



Hyzine Website-Based E-Books to Improve Learning Outcomes of Social Studies Elementary School

Iffana Fatikha Rizqi^{1*}, Elok Fariha Sari² 

^{1,2} Primary School Teacher Education, Universitas Negeri Semarang, Semarang, Indonesia

ARTICLE INFO

Article history:

Received February 15, 2024

Accepted June 12, 2024

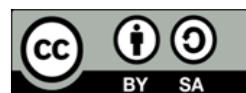
Available Online July 25, 2024

Kata Kunci:

Pengembangan, E-book, IPS, Bahan Ajar Digital, Interaktif

Keywords:

Development, E-book, Social Studies, Digital Teaching Materials, Interactive



This is an open access article under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.

Copyright © 2024 by Author. Published by Universitas Pendidikan Ganesha.

ABSTRAK

Penggunaan bahan ajar digital masih sangat jarang untuk pendidikan sekolah dasar di Indonesia. Saat ini pembelajaran masih didominasi oleh pembelajaran yang bersifat konvensional dan menggunakan media pembelajaran yang kurang baru. Tujuan penelitian ini adalah untuk mengembangkan e-book pada konten IPS SD yang efektif dan berkualitas tinggi, dan mendukung peningkatan hasil belajar siswa. Penelitian ini dikategorikan sebagai penelitian dan pengembangan (R&D) dengan menerapkan model Borg dan Gall. Dalam proses pengumpulan data melalui wawancara, validasi ahli, angket respon, dan lembar pretest dan posttest. Penelitian ini menghasilkan antara lain: (1) e-book sangat layak digunakan, (2) dari hasil angket respon e-book dinyatakan sangat praktis (90,5%), (3) e-book terbukti efektif berdasarkan hasil uji N-gain (58,9%), di mana terjadi peningkatan skor rata-rata posttest daripada skor rata-rata pretest. Hasil ini menunjukkan bahwa e-book cukup dan efektif digunakan. Implikasi dari pengembangan e-book pada penelitian ini adalah e-book berbasis website hyzine ini dapat mendukung peningkatan hasil belajar konten IPS pada siswa kelas IV sekolah dasar.

ABSTRACT

The use of digital teaching materials is still rare for elementary school education in Indonesia. Currently, learning is still dominated by conventional learning. The purpose of this research is to develop e-books on elementary social studies content that are effective and of high quality, and support the improvement of student learning outcomes. This research is categorized as research and development (R&D) by applying the Borg and Gall model. In the process of collecting data through interviews, expert validation, response questionnaires, and pretest and post-test sheets. This research resulted in, among others: (1) the e-book is very feasible to use, (2) from the results of the response questionnaire the e-book is declared very practical (90.5%), (3) the e-book is proven to be effective based on the results of the N-gain test (58.9%), where there is an increase in the average post-test score than the average pretest score. These results indicate that the e-book is adequately and effectively used. The implication of the development of e-books in this study is that this Hyzine website-based e-book can support the improvement of learning outcomes of social studies content in grade IV students of elementary school.

1. INTRODUCTION

Education is not only a long process that aims to provide knowledge and information to students, but it is also considered an effort to help individuals explore cultural values to build a better civilization. Education is also a complex effort to adapt culture to the needs of members and the way members perceive the needs of culture (Fouze & Amit, 2023; Izzati et al., 2023). Education is the process of conveying information from teachers to students. Education is considered successful if the learning objectives are achieved. Education is also said to be successful if teachers can use learning objectives as a benchmark to evaluate students' basic abilities and identify student learning difficulties in the classroom (Ariyani & Kristin, 2021; Sotatema Lase et al., 2023). Education aims to prepare people to face problems in the present and in the future. One of the subjects that has important significance in this context is social studies learning. Social studies learning at school aims to develop students' abilities in thinking logically, analytically, systematically, critically, and creatively, while also improving socialization skills referring to the opinion of (Ariyani & Kristin, 2021; Rosa & Orey, 2011). The main focus today includes the concepts of digital economy, artificial intelligence, big data processing, robotics, and other elements that are often identified as

paradigm-shifting innovation phenomena (Aura et al., 2021; Mulyono & Elly, 2023). Additionally, educational activities in the classroom must help students learn by utilizing media or materials that are pertinent to their studies. Therefore, it is becoming increasingly important for teachers to adapt to the changing times and utilize technology and create an engaging learning environment for students (Aura et al., 2021; Herawati & Muhtadi, 2018). However, in reality, many teachers still rely on printed books in implementing the learning process. However, modules in the form of printed books tend to be less dynamic and less visually appealing. The utilization of interactive learning media is proven to be effective in the learning process, as it can trigger students' interest in learning and improve their understanding of the concepts and skills taught. If students have an interest in learning, their attention to the lesson will increase (Antara et al., 2022; Aryanto & Sukardi, 2023; Cheung, 2018). Thus, teachers are expected to be able to adopt interesting and digital-based media, as a step towards applying technology in the context of digitizing education. The purpose of the approach is to improve students' understanding of the concepts and skills being taught.

Based on observations, the researcher directly observed the learning process of social studies content at SD Negeri Karang Sari 3. Research reveals that a number of students face difficulties in understanding concepts during the Social Studies learning process. From the results of interviews found problems in learning social studies in the form of media used in learning less interactive, namely using modules or printed books, so that students are less excited in learning. During the learning process, the teacher uses the lecture method which results in students tending to be inactive and bored during the learning process. The data is supported by using the social studies learning results of class IV SD Negeri Karang Sari 3 which shows only 9 out of 22 students (41%) who have completed the material "My Indonesia is Rich in Culture". The researcher wants to apply technology-based interactive teaching materials to overcome problems based on the problems found.

Developing modules in the form of technology-based printed books, namely E-Books, is the best solution. Technology should be used effectively in education to enhance students' learning experience. Enhancing students' ability to develop effective learning practices in the digital era can improve students' competencies (Nursamsu et al., 2023; Wen & Shinas, 2020). According to a study e-books are considered to be the result of technological advances applied in education. E-books have many advantages, such as being easy to use anywhere, having videos to view, having links to websites, and containing concise and interesting material (Fadilah et al., 2022; Fitri & Pahlevi, 2020; Kharisma et al., 2023). Electronic books, or often referred to as e-books, are digitized versions of conventional printed books that can be accessed and read through devices such as smartphones or computers. E-books prove their usefulness in supporting learning outside the classroom or in the home environment (Ormancı & Çepni, 2020; Ozturk & Hill, 2020).

In previous research stated that e-books are very influential in improving students' abilities in learning, so that learning outcomes increase (Nursamsu et al., 2023). Other researchers also point out that e-books can help students learn anywhere without difficulty (Mella et al., 2022; Sari & Airlanda, 2022). The limitations of interactive teaching materials based on social studies content technology that focuses on the material "My Indonesia is Rich in Culture". The purpose of this research is to develop e-books as teaching materials based on the Hyzine website that can support the improvement of student learning outcomes in social studies class IV. This teaching material is expected to provide support and convenience in the social studies learning process for students. This research also aims to provide benefits for educators, in this case, it is expected that teachers will gain experience regarding the effectiveness of utilizing digital teaching materials (e-books) in improving students' skills and knowledge in learning social studies. The novelty of this research is utilizing the Hyzine website as the main medium in developing e-books, which has not been widely used in the context of learning at the elementary school level. This approach allows for the presentation of interactive materials that are easily accessible to students, teachers, and parents anytime and anywhere.

2. METHOD

This research falls into the category of Research & Development (R&D) research where out of 10 steps, the researchers took 8 steps of the Borg and Gall model. Development research has the aim of developing products, namely e-book teaching materials based on the Hyzine website, and testing the extent of their effectiveness in improving student learning outcomes in grade IV social studies subjects. Retrieved from previous study development research is a way to create and improve a product that can be accounted for after undergoing validation tests and effectiveness tests (Ramot & Bialik, 2023). Respondents in this study were class IV SD Negeri Karang Sari 3, with a total of 22 students. Through the probability sampling technique, it was determined that the participants in this study were divided into a small group as a trial of use involving 5 students, and a large group consisting of 17 students, all of whom came from class IV of SD Negeri Karang Sari 3. In this study, data was obtained through two techniques. Non-test techniques use

direct observation, interviews, and questionnaires. While the test technique uses pretest and posttest questions in the form of multiple-choice questions, each totaling 30 questions. The application of data analysis techniques aims to produce products that are quality, practical, feasible, and effective.

Instrument scores from validation sheets that have been assessed by material experts and media experts can be used to evaluate the validity of the product being tested. Next, the score is used to determine the level of feasibility of the product that has been developed by considering the following criteria as show in [Table 1](#).

Table 1. Feasibility Test

No	Percentage	Criteria
1	76% - 100%	Very feasible
2	51% - 75%	Feasible
3	26% - 50%	Feasible enough
4	0% - 25%	Less feasible

In this study, to determine the practicality of using a response questionnaire. Data from the response questionnaire that has been completed by teachers and students can be used to assess the level of practicality of the product that has been developed by considering the following criteria as show in [Table 2](#).

Table 2. Practicality Test

No	Percentage	Criteria
1	81% - 100%	Very practical
2	61% - 80%	Practical
3	41% - 60%	Practical enough
4	21% - 40%	Unpractical
5	0% - 20%	Very impractical

Meanwhile, to assess the level of effectiveness, it can be calculated using the N-gain formula. Afterward, the N-gain calculation is used to determine the category of the product that has been developed, with the following criteria as show in [Table 3](#).

Table 3. N-gain Score Division Category

No	Percentage	Category
1	N-gain < 0,3	Low
2	0,3 ≤ N-gain < 0,5	Medium
3	N-gain ≥ 0,7	Hight

Next, the N-gain score obtained can be converted into a percentage (%) to assess the effectiveness of the N-gain of the product that has been developed, with the steps as show in [Table 4](#).

Table 4. Category of Effectivtiness Interpretation of N-gain Value

No	Percentage	Interpretation
1	< 40	Ineffective
2	40 - 55	Less effective
3	56 - 75	Effective enough
4	> 76	Effective

3. RESULT AND DISCUSSION

Result

The results of this study increased the learning outcomes of fourth grade students of SD Negeri Karangsari 3 through the creation of effective e-books based on the hyzine website. Specifically, the material centers on the topic "My Indonesia is Rich in Culture" in social studies. In addition, a discussion of the findings from the study on the creation of e-book instructional resources is provided below.

Need Analysis Stage

At this stage, information was collected, especially related to children's needs and problems, through interviews with the fourth grade teacher of SD Negeri Karangsari 3. The interview results show

that most students have difficulty in understanding information about Indonesia's cultural diversity. In addition, students become disinterested when there are no visually appealing teaching resources, and this lowers their learning outcomes. The current lecture-based learning approach tends to reduce student engagement, and available learning resources are limited to printed books. Limited technological capabilities also create conditions where teachers have never used digital-based teaching materials.

It is known that schools provide facilities that support the use of digital-based teaching materials but have not been maximized in their utilization. Researchers consider this to develop web-based e-book teaching materials that can be accessed through chrome books which are school facilities. Furthermore, researchers use student and teacher needs questionnaires to develop e-book teaching materials.

Product Design Stage

The researcher wants to make e-book teaching materials based on the hyzine website which contains material about my rich culture of social studies learning content for grade IV or phase B. The developed digital teaching materials contain subject matter, links connected to videos and infographics, and are integrated with Quizizz for practice questions. This product is made through canva and then converted into a flipbook using the hyzine website.

The first stage of e-book development is to develop an e-book display with the canva application. This stage includes preparing the layout for each page as well as the content that will be included in the e-book teaching materials. Next, the researcher collected images, video links, and infographics, and selected fonts to use in the product. In addition, the researcher also collected references relevant to the material.

The next step was to draft and develop the e-book content using the Canva app, and integrate it with the Quizizz link to give students access to practice questions. Then the product is converted into an e-book by uploading the product on the hyzine website so that the product can be accessed through the link provided. The product can then be tested to expert validators to test the feasibility of the product before use. E-book cover is show in [Figure 1](#).



Figure 1. E-book Cover

Base on [Figure 1](#), the cover contains the title of the e-book teaching material for class IV / Phase B Chapter 6 “My Indonesia is Rich in Culture”. There is a navigation button on the bottom right of the cover page that serves to move to the next page. Preface, learning outcomes and learning objectives is show in [Figure 2](#).

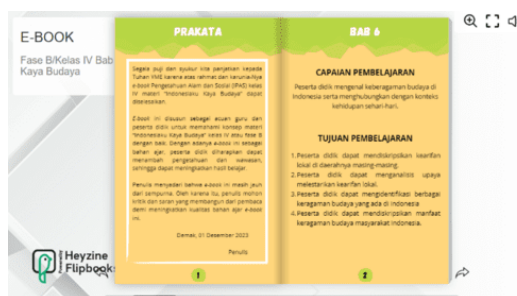


Figure 2. Preface, Learning Outcomes and Learning Objectives

Base on [Figure 2](#), the preface page contains an expression of the researcher's gratitude as well as the researcher's goals and expectations when developing e-book teaching materials. The learning outcomes and learning objectives page contains teaching material benchmarks that are used for learning success. The instructions page is show in [Figure 3](#).



Figure 3. Instructions Page

Base on Figure 3, the usage guide section includes an explanation of how to use or steps to utilize e-book teaching materials, with the aim that its use becomes easier and more efficient. The material page is show in Figure 4.



Figure 4. Material Page

Base on Figures 4 through 9 contain sub-materials from chapter 6 of social studies class IV/Phase B. In each sub-chapter there are pictures and charts that make it easier for students to learn. On some pages there are interesting info and links to videos or infographics to broaden students' horizons and attract students' attention in their interest in learning. Exercise & bibliography page is show in Figure 5.



Figure 5. Exercise & Bibliography Page

Figure 5 contains practice questions integrated with Quizizz to determine the level of student ability after using e-book teaching materials. In addition, this e-book includes a bibliography that lists the references used by the author while developing the product.

Validation of Design

Before the developed product is used, it is tested by media expert validators and material experts to assess its feasibility. Result of expert validation is show in Table 5.

Table 5. Result of Expert Validation

No	Type of Validation	Percentage	Interpretation
1	Validation of Materials	85.7%	Very Feasible
2	Validation of Media	86.3%	Very Feasible

Base on [Table 5](#), fourth grade students of SD Negeri Karang Sari 3 can test this product without revision, according to the validation results from media and material experts.

Trial Test

After the product passes the validation stage carried out by media experts and material experts, the product is considered ready for small group trials. In this study, five students from class IV of SD Negeri Karang Sari 3 participated in the first trial. Purposive sampling is used in the sample selection process, where the sample is selected based on a number of factors that match the predetermined criteria. In this case, two students from the top rank, one from the middle rank, and two from the bottom rank were the samples that the researcher took based on the students' rank.

After the initial trial, a large group of 17 students from class IV of SD Negeri Karang Sari 3 can be used to test the e-book teaching material product, which is based on the Hyzine website. By using the saturated sampling technique, the entire population was included as a sample in the pilot test. The trial use of the product was conducted according to the same plan as the first study. After completing the pretest, students were given posttest questions and asked to fill out a response questionnaire. Using the N-gain test to calculate the pretest and posttest data from the large group use study, the following data was obtained as show in [Table 6](#).

Table 6. Usage Trial Result

No	Data	Pretest	Posttest
1	Average	51	79.9
2	N-gain		0.6
3	N-gain (%)		58.9
4	Category		Medium
5	Interpretation of Effectiveness		Effective enough

The N-gain score from the pretest of 0.6, which is listed in [Table 6](#), falls into the category of moderate improvement, then the value obtained is converted into a percentage to determine the effectiveness of the product. The obtained value of 58.9 is classified as a moderately effective product. Finally, through the response questionnaire, it got a value of 90.5%, which means that the product is very practical to use.

Discussion

The conclusion drawn from the data analysis is that e-books, a type of interactive teaching material, can be used effectively for learning. This is supported by several reasons. E-books can increase learning motivation in students. Through this e-book, the learning situation will be more interesting ([Dinata et al., 2024](#); [Haryadi & Selviani, 2021](#)). Teachers will find it easier to convey information to students when digital books are included in learning activities, in addition to making it easier for students because e-books are interactive ([Rahmatsyah & Dwiningsih, 2021](#); [Syawaludin et al., 2019](#)). This undoubtedly gives students the impression that teacher instruction is essential to their learning. This affects meaningful learning activities. Therefore, the existence of this e-book has an effect on increasing student learning outcomes.

E-books that are interactive instructional resources make learning enjoyable. Students that use e-book instructional materials are more engaged in their studies, which makes them more pleasurable. Fun learning activities also help pupils avoid boredom when engaging in educational tasks, according to earlier research findings ([Amjah, 2014](#); [Vidergor & Ben-Amram, 2020](#)). For learning activities to be more meaningful and for students to obtain a deeper knowledge, they must be completely engaged in them.

The validity of this study was recognized as very high by media experts with a percentage level of 86.3% and material experts with a percentage level of 85.7%. This is due to the suitability of the material developed with the learning outcomes and learning objectives on the material "My Indonesia is Rich in Culture". According to research findings that items developed in an appropriate manner will correspond to the validity results found ([Khoiriyah & Rizki, 2017](#); [Taufik et al., 2021](#)). Previous study in his research revealed the purpose of product validation in order to determine the feasibility of the product developed before being applied ([Juniantari et al., 2020](#); [Munandar & Rizki, 2019](#)).

After being declared feasible by two expert validators, then test the practicality of the e-book by giving a student response questionnaire. The results of the large group test showed a percentage of 90.5%, which means that this hyzine website-based e-book teaching material is very practical. In this context, previous study indicates that students' responses to the learning materials reflect the level of practicality of the teaching materials ([Suniasih et al., 2019](#)). Ease of use of teaching materials is the essence of practicality. The production of the hyzine website-based e-book teaching resource has been well received by teachers and students, as evidenced by their enthusiastic responses. To further assist the learning

process and improve the achievement of student learning outcomes, this e-book is essential. Evaluation of learning outcomes, which is the product of educational activities in schools, is very important. Improved learning outcomes can be achieved through deliberate efforts, carried out systematically, and oriented towards positive changes (Ariyani & Kristin, 2021; Oonk et al., 2022; Syafrida, 2018). If students have effort, motivation will appear in them. Developing e-book teaching materials can also help teachers in delivering materials.

The making of interactive electronic books for fourth grade students of SD Negeri Karangsari 3 which emphasizes social studies learning by using the learning resource "Indonesiaku Kaya akan Budaya" is the subject of this research. The development of this e-book incorporates the use of relevant images, videos, and practice questions to deliver engaging content. The straightforward language of the e-book makes it easier for students to understand, which will enhance learning objectives. With a percentage of 58.9%, it can be concluded from the results of the product effectiveness test that this product is quite effective. As a result, the use of this e-book can improve student learning outcomes during the learning process. The average pretest score of 51 and posttest score of 79.7 showed an increase in learning outcomes, and the average N-gain percentage of 85.9% was included in the medium category.

The opinion expressed by studies supports the effectiveness of media that use images, because they can convey messages and content more clearly, and are easier to understand (David et al., 2020; Yuliatin Riski et al., 2020). According to previous research, children are more interested in reading digital books than printed books (Ciampa, 2016). E-books equipped with images and videos have the potential to assist teachers in delivering material to students and achieving learning objectives. The use of e-modules can improve learning outcomes and student independence, in accordance with the findings of previous research (Linda et al., 2021). This perspective is supported by the fact that e-books have the ability to increase student engagement and give them access to flexible learning options, anytime and anywhere (Andaresta & Rachmadiarti, 2021; Putra & Wulandari, 2022).

This study provides implications for the development of interactive and interesting digital learning resources through the Hyzine website. This website-based e-book can be an alternative learning media that can be easily accessed by students and teachers, especially in Social Sciences (IPS) subjects. This supports efforts to digitize education in the information technology era. The use of Hyzine website-based e-books in IPS learning can improve student learning outcomes, as evidenced in this study. The developed e-book allows the presentation of materials in a more varied and interactive way, which encourages active student involvement in the learning process. This can improve student understanding and retention of the material being studied.

One of the main limitations of developing Hyzine website-based e-books is the dependence on internet access. In areas that do not yet have adequate internet networks, the implementation of this media will be difficult. This can limit the effectiveness of using these e-books in schools in remote areas. Not all teachers and students are ready to use website-based technology in learning. Limited digital literacy can be an obstacle for some teachers and students in utilizing these e-books optimally. Special training is needed to improve digital competence, both for teachers and students.

4. CONCLUSION

Hyzine website-based e-book teaching materials are very feasible, practical, and quite effective in improving student learning outcomes in grade IV social studies subjects, according to the results of the analysis and research findings. The utilization of digital teaching materials makes it easier for teachers to deliver learning materials, while e-books are also able to increase students' learning motivation and arouse their enthusiasm in the learning process. With the presentation of material that is easy to understand and high enthusiasm for learning, it is expected that there will be a significant increase in student learning outcomes. The results of this study indicate that the use of digital-based instructional resources, including e-books, can be a useful substitute for improving student achievement in elementary school social studies classes, particularly on the material "My Indonesia is Rich in Culture" for grade IV. Through learning by using e-books based on the hyzine website, it is hoped that student learning outcomes will continue to improve. The hope for further research is that there will be further development of the hyzine website-based e-book so that learning can run effectively to improve student learning outcomes.

5. REFERENCES

- Amjah, D. Y. P. H. (2014). A Study of Teachers' Strategies so Develop Students' Interest towards Learning English as a Second Language. *Procedia - Social and Behavioral Sciences*, 134, 188–192. <https://doi.org/10.1016/j.sbspro.2014.04.238>.
- Andaresta, N., & Rachmadiarti, F. (2021). Pengembangan E-Book Berbasis STEM Pada Materi Ekosistem

- untuk Melatihkan Kemampuan Literasi Sains Siswa. *Berkala Ilmiah Pendidikan Biologi (BioEdu)*, 10(3), 635–646. <https://doi.org/10.26740/bioedu.v10n3.p635-646>.
- Antara, I. G. W. S., Suma, K., & Parmiti, D. P. (2022). E-Scrapbook: Konstruksi Media Pembelajaran Digital Bermuatan Soal-soal Higher Order Thinking Skills. *Jurnal Edutech Undiksha*, 10(1), 11–20. <https://doi.org/10.23887/jeu.v10i1.47559>.
- Ariyani, B., & Kristin, F. (2021). Model Pembelajaran Problem Based Learning untuk Meningkatkan Hasil Belajar Siswa SD. *Jurnal Ilmiah Pendidikan Dan Pembelajaran*, 5(3), 353–361. <https://doi.org/10.23887/jipp.v5i3.36230>.
- Aryanto, A., & Sukardi. (2023). Pengembangan Media Interaktif Berbasis HTML5 Digital Story Pocketbook Muatan Pembelajaran Bahasa Indonesia Kelas IV. *Jurnal Perseda : Jurnal Pendidikan Guru Sekolah Dasar*, 6(2), 152–161. <https://doi.org/10.37150/PERSEDA.V6I2.2111>.
- Aura, I., Hassan, L., & Hamari, J. (2021). Teaching within a Story: Understanding storification of pedagogy. *International Journal of Educational Research*, 106, 101728. <https://doi.org/10.1016/j.ijer.2020.101728>.
- Cheung, D. (2018). The Key Factors Affecting Students' Individual Interest in School Science Lessons. *International Journal of Science Education*, 40(1), 1–23. <https://doi.org/10.1080/09500693.2017.1362711>.
- Ciampa, K. (2016). Motivating Grade 1 Children to Read : Exploring the Role of Choice , Curiosity , and Challenge in Mobile Ebooks. *Reading Psychology*, 37(5), 665–705. <https://doi.org/10.1080/02702711.2015.1105337>.
- David, D., Situmorang, B., Kartika, K., Darmayanti, H., Riezka, H., & Ns, H. (2020). Efektivitas Videography dengan Menggunakan Powtoon untuk Meningkatkan Pemahaman Mengenai Bullying Artikel info. *Indonesia Journal of Learning Education and Counseling*, 2(2), 148–162. <https://doi.org/10.31960/ijolec.v2i2.290>.
- Dinata, R. R., Handayani, W., & Rahayu, E. W. (2024). Peran Transformatif Artificial Intelligence (AI) dalam Membentuk Pendidikan Kreatif Abad 21. *EduTech: Jurnal Teknologi Pendidikan*, 23(1), 16–25. <https://doi.org/10.17509/e.v23i1.64743>.
- Fadilah, E., Irianto, A., & Rusminati, S. H. (2022). Penggunaan Media Monopoly Education pada Pembelajaran Tematik di Sekolah Dasar. *Edukatif: Jurnal Ilmu Pendidikan*, 4(4), 5827–5833. <https://doi.org/10.31004/edukatif.v4i4.3319>.
- Fitri, E. R., & Pahlevi, T. (2020). Pengembangan LKPD Berbantuan Kvisoft Flipbook Maker pada Mata Pelajaran Teknologi Perkantoran di SMKN 2 Nganjuk. *Jurnal Pendidikan Administrasi Perkantoran (JPAP)*, 9(2), 281–291. <https://doi.org/10.26740/jpap.v9n2.p281-291>.
- Fouze, A. Q., & Amit, M. (2023). The Importance of ethnomathematics education. *Creative Education*, 14, 729–740. <https://doi.org/10.4236/ce.2023.144048>.
- Haryadi, R., & Selviani, F. (2021). Problematika Pembelajaran Daring Di Masa Pandemi Covid-19. *Academy of Education Journal*, 12(2), 254–261. <https://doi.org/10.47200/aoej.v12i2.447>.
- Herawati, N. S., & Muhtadi, A. (2018). Pengembangan modul elektronik (e-modul) interaktif pada mata pelajaran Kimia kelas XI SMA. *Jurnal Inovasi Teknologi Pendidikan*, 5(2), 180–191. <https://doi.org/10.21831/jitp.v5i2.15424>.
- Izzati, U. A., Handayani, W., & Mulyana, O. P. (2023). Innovative Behavior in Elementary School Teachers. *Studies in Learning and Teaching*, 4(3), 469–479. <https://doi.org/10.46627/SILET.V4I3.259>.
- Juniantari, M., Mahayukti, G. A., Gita, I. N., & Suryawan, I. P. P. (2020). Validity of Introduction to Basic Mathematics Teaching Materials Based on Conceptual Understanding Procedures Models and Character Education. *Journal of Physics: Conference Series*, 1503(1). <https://doi.org/10.1088/1742-6596/1503/1/012018>.
- Kharisma, R., Laksono, S., Nurcahyo, H., Wibowo, Y., Biologi, M. P., Matematika, F., Ilmu, D., & Alam, P. (2023). Penerapan e-book berbasis socio-scientific issues dalam meningkatkan kemandirian belajar pada materi sistem sirkulasi darah (Vol. 9, Issue 1, pp. 58–69). <https://doi.org/10.22219/JINOP.V9I1.22843>.
- Khoiriyah, U., & Rizki, S. (2017). Pengembangan Bahan Ajar Himpunan Matematika Yang Dikaitkan Dengan Nilai-Nilai Islam. *AKSIOMA: Jurnal Program Studi Pendidikan Matematika*, 6(3), 315–322. <https://doi.org/10.24127/AJPM.V6I3.1142>.
- Linda, R., Zulfarina, Mas'ud, & Putra, T. P. (2021). Peningkatan Kemandirian dan Hasil Belajar Peserta Didik Melalui Implementasi E-Modul Interaktif IPA Terpadu Tipe Connected Pada Materi Energi SMP/MTs. *Jurnal Pendidikan Sains Indonesia*, 9(2), 191–200. <https://doi.org/10.24815/jpsi.v9i2.19012>.
- Mella, B., Wulandari, I. G. A. A., & Wiarta, I. W. (2022). Bahan Ajar Digital Interaktif Berbasis Problem Based Learning Materi Keragaman Budaya. *Jurnal Penelitian Dan Pengembangan Pendidikan*, 6(1), 127–

136. <https://doi.org/10.23887/jppp.v6i1.46368>.
- Mulyono, D., & Elly, A. (2023). *E-Modul Interaktif Teori Bilangan Menggunakan Aplikasi Kvisoft Flipbook Maker* (Vol. 9, Issue 1, pp. 70–81). <https://doi.org/10.22219/JINOP.V9I1.20584>.
- Munandar, A., & Rizki, S. (2019). Pengembangan Bahan Ajar Matematika Berbasis Komputer Menggunakan Flipbook Maker Disertai Nilai Islam Pada Materi Peluang. *AKSIOMA: Jurnal Program Studi Pendidikan Matematika*, 8(1). <https://doi.org/10.24127/ajpm.v8i1.1957>.
- Nursamsu, N., Mahyuny, S. R., Nafaida, R., & Rezeqi, S. (2023). Development of E-Book Based Instructional Design PjBL Model Integrated Science Literacy To Improve Critical Thinking Abilit. *Jurnal Penelitian Pendidikan IPA*, 9(9), 6896–6903. <https://doi.org/10.29303/JPPIPA.V9I9.4948>.
- Oonk, C., Gulikers, J., Brok, P., & Mulder, M. (2022). Stimulating boundary crossing learning in a multi-stakeholder learning environment for sustainable development. *International Journal of Sustainability in Higher Education*, 23(8), 21–40. <https://doi.org/10.1108/IJSHE-04-2021-0156>.
- Ormançı, Ü., & Çepni, S. (2020). Views on interactive e-book use in science education of teachers and students who perform e-book applications. *Turkish Online Journal of Qualitative Inquiry*, 11(2), 247–279. <https://doi.org/10.17569/tojqi.569211>.
- Ozturk, G., & Hill, S. (2020). Mother–child interactions during shared reading with digital and print books. *Early Child Development and Care*, 190(9), 1425–1440. <https://doi.org/10.1080/03004430.2018.1538977>.
- Putra, I. W. D., & Wulandari, I. G. A. A. (2022). E-Modul Interaktif Berorientasi Karakter Peduli Lingkungan untuk Kelas IV Sekolah Dasar. *Jurnal Ilmiah Pendidikan Profesi Guru*, 5(1), 185–196. <https://doi.org/10.23887/JIPPG.V5I1.45886>.
- 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>.
- Ramot, R., & Bialik, G. (2023). Toward a consensual definition of educational research and development: a Delphi study. *Higher Education Research & Development*, 42(2), 427–441. <https://doi.org/10.1080/07294360.2022.2052814>.
- Rosa, M., & Orey, D. (2011). Ethnomathematics: the cultural aspects of mathematics. *Revista Latinoamericana de Etnomatemática*, 4(2), 32–54. <http://funes.uniandes.edu.co/3079/>.
- Sari, M. W. N., & Airlanda, G. S. (2022). Pengembangan E-book dengan Strategi Problem Based Learning dalam Berpikir Kritis dan Kreatif. *Edukatif: Jurnal Ilmu Manajemen*, 4(4), 5845–5851. <https://doi.org/10.31004/edukatif.v4i4.3232>.
- Sotatema Lase, K., Komang Sudarma, I., Kunci, K., & Ilmiah, P. (2023). Interactive E-Module Based on Scientific Approach in Science Content Learning for Sixth-Grade Students. *MIMBAR PGSD Undiksha*, 11(2), 175–183. <https://doi.org/10.23887/JJPGSD.V11I2.64508>.
- Suniasih, N. W., Sujana, I. W., & Putra, I. K. A. (2019). Building Literate Teachers to Improve Learning Processes in Elementary School. Bali, Indonesia. In *ICTES 2018: Proceedings of the First International Conference on Technology and Educational Science, ICSTES 2018*, 21–22. <https://books.google.com/books?hl=id&lr=&id=zXFdEAAAQBAJ&oi=fnd&pg=PA108&dq>.
- Syafrida, S. (2018). Implementasi Pemberian Reward Dalam Meningkatkan Motivasi Berprestasi Guru Sdn 007 Kunto Darussalam. *Jurnal Pajar*, 2(3), 481. <https://doi.org/10.33578/PJR.V2I3.5552>.
- Syawaludin, A., Gunarhadi, & Rintayati, P. (2019). Development of augmented reality-based interactive multimedia to improve critical thinking skills in science learning. *International Journal of Instruction*, 12(4), 331–344. <https://doi.org/10.29333/iji.2019.12421a>.
- Taufik, A. N., Berlian, L., Suryani, D. I., Nulhakim, L., Rohimah, R. B., & Ansori, M. (2021). Validity of a Kahoot!-Based Cognitive Test Instrument on Corona Pandemic Theme. *Jurnal Penelitian Dan Pembelajaran IPA*, 7(1), 118. <https://doi.org/10.30870/jppi.v7i1.9598>.
- Vidergor, H. E., & Ben-Amram, P. (2020). Khan academy effectiveness: The case of math secondary students' perceptions. *Computers and Education*, 157(July), 103985.1-12. <https://doi.org/10.1016/j.compedu.2020.103985>.
- Wen, H., & Shinas, V. H. (2020). Using a multidimensional approach to examine TPACK among teacher candidates. *Journal of Digital Learning in Teacher Education*, 37(1), 30–47. <https://doi.org/10.1080/21532974.2020.1804493>.
- Yuliatin Riski, W., Indah Fitriyani, D., & Nofita Sari, I. (2020). Pengembangan Bahan Ajar Komik Digital Pada Materi Gerak. *VOX EDUKASI: Jurnal Ilmiah Ilmu Pendidikan*, 11(2), 97–104. <https://doi.org/10.31932/ve.v11i2.829>.