta tanah air pada siswa. Semakin baik dan semakin banyak modul elektronik yang memuat alam dan suasana di Indonesia maka rasa cinta tanah air siswa akan semakin meningkat.

#### ABSTRACT

The current problem is that the character of loving the homeland still needs to be higher. Lowering the character of love for the motherland impacts student behaviour which is not good. Various types of media are needed to encourage students to learn. The purpose of this study was to analyze the influence of students on the character of loving the motherland by using an electronic module. This study uses a type of quantitative research. The research subjects were taken as many as 19 people from each class. Methods of data collection using observation and questionnaires. The instrument used in this study was a questionnaire sheet. This study uses a simple random technique. The data analysis used was the T-test, regression, and descriptive statistical tests. The study results show an influence between the use of e-modules and the character of loving the motherland in students. It was concluded that using e-modules can improve students' character of loving the motherland. The better and more electronic modules containing nature and the atmosphere in Indonesia, the more the student's sense of love for their homeland will increase.

#### 1. INTRODUCTION

Education is the main key for a country to excel in global competition. Education is considered as the most strategic field to achieve national welfare (Budiarti et al., 2022; Firdaus & Wilujeng, 2018; Sukmasari & Rosana, 2017). Intelligent and characterized Human Resources (HR) is a prerequisite for the formation of a high civilization. Conversely, low human resources will produce a civilization that is not good either (Argarini, 2018; Elvanisi et al., 2018; Marzuki & Hakim, 2019). The quality of education in Indonesia is not much different from other developing countries. Although there are some things that are left behind, that does not mean that education in this island nation is not good. There is one way so that the goals in education are achieved as expected, namely by making learning media.

Learning media requires various types of media to encourage students to learn. Learning media is one of the methods or tools used in teaching and learning activities (Hekmah et al., 2019; Muhajir et al., 2019; Riyadi & Qamar, 2017). This is done to stimulate learning patterns, support the process of successful teaching and learning, and enable teaching and learning activities to achieve their goals effectively. There are various types of learning media available. And in this modern era, the role of technology has entered many aspects, including in the world of education (Hertiavi, 2020; Nurzaelani et al., 2018; Rumapea, 2018). One of the challenges of learning media is to arouse students' interest in the learning material presented. One of the learning media created to attract students' interest is an electronic module.

A module is a collection of subject matter used by students for independent study, which is studied in stages and thoroughly, systematically arranged, supplemented by assignments, exercises or evaluation materials, as well as other supporting materials to support the learning process in certain subjects (Herawati & Muhtadi, 2018; Seruni et al., 2019). e-Modules are modifications of conventional modules by integrating the use of information technology, so that existing modules can be more interesting and interactive. Because with e-Modules we can add multimedia facilities (images, animations, audio and video) in it (Gunawan, 2020; Puspitasari, 2019; Riyadi & Qamar, 2017). Assemblr EDU is a platform that allows you to create more interactive, collaborative & fun learning activities with 3D & AR. Upload files, write notes, share visuals, and create your 3D & AR in class - all we have to equip you. The reason why you should use Assemblr EDU for education is because it is visual based, easy to understand, unlimited material, encourages creativity. Based on visuals, that most of the human brain is dedicated only to digest visuals. We can also add interactive test or evaluation facilities so that students can interact more with their learning resources and besides that they can also foster the character of loving the motherland. Love for the motherland is defined as a sense of pride, belonging, respect, respect and loyalty that each individual has in the country where he lives is reflected in the behavior of defending, guarding, protecting, willing to sacrifice for the interests of the nation, loving and preserving customs or traditions (Novelyya, 2019; Wisnarni, 2017; Zainul et al., 2018). culture as well as the nature and environment of a country. A sense of love for the motherland needs to be cultivated in the soul of every individual who is a citizen of a country or nation so that common national goals are achieved (Hamidah & Palupi, 2012; Mira & Zulkarnen, 2008; Saputri & Mukmin, 2021).

This research is in line with previous research on electronic modules. Previous research describes the Development of Collaborative Interactive E-Modules (Albana & Sujarwo, 2021; Rahmatsyah & Dwiningsih, 2021). In addition to previous research regarding the character of loving the homeland, where previous research discussed the development of the character of loving the homeland (Priyoutomo, 2016; Sopiah, 2021). This study has limitations, researchers only conduct research with the character of a sense of love for the homeland to students. The novelty of this study is that researchers examine the character of students' love for their homeland by using e-modules in learning, so that in this case students can grow these characters from the electronic modules that have been designed.

This is important because the character of love for the motherland is still low. So that an interactive e-module is formed that can foster a sense of love for the homeland of students in learning. The purpose of this study was to analyze the comparative influence of students on the character of loving the motherland by using an electronic module. In addition, to know the description of the character of love for the country towards the electronic modules used.

## 2. METHOD

This study uses a type of quantitative research. Where this quantitative research is used to produce systematic data (Banks et al., 2018; Parreira et al., 2020). Retrieval of different data in each type of research also adds more significant results. Quantitative research is more about results in the form of numbers or systematically so that testing is needed (Firmansyah et al., 2021; Siyoto & Sodik, 2015). The sample population taken in conducting this research was students in grades 4 and 5 from SDN 34 Batang Hari and SDN 64 Muara Bulian. With research subjects taken as many as 19 Orang from each class. The total number is 76 students. Population is an individual unit with its characteristics to be studied. In contrast to the sample, the subjects studied were nearly half of the population subjects

The instrument used in this study was a questionnaire sheet. The questionnaire has instructive properties with the aim of measuring knowledge that has not been validated systematically (Sun et al., 2018; Vansteensel et al., 2017). The grid used in the questionnaire instrument is the love of the land for water students in science subjects showed in Table 1. This student e-module questionnaire has a total of 52 questions given to students. The intervals for the category of students' love for the country and water showed in Table 2.

An indicator of love for the motherland	Total question
Contribute to the progress of the nation and state.	26
His body and soul are proud to be Indonesian	26
Total	52

Table 1. The Lattice of the Character Instruments of Love for the Motherland

	Interval Indikator					
Categori	His soul and body are proud as Contribute to the progress of the Indonesian people Contributing to the nation and state. progress of the nation and state					
Not very good	26-46.8	26-46.8				
Not good	46.9-67.6	46.9-67.6				
Enough	67.7-88.4	67.7-88.4				
Well	88.5-109.2	88.5-109.2				
Very good	109.3-130	109.3-130				

#### **Table 2.** Student E-Module Categories and Intervals

This study used a simple random technique. This simple random technique will provide a better estimate (Ning & Tao, 2020). In addition, researchers use this technique because data collection is random and simple. Students from grades 4 and 5 will answer the questionnaire on love of the country variable. From filling it already has a score which will be processed first. So that if you have obtained the data, the researcher can proceed to the data processing stage.

From the type of research model carried out on the quantitative type, the testing phase will be carried out. The testing phase consists of descriptive statistical testing, hypothesis testing and assumption testing. After the data has passed several requirements in data testing, the results of the test will be obtained. In this way, a conclusion will be drawn at the end.

## 3. RESULT AND DISCUSSION

#### Result

The results of the data analysis showed that the character module found that the student categories ranged from good enough to very good on the asking and finding indicators. The more dominant percentage value shows it. Normality Test showed in Table 3.

## Table 3. Normality Test

	Kolmogorov-Smirnova			S	Shapiro-Wi	lk
	Statistic	df	Sig.	Statistic	df	Sig.
love the motherland4	0.082	48	0.200	0.970	19	0.397
love the motherland5	0.127	48	0.137	0.959	19	0.185
E-modul 4	0.128	48	0.172	0.944	19	0.083
E-modul 5	0.122	48	0.200*	0.977	19	0.684

The explanation of Table 3, it is explained that the data used is normal data. The significant value obtained is more than 0.05 so that the data is said to be normal because it is in accordance with the applicable provisions. Linearity Test showed in Table 4. From the linearity test obtained in Table 4 it explains that the data used is linear data. The linear data is shown from the significant results of Deviation from Linearity which is obtained more than 0.05. Homogeneity Test showed in Table 5.

#### Table 4. Linearity Test

			Sum of Squares	df	Mean Square	F	Sig.
love the	Between	(Combined)	1551.167	96	81.640	3.045	0.998
motherland *	Groups	Linearity	319.504	1	319.504	11.918	0.315
E-modul_4		Deviation	1231.663	18	68.426	2.552	0.980
		from					
		Linearity					
	Withi	n Groups	375.333	14	26.810		
	Т	'otal	1926.500	33			
	Between	(Combined)	696.363	96	38.687	1.652	0.165
	Groups	Linearity	3.471	1	3.471	.148	0.706

		Sum of Squares	df	Mean Square	F	Sig.
love the motherland * E-modul_ 5	Deviation from Linearity	692.892	17	40.758	1.741	0.143
Wit	hin Groups	351.167	15	23.411		
Tot	al	1047.529	33			

## Table 5. Homogeneity Test

		Levene Statistic	df1	df2	Sig.
love the	Based on Mean	0.075	1	96	0.785
motherland	Based on Median	0.146	1	96	0.704
	Based on Median and with adjusted df	0.146	1	91.991	0.704
	Based on trimmed mean	0.132	1	96	0.717
E-modul	Based on Mean	1.078	1	96	0.303
	Based on Median	0.998	1	96	0.321
	Based on Median and with adjusted df	0.998	1	96.868	0.322
	Based on trimmed mean	1.049	1	96	0.309

The homogeneity test in Table 5 explains that the data used on the love of the motherland character and the e-module in students are homogeneous. This is made clear by the significant results obtained at more than 0.05. T-test results are presented in Table 6.

## Table 6. T Test

VARIABLE	Sig.	Sig. (2-tailed)
love the motherland 4	0.039	0.008
love the motherland 5	0.013	0.030
E-modul 4	0.048	0.042
E-modul 5	0.049	0.015

Based on the results of the T test in Table 6, it is explained that there is a comparison of the characters from each class. This is obtained from a significant value of no more than 0.05. Based on the results it was found that the R square results obtained by the love of the motherland character and the student e-module were, R square  $062 \times 100 = 62\%$ . Based on Hypothesis regression test with ANOVA on the character of love for the homeland and student e-modules, the significant value obtained is .042 so this shows that the significant value obtained is <0.005. Regression test of the character of love for the motherland and student e-module and student e-modules above, the character of love for the motherland and student e-module is .005. Regression test of the character and e-module have an influence on the use of the e-module used. This is evidenced by the significant value obtained not more than 0.05.

## Table 7. Regression Test of the Character of Love for the Motherland and Student E-Modules

Model	Unstandardized Coefficients				Standardized Coefficients	t	sig
-	В	Std. Error	Beta				
love the motherland	66.897	13.753		4.834	0.000		
><	0.153	0.169	0.384	0.876	0.046		
E-modul							

## Discussion

The results of the description carried out are that SDN 64 Muaro Bulian has an advantage in the character of a sense of love for the motherland. Where the indicator asked the results obtained by 37% for class 4 and 52% in the good category. This shows that students have an interest in asking well. Meanwhile, the indicators found that SDN 64 Muaro Bulian was superior. This is shown by the results obtained by 57% percent in the good and good enough categories. So that the two indicators explain that SDN 64 Muaro

Bulian has a character of loving the homeland which is better in the use of e-modules in the teaching and learning process than SDN 34 Batang Hari.

Tests carried out on the hypothesis test explained that the data were normally distributed with significant values of 0.200, 0.137, 0.172, 0.200. With these significant values in accordance with the provisions that had been determined where the significant value generated in this normality test must be more than 0.05. Continuing with the homogeneity test obtained on the basis of a mean of 0.704 in the love of the country variable and 0.303 in the e-module. this shows that the data used produces the same variance. Furthermore, in the linearity test, it was found that the data used were linear with each other. So that after testing the assumptions, it can be continued with hypothesis testing if it is in accordance with the applicable provisions.

The hypothesis test used is the T test which produces a significant value. Where in this explanation there are differences obtained from students at SDN 34 Batang Hari and SDN 64 Batang Hari. Where SDN 64 Batang Hari is superior in the character of love for the motherland in the use of electronic modules in the teaching and learning process. The formation of the character of loving the motherland in students at SDN 64 Batang Hari is more prominent in terms of contributing to the progress of the nation and state, such as learning to practice good attitudes (Ahsani & Azizah, 2021; Grosvenor & Pataki, 2017; Ikhsan, 2017). so that later students who learn the character of love for the motherland since childhood will have an impact on the progress of the nation and state. Apart from that, this indicator of the soul and body of the nation as the Indonesian nation is shown from the good use of the Indonesian language (Dishon, 2021; Mardiyah, 2017; Priyoutomo, 2016). So that in the use of Indonesian students will be better.

The resulting regression test is obtained according to the applicable provisions. Where are the significant results obtained that there is an influence between the use of the e-module and the character of loving the motherland in students. The electronic module used can foster students' love for their homeland because there are several features used in making electronic modules and explaining the shape of Indonesia. This is in accordance with previous findings which state that electronic modules can increase student motivation (Darwis et al., 2020; Hafsah et al., 2016; Herawati & Muhtadi, 2018). The better and the more electronic modules containing about nature and the atmosphere in Indonesia, the more the students' sense of love for the motherland will increase. Other findings also state that E-modules can improve student learning outcomes (Asrial et al., 2020; Darwis et al., 2020; Hafsah et al., 2016). Because this electronic module can attract students' dance so they can focus more on learning,

The long-term impact on the character of the love for the motherland that students have will affect the attitudes they have as adults. One of the characters that students will have as adults is to defend the Indonesian state and be willing to sacrifice (Andrinata et al., 2016; Ikhsan, 2017). The attitude of love for the homeland and the nation of Indonesia is a positive attitude that supports the process of national integration. Instilling an attitude like this is aimed at the younger generation, besides having a positive impact on the nation, it also has a positive impact on themselves, as well as a positive impact on others. So as much as possible we must have a positive way of thinking so that it will be easier for Indonesia to find new innovations that will make Indonesia proud in any part of the world (Gleason, 2018; Grosvenor & Pataki, 2017; Jack & Lin, 2017). Conversely, if our way of thinking tends to be negative then the name of the Indonesian nation will also be tarnished.

## 4. CONCLUSION

The research conducted shows that there is an influence between the use of e-modules and the character of a sense of patriotism in students. This can be seen in the test results that have been carried out. The better and the more electronic modules that contain nature and the atmosphere in Indonesia, the students' sense of love for their homeland will increase. In addition, there are differences obtained from students at SDN 34 Batang Hari and SDN 64 Batang Hari. SDN 64 Batang Hari excels in the character of loving the motherland in the use of electronic modules in the teaching and learning process. The formation of the character of loving the motherland in students at SDN 64 Batang Hari is more prominent in terms of contributing to the progress of the nation and state, such as learning to practice good attitudes.

## 5. REFERENCES

Ahsani, E. luthfi F., & Azizah, N. R. (2021). Implementasi Literasi Budaya Dan Kewargaan Untuk Mengembangkan Keterampilan Sosial Siswa Madrasah Ibtidaiyah Di Tengah Pandemi. *Jurnal Pendidikan Kewarganegaraan, 11*(01), 7. https://doi.org/10.20527/kewarganegaraan.v11i01.10317.

Albana, L. F. A. N. F., & Sujarwo, S. (2021). An interactive e-module develompent to increase the self-

regulated learning of basic graphic design. *Jurnal Kependidikan: Penelitian Inovasi Pembelajaran*, 5(2). https://doi.org/10.21831/jk.v5i2.33278.

- Andrinata, Sumarmi, & I Komang Astina. (2016). Pengembangan Modul Geografi Pariwisata Berbasis Paket Wisata Pulau Lombok Sebagai Upaya Memupuk Rasa Cinta Tanah Air Pada Mahasiswa. Jurnal Pendidikan: Teori, Penelitian, dan Pengembangan, 1(10), 1999–2003. https://doi.org/10.17977/jp.v1i10.7339.
- Argarini, D. F. (2018). Analisis Pemecahan Masalah Berbasis Polya pada Materi Perkalian Vektor Ditinjau dari Gaya Belajar. *Matematika Dan Pembelajaran*, 6(1), 91. https://doi.org/10.33477/mp.v6i1.448.
- Asrial, Syahrial, Maison, Kurniawan, D. A., & Piyana, S. O. (2020). Ethnoconstructivism E-Module to Improve Perception, Interest, and Motivation of Students in Class V Elementary School. *JPI (Jurnal Pendidikan Indonesia)*, 9(1), 30–41. https://doi.org/10.23887/jpi-undiksha.v9i1.19222.
- Banks, H. T., Flores, K. B., Langlois, C. R., Serio, T. R., & Sindi, S. S. (2018). Estimating the rate of prion aggregate amplification in yeast with a generation and structured population model. *Inverse Problems in Science and Engineering*, 26(2), 257–279. https://doi.org/10.1080/17415977.2017.1316498.
- Budiarti, R. S., Kurniawan, D. A., & Rohana, S. (2022). A Comparison by Gender: Interest and Science Process Skills. Journal of Education Research and Evaluation, 6(1), 88–97. https://doi.org/10.23887/jere.v6i1.37723.
- Darwis, D., Fitriani, E., & Styariyani, D. (2020). Pengembangan Modul Elektronik Berbasis Model Learning Cycle 5E Pada Pembelajaran Kimia Materi Asam-Basa. *JRPK: Jurnal Riset Pendidikan Kimia*, 10(1). https://doi.org/10.21009/JRPK.101.02.
- Dishon, G. (2021). The new natural? Authenticity and the naturalization of educational technologies. *Learning, Media and Technology,* 46(2), 156–173. https://doi.org/10.1080/17439884.2020.1845727.
- Elvanisi, A., Hidayat, S., & Fadillah, E. N. (2018). Analisis keterampilan proses sains siswa sekolah menengah atas Skills analysis of science process of high school students. *Jurnal Inovasi Pendidikan IPA*, 4(20), 245–252.
- Firdaus, M., & Wilujeng, I. (2018). Pengembangan LKPD inkuiri terbimbing untuk meningkatkan keterampilan berpikir kritis dan hasil belajar peserta didik Developing students worksheet on guided inquiry to improve critical thinking skills and learning outcomes of students. 4(1), 26–40.
- Firmansyah, M., Masrun, M., & Yudha S, I. D. K. (2021). Esensi Perbedaan Metode Kualitatif Dan Kuantitatif. *Elastisitas - Jurnal Ekonomi Pembangunan*, 3(2), 156–159. https://doi.org/10.29303/e-jep.v3i2.46.
- Gleason, N. W. (2018). Higher Education in the Era of the Fourth Industrial Revolution. In *Higher Education in the Era of the Fourth Industrial Revolution*. https://doi.org/10.1007/978-981-13-0194-0.
- Grosvenor, I., & Pataki, G. (2017). Learning through culture: Seeking "critical case studies of possibilities" in the history of education. *Paedagogica Historica*, 53(3), 246–267. https://doi.org/10.1080/00309230.2016.1264981.
- Gunawan, A. (2020). Pemanfaatan Teknologi Informasi Dan Komunikasi Melalui Penggunaan Media Pendidikan Dalam Pembelajaran IPS Sd. *Pedagogi Jurnal Penelitian Pendidikan*, 03(02), 24.
- Hafsah, N. R., Rohendi, D., & Purnawan, P. (2016). Penerapan Media Pembelajaran Modul Elektronik Untuk Meningkatkan Hasil Belajar Siswa Pada Mata Pelajaran Teknologi Mekanik. *Journal of Mechanical Engineering Education*, 3(1), 106. https://doi.org/10.17509/jmee.v3i1.3200.
- Hamidah, S., & Palupi, S. (2012). Peningkatan Soft Skills Tanggung Jawab Dan Disiplin Terintegrasi Melalui Pembelajaran Praktik Patiseri. *Jurnal Pendidikan Karakter*, 0(2), 143–152.
- Hekmah, N., Wilujeng, I., & Suryadarma, I. G. P. (2019). Web-Lembar Kerja Siswa IPA terintegrasi lingkungan untuk meningkatkan literasi lingkungan siswa. *Jurnal Inovasi Pendidikan IPA*. https://doi.org/10.21831/jipi.v5i2.25402.
- Herawati, N. S., & Muhtadi, A. (2018). Developing Interactive Chemistry E-Modul For The Second Grade Students of Senior High School. *Jurnal Inovasi Teknologi Pendidikan*, 5(2), 180–191.
- Hertiavi, M. A. (2020). Penerapan E-Learning dengan Platform Edmodo untuk Meningkatkan Hasil Belajar Mahasiswa. Jurnal Komunikasi Pendidikan, 4(1), 1. .Ikhsan, M. A. (2017). Nilai - Nilai Cinta Tanah Air Dalam Perspektif Al-Qur'an. Jurnal Ilmiah Pendidikan Pancasila dan Kewarganegaraan, 2(2), 108– 114. https://doi.org/10.17977/um019v2i22017p108.
- Jack, B. M., & Lin, H. shyang. (2017). Making learning interesting and its application to the science classroom. *Studies in Science Education*, *53*(2), 137–164. https://doi.org/10.1080/03057267.2017.1305543.
- Mardiyah, M. (2017). Nilai-Nilai Pendidikan Karakter Pada Pengembangan Materi Ajar Bahasa Indonesia Di Kelas Iv Sekolah Dasar. *TERAMPIL: Jurnal Pendidikan dan Pembelajaran Dasar*, 4(2), 31–47.
- Marzuki, I., & Hakim, L. (2019). Strategi Pembelajaran Karakter Kerja Keras. *Rausyan Fikr : Jurnal Pemikiran dan Pencerahan*, *15*(1), 79–87. https://doi.org/10.31000/rf.v15i1.1370.

- Mira, M., & Zulkarnen, R. (2008). Persepsi Masyarakat Pesisir Terhadap Penggunaan Energi Alternatif Untuk Melaut. Jurnal Sosial Ekonomi Kelautan dan Perikanan, 3(2), 233. https://doi.org/10.15578/jsekp.v3i2.5855.
- Muhajir, M., Musfikar, R., & Hazrullah, H. (2019). Efektivitas Penggunaan E-Learning Berbasis Edmodo Terhadap Minat Dan Hasil Belajar (Studi Kasus Di Smk Negeri Al Mubarkeya). *Cyberspace: Jurnal Pendidikan Teknologi Informasi*, *3*(1), 50. https://doi.org/10.22373/cj.v3i1.4725.
- Ning, J., & Tao, H. (2020). Randomized quasi-random sampling/importance resampling. *Communications in Statistics: Simulation and Computation, 49*(12), 3367–3379. https://doi.org/10.1080/03610918.2018.1547398.
- Novelyya, S. (2019). Pengaruh Karakter Rasa Ingin Tahu Siswa Terhadap Hasil Belajar Mata Pelajaran Ipa Fisika Di Smp Negeri 08 Muaro Jambi. *Briliant: Jurnal Riset dan Konseptual*, 4(2), 174. https://doi.org/10.28926/briliant.v4i2.291.
- Nurzaelani, M. M., Kasman, R., & Achyanadia, S. (2018). Pengembangan Bahan Ajar Integrasi Nasional Berbasis Mobile. *JTP - Jurnal Teknologi Pendidikan, 20*(3), 264–279. https://doi.org/10.21009/jtp.v20i3.8685.
- Parreira, P., Sousa, L. B., Marques, I. A., Santos-Costa, P., Cortez, S., Carneiro, F., Cruz, A., & Salgueiro-Oliveira, A. (2020). Usability assessment of an innovative device in infusion therapy: A mix-method approach study. *International Journal of Environmental Research and Public Health*, 17(22), 1–13. https://doi.org/10.3390/ijerph17228335.
- Priyoutomo, S. D. (2016). Penanaman Sikap Cinta Tanah Air Dalam Pramuka di Dabim 5 UPTD Pendidikan Wirosari Brobogan. *Jurnal Varidika Kajian Penelitian dan Pendidikan, 28*(1). https://doi.org/10.23917/varidika.v28i1.2402.
- Puspitasari, A. D. (2019). Penerapan Media Pembelajaran Fisika Menggunakan Modul Cetak dan Modul Elektronik pada Siswa SMA. *Jurnal Pendidikan Fisika*, 7(1), 17–25. https://doi.org/10.24252/jpf.v7i1.7155.
- Rahmatsyah, S. W., & Dwiningsih, K. (2021). Development of Interactive E-Module on The Periodic System Materials as an Online Learning Media. *Jurnal Penelitian Pendidikan IPA*, 7(2), 255. https://doi.org/10.29303/jppipa.v7i2.582.
- Riyadi, S., & Qamar, K. (2017). Efektivitas E-Modul Analisis Real Pada Program Studi Pendidikan Matematika Universitas Kanjuruhan Malang. *Supremum Journal of Mathematics Education (SJME) Journal*, 1(1), 26–33.
- Rumapea, R. (2018). Pengaruh Model Pembelajaran Kooperatif Tipe Stad dan Pemberian Soal Open Ended Terhadap Kemampuan Pemecahan Masalah Siswa Ditinjau dari Kemampuan Awal Matematika. *Pendidikan Matematika*, *12*(1), 1–14. https://doi.org/10.22342/jpm.12.1.4551.1-14.
- Saputri, T. N. R., & Mukmin, B. A. (2021). Analisis Implementasi Karakter Mandiri Siswa Sekolah Dasar di Masa Pandemi Covid-19 Berbasis Media Asinkronus. *Jurnal Basicedu*, *5*(4), 2045–2053.
- Seruni, R., Munawaoh, S., Kurniadewi, F., & Nurjayadi, M. (2019). Pengembangan Modul Elektronik (E-Module) Biokimia Pada Materi Metabolisme Lipid Menggunakan Flip Pdf Professional. *JTK (Jurnal Tadris Kimiya*), 4(1), 48–56. https://doi.org/10.15575/jtk.v4i1.4672.
- Siyoto, S., & Sodik, M. A. (2015). Dasar Metodologi Penelitian (1st ed). Literasi Media Publishing.
- Sopiah, C. (2021). Dampak Pembelajaran Online Terhadap Pendidikan Karakter Anak Usia Dini. Jurnal Jendela Bunda Program Studi PG-PAUD Universitas Muhammadiyah Cirebon, 8(2), 22–31. https://doi.org/10.32534/JJB.V8I2.1719.
- Sukmasari, V. P., & Rosana, D. (2017). Pengembangan Penilaian Proyek Pembelajaran IPA Berbasis Discovery Learning untuk Mengukur Keterampilan Pemecahan Masalah Developing Discovery-Learning Based Natural Sciences Learning Project Assessment to Assess Problem Solving Skill. 3(1), 101–110.
- Sun, H., Teh, P. L., & Linton, J. D. (2018). Impact of environmental knowledge and product quality on student attitude toward products with recycled/remanufactured content: Implications for environmental education and green manufacturing. *Business Strategy and the Environment*, 27(7), 935–945. https://doi.org/10.1002/bse.2043.
- Vansteensel, M. J., Kristo, G., Aarnoutse, E. J., & Ramsey, N. F. (2017). The brain-computer interface researcher's questionnaire: from research to application. *Brain-Computer Interfaces*, 4(4), 236– 247. https://doi.org/10.1080/2326263X.2017.1366237.
- Wisnarni. (2017). Menumbuhkembangkan Karakter Cinta Tanah Air Melalui Kegiatan Eksrakulikuler Berbasis Kebiasaan Pada Sdn No 199/Iii Koto Majidin Hilir. *jurnal Tarbawi*, *3*(119), 51–63.
- Zainul, R., Oktavia, B., Guspatni, & Putra, A. (2018). *Pengenalan Dan Pengembangan E-Modul Bagi Guru- Guru Anggota MGMP Kimia Dan Biologi Kota Padang Panjang*. https://doi.org/https://doi.org/10.31227/osf.io/yhau2.