

Development of Canva Based E-Module to Foster Multiliteracy in Fraction Material

Sayyidatul Karimah¹, Rini Utami², Erwan Kustriyono³, Ahmad Aunur Rohman⁴

^{1,2,3}*Universitas Pekalongan, Pekalongan, Indonesia*

⁴*Universitas Islam Negeri Walisongo Semarang, Semarang, Indonesia*

Abstract

This research aims to develop learning media in the form of a Canva-based e-module on fraction material for grade IV elementary school to foster valid, practical and effective student multiliteracy. This type of research is a development research with the Plomp development model. In this model, the stages carried out are: (1) the initial investigation stage, (2) the design stage, (3) the realization/construction stage, (4) the test, evaluation and revision stage). The instrument used in this study was a questionnaire sheet in the form of a validation questionnaire to measure the validity of the product developed and a response questionnaire to measure the practicality of the product developed and also a test to determine the effectiveness of the product developed. The results of the study showed that the learning media in the form of a Canva-based e-module on fraction material to foster multiliteracies was valid with a validation value of 3.88 and practical with a response questionnaire value of 91%. The results of the pretest and posttest showed an increase of 0.72 (high criteria). Based on these results, it can be concluded that the Canva-based e-module is valid, practical and effective so that it can be used by teachers and students in mathematics learning.

Keywords: Canva, E-Module, Fraction, Multiliteracy

Pengembangan E-Modul Berbasis Canva untuk Menumbuhkan Multiliterasi pada Materi Pecahan

Abstrak

Penelitian ini bertujuan untuk mengembangkan media pembelajaran yang berupa e-modul berbasis canva materi pecahan kelas IV SD untuk menumbuhkan multiliterasi siswa yang valid, praktis dan efektif. Jenis penelitian ini merupakan penelitian pengembangan dengan model pengembangan Plomp. Dalam model ini, tahapan yang dilakukan yaitu: (1) tahap investigasi awal, (2) tahap desain, (3) tahap realisasi/konstruksi, (4) tahap tes, evaluasi dan revisi). Instrument yang digunakan dalam penelitian ini yaitu lembar angket yang berupa angket validasi untuk mengukur kevalidan produk yang dikembangkan dan angket respon untuk mengukur kepraktisan produk yang dikembangkan serta tes untuk mengetahui keefektifan produk yang dikembangkan. Hasil penelitian menunjukkan bahwa media pembelajaran yang berupa e-modul berbasis Canva materi pecahan untuk menumbuhkan multiliterasi valid dengan nilai validasi

sebesar 3,88 dan praktis dengan nilai angket respon sebesar 91%. Hasil pretest dan posttest menunjukkan peningkatan sebesar 0,72 (kriteria tinggi). Berdasarkan hasil tersebut, maka dapat disimpulkan bahwa e-modul berbasis canva valid, praktis dan efektif sehingga dapat digunakan oleh guru dan siswa dalam pembelajaran matematika.

Kata kunci: Canva, E-modul, Pecahan, Multiliterasi

INTRODUCTION

Learning mathematics is one of the essential subjects in elementary school. Mathematics plays a crucial role in developing students' logical, critical, and creative thinking skills. Fractions are crucial for elementary school mathematics. Learning fractions in elementary school presents several challenges. One such challenge is that students often struggle to understand the concept of fractions. This is due to several reasons, including the abstract and difficult concept of fractions for students to grasp, the lack of engaging and interactive learning media, and students' limited literacy skills, including the ability to read, write, and understand mathematical information (Tambunan & Tambunan, 2023).

The multiliteracy level of elementary school students in Indonesia is generally still relatively low and has not developed optimally. This is evident in students' limited ability to integrate various types of literacy, such as reading, writing, numeracy, and science, which are essential components of multiliteracy (Budiastini et al., 2022). Furthermore, various studies have shown that elementary school students' basic literacy skills, such as reading, comprehension, and numeracy, still require improvement through more interactive and contextual learning innovations (Hamidah et al., 2025). This condition is also influenced by the implementation of literacy activities in schools, which are not yet optimal and still face various obstacles, such as a lack of engaging learning media and limited literacy habits in the learning environment.

More specifically, the multiliteracy skills of students in Pekalongan are not significantly different from the national situation, where students' literacy skills still tend to focus on basic literacy and do not yet lead to comprehensive multiliteracy mastery. Learning in elementary schools is still dominated by conventional methods, thus not fully facilitating the development of students' digital, visual, and critical literacy. Therefore, innovation in learning is needed, one of which is through the development of engaging and interactive learning media, to optimally foster students'

multiliteracy skills from the elementary school level.

Based on these challenges, it is necessary to develop teaching materials that can help students understand the concept of fractions. These materials are expected to engage students' interest, enabling them to learn actively and independently. One such open-source material is an e-module. An e-module is an open-source material packaged digitally and accessible via the internet (Putri, R. R. R.; Kaspul & Arsyad, 2022). E-modules are an effective and efficient learning medium that prioritizes student independence in independent understanding during learning activities (Alyusfitri et al., 2023). E-modules have several advantages compared to conventional open materials, including: they can be accessed anytime and anywhere, they can be interacted with more interactively, and they can be equipped with various engaging multimedia features.

Canva is a graphic design platform that can be used to create e-modules. This Canva application can support e-module development because it includes many interesting features, making the presentation of material richer and more engaging. Canva has several advantages, including: it is easy to use, even for beginners, and it offers a variety of templates and design elements that are free and accessible online, allowing it to be used anywhere. As a user-friendly graphic design platform with diverse multimedia features, Canva has the potential to be a tool for developing engaging and interactive e-modules (Irkhamni et al., 2021).

This research develops a Canva-based e-module to foster multiliteracy. The concept of multiliteracy emerged because humans do not only read or write, but they read and write in certain genres that involve social, cultural, and political goals that are the demands of the globalization era. This is the basis for the birth of multiliteracy in the world of education (Selayani & Bayu, 2023). Multiliteracy is learning that always uses language skills to learn and form a complex understanding of knowledge related to other sciences in the process of inquiry activities and as a means of building knowledge (Simarmata et al., 2020). The concept of multiliteracy emerged because humans do not only read or write, but they read and write in certain genres that involve social, cultural, and political goals that are the demands of the globalization era. This is the basis for the birth of multiliteracy in the world of education. Multiliteracy is a combination of six types of literacy: reading and writing literacy, numeracy literacy, science literacy, digital literacy, financial literacy, and cultural and civic literacy (Pasang, R; Basir, F.,

2019). In relation to multiliteracy, the benefits of having good literacy skills include students being able to better understand what is read and written, but also being able to absorb the information contained in a reading well and in an integrated manner, so that students can also respond critically to the information they receive. Therefore, this study developed an e-module containing fraction material that is related to everyday life.

Previous research has shown that the development of Canva-based learning media in elementary school mathematics has excellent potential to improve the quality of learning while supporting the development of students' multiliteracies. Kamila and Kowiyah found that Canva media for fractions was very valid and practical to use (Kamila & Kowiyah, 2023), while Ma'arif et al. showed that Canva-based media for plane geometry material was able to improve conceptual understanding through engaging visualizations (Ma'arif et al., 2025). In addition, Setiani and Hendikawati revealed that Canva media effectively helped students understand abstract mathematical concepts through visual representations (Setiani & Hendikawati, 2024), while Faishal and Efriyanti showed that the integration of video, text, and audio in Canva was able to increase students' learning interest (Faishal & Efriyanti, 2025). Furthermore, Yanah et al. emphasized that the use of Canva-based multiliteracies media can significantly improve student learning activities and outcomes (Yanah et al., 2024). Thus, it can be concluded that Canva-based learning media is not only effective in improving the understanding of mathematical concepts, but also plays an important role in fostering multiliteracies, especially numeracy, visual, and digital literacy in elementary school students.

RESEARCH METHODS

This research is a development research with the development model used is the Plomp model which consists of the initial investigation stage, the planning stage, the realization/construction stage and the testing, evaluation and revision stages. The Plomp model is widely used in the field of education to produce valid, practical and effective learning products. The advantage of this model lies in its systematic and iterative nature so that it allows for continuous improvement of the developed products (Plomp & Nieveen, 2010). This research was conducted in the even semester of 2024. Data collection techniques used questionnaire instruments and essay tests. The subjects in this study included 10 mathematics teachers and 20 fourth-grade elementary school

students from 4 schools in Pekalongan who were determined based on simple random sampling techniques.

Data analysis techniques in this study include analysis of validation data, analysis of response data and analysis of learning outcome data. Validation data analysis consisted of the average validation results from three e-module validators. The validity formula was calculated using the following formula.

$$V_a = \frac{\sum_{j=1}^n A_i}{n}$$

Description:

Va = total average

Ai = average of each aspect

n = number of aspects

The Va value or total average value obtained can be used as a reference for determining the validity level of the canva based e-modul in Table 1 (Hobri, 2010).

Table 1. Validity Criteria

No	Va	Validity criteria
1	$3 \leq V_a \leq 4$	Valid
2	$2 \leq V_a \leq 3$	Less Valid
3	$1 \leq V_a \leq 2$	Invalid

In response data analysis, student responses are said to be positive if the percentage obtained is more than 80% of the average percentage of each indicator (Hobri, 2010). The nest, improvements in learning outcomes were assessed using paired-sample comparison tests and Gain normalization to determine the extent of student learning improvement after using the Canva-based e-module. The Normalized Gain (g) formula (Hake R.R, 1999) is as follows.

$$(g) = \frac{\text{posttest scores} - \text{pretest scores}}{\text{maksimum scores} - \text{pretest scores}}$$

Next, the Normalized Gain (g) value obtained is translated according to the Normalized Gain (g) acquisition criteria as presented in Table 2.

Table 2. Normalized Gain (g) Criteria

Normalized Gain (g)	Criteria
$(g) < 0,3$	Low
$0,3 \leq (g) \leq 0,7$	Medium
$(g) > 0,7$	High

RESULTS AND DISCUSSION

The first stage is the preliminary investigation. This stage aims to identify the needs and issues that serve as the foundation for product development. During this phase, researchers conduct a needs analysis through observations, teacher interviews, document reviews, and literature studies. The analysis covers learner characteristics, the prevailing curriculum, the topic of fractions, existing learning resources, and students' multiliteracy skills.

Observation results indicate that instruction on fractions remains dominated by textbooks and lecture-based methods, causing students to struggle with the abstract nature of fraction concepts. Furthermore, available teaching materials fail to integrate various aspects of multiliteracy such as reading, visual, digital, and numeracy literacy. Teachers also have not optimally utilized digital media to support interactive and contextual learning.

Analysis of learner characteristics reveals that elementary school students are interested in learning media that feature engaging illustrations, varied colors, videos, animations, and interactive activities. Consequently, there is a need for digital teaching materials that can facilitate students' learning needs while supporting the implementation of 21st-century learning. Based on these findings, a Canva based e-module was developed; it presents fraction content through appealing visuals, contextual problem-solving activities, interactive exercises, and various features designed to foster students' multiliteracy skills. These findings are supported by research by Novitasari and Pratiwi and Agustina et al., which indicates that teachers and students need interactive, contextual, and engaging Canva-based e-modules to increase learning motivation and understanding of mathematical concepts (Novitasari & Pratiwi, 2023).

This preliminary investigation stage serves as the foundation for determining product specifications, ensuring the resulting e-module aligns with teacher needs, learner characteristics, curriculum requirements, and advancements in educational technology. Development research utilizing the Plomp model establishes the preliminary investigation phase as the basis for analyzing needs, the learning context, and user characteristics prior to entering the prototype design stage (Arifah & Helsa, 2024).

The second stage is the design. The design phase involves drafting the initial e-module based on the analysis conducted during the preliminary investigation stage. Activities in this phase include defining the target competencies, planning the development of the Canva based e-module, and creating research instruments such as validation sheets, practicality questionnaires, and learning outcome tests. In this study, the e-module was developed using Canva, adhering to instructional design principles that prioritize an engaging, simple, and interactive experience. The e-module's visual design incorporates color schemes suited to elementary school students, contextual illustrations, communicative icons, infographics, instructional videos, and exercises that encourage students to actively construct their knowledge. Research by (Wulandari et al., 2022) shows that Canva is capable of producing more engaging e-modules, thereby increasing student learning interest.

The presentation of fraction-related material follows a progressive structure ranging from basic concepts, representations, and comparisons to real life applications thereby facilitating meaningful conceptual understanding for students. These findings are supported by (Bian, Yullyatty; Lilianti; Mokodompit, Multi; Sari, 2024), who stated that Canva supports digital literacy development through creative, interactive, and accessible presentation of materials.

Multiliteracy aspects were also prioritized during the design phase. Each section of the e-module is designed to foster various literacy skills: reading literacy through informative texts; visual literacy via images, diagrams, and infographics; numeracy literacy through contextual problem-solving activities involving fractions; and digital literacy through the use of digital media and interactive features available in Canva. Consequently, the e-module design focuses not only on mastering mathematical content but also on developing 21st-century competencies that support students' multiliteracy

skills. The outcome of the design phase is "Prototype I," which proceeds to the realization stage and undergoes validation by experts before being pilot-tested with students. Catubig et al. showed that the use of Canva with integrated visual elements can improve students' visual literacy skills through the effective use of images, color, typography, and layout (Catubig et al., 2024).

The third stage is the realization/construction. In this study, the implementation phase began with the creation of an e-module using the Canva application. The researcher developed the cover page, foreword, user instructions, learning outcomes, learning objectives, concept map, content on fractions, sample problems, practice exercises, summary, evaluation, glossary, and bibliography. All components were arranged systematically to align with the learning flow, thereby facilitating independent study for the learners. The layout of the developed e-module is shown in Figure 1 (cover and module content).



Figure 1. Cover and Module Content

The cover design shown in Figure 1 integrates elements of visual literacy through the use of communicative imagery and color mathematical literacy via the representation of fraction concepts and digital literacy through the use of the Canva application during the design process. Consequently, the module cover serves not merely as a product identifier but also as an initial medium that captures students' attention and fosters learning motivation before they engage with the e-module's content. The alignment between the cover and content of a Canva-based e-module is one indicator of the quality of learning media design. The cover not only serves as a visual

identity but also as an initial representation that provides an overview of the theme, material, and learning objectives. Therefore, the use of illustrations, colors, typography, and graphic elements on the cover need to be aligned with the module content so that students have the right expectations before studying the material. The use of Canva supports this consistency because it provides various templates and design elements that allow developers to maintain visual uniformity across all sections of the module. This is in line with Salamah, et al. who explained that Canva facilitates the development of mathematics e-modules with an attractive and structured visual appearance (Salamah et al., 2024). Furthermore, Garay Abad and Hattie states that a cover designed according to sound visual design principles can enhance student engagement, facilitate material navigation, and support a more effective learning experience (Garay Abad & Hattie, 2025).

Next, a section of the content of the electronic module that has been developed is delayed. The content of this Canva-based e-module is designed to foster multiliteracy skills, specifically reading literacy, visual literacy, numeracy literacy and digital literacy. Reading literacy through activities involving reading contextual stories about pizza division. According to Permatasari, e-module content that presents a contextual story about sharing pizza can support reading literacy skills because students not only read the text but also understand the information and connect it to the mathematical concepts they are learning. Using Canva-based e-modules with reading activities has been proven to improve elementary school students' reading comprehension (Permatasari, Ria Yuli; Margiyati, 2025).

Visual literacy can be done through the use of pizza illustrations, images of students, icons, and a communicative layout. Mahendra et al., who explained that Canva provides various visual elements such as illustrations, icons, templates, and layouts that help visualize mathematical concepts so that they are easier for students to understand (Mahendra et al., 2024). Numeracy literacy can be done through activities focused on understanding the concept of unit fractions (fractions with a numerator of one) using visual representations and mathematical symbols. The last digital literacy, as the entire module was developed using the Canva application, serving as an engaging and easily accessible digital learning medium. Ridwan showed that the use of Canva in differentiated learning improves students' digital literacy skills through the activity of

designing digital learning products (Ridwan, 2025).

According to Nengsih et al, high-quality module content encompasses not only concepts, facts, and procedures but also includes contextual examples, learning activities, exercises, and evaluations, thereby enabling students to build understanding independently and actively (Nengsih et al., 2024). In line with this, Silalahi et al notes that e-modules with comprehensive, clear, and easily understandable content enhance user satisfaction and support independent learning (Silalahi et al., 2024). Thus, the content of this e-module does not merely present mathematical concepts; it integrates various forms of literacy, thereby supporting the research objective of developing a Canva-based e-module to foster multiliteracy skills among elementary school students.

The next stage is the testing, evaluation, and revision stage, where researchers validate the e-module with experts to determine the validity of the Canva-based e-module on fraction material. This validation was carried out by three validators as material and media experts. The validation sheet contains four aspects and 12 statements. The validation sheet contains four assessment numbers, namely very good (4), good (3), less good (2), and not good (1). Validator 1 gave a score of 4 (very good) for 12 statements. The second validator gave a score of 4 (very good) for 10 statements and a score of 3 (good) for 2 statements. The third validator gave a score of 4 (very good) for 9 statements and a score of 3 (good) for 3 statements. The results of the validity test based on the assessments of the validators can be seen in Table 3.

Table 3. Summary of Validation Results

No	Rated Aspect	Average Score
1	Content Eligibility	3,89
2	Language Eligibility	3,75
3	Presentasion Eligibility	3,89
4	Display Eligibility	4,00
Total average		3,88
Criteria		Valid

Based on Table 3, the validation result obtained was 3,88, indicating validity. Next, a trial was conducted to determine the practicality of the Canva-based e-module on fractions. The results of the questionnaire response trial showed that 91% of students responded positively to the Canva-based e-module. This 91% result indicates that the

Canva-based e-module is practical for use in mathematics learning. The results of the questionnaire response trial are presented in Table 4.

Table 4. Summary of Response Questionnaire

Total of scores	Average	Percentage	Criteria
477	47,7	91%	Practice

Based on table 4, the results of the student response questionnaire obtained were 91%, indicating practicality.

After being declared valid and practical, pre- and post-tests were conducted to determine improvements in fourth-grade elementary school students' learning outcomes on fractions. The pre- and post-test results are presented in Table 5 below.

Table 5. Summary of Pre-test and Post-test Results

	Pre-test	Post-test
Mean	42,5	83,75
Minimum	25	50
Maximum	100	100

The pretest and posttest results were subjected to a Gain Normalization test to assess improvements in student learning outcomes. A gain of 0,72 was obtained. Based on the gain normalization criteria, the module falls within the High criteria, indicating effectiveness.

These research findings align with those of Anggraeni and Agustina; Atikah et al and also Pasmawangi et al., who stated that the module development is suitable for use in elementary school mathematics learning. Elementary school mathematics learning aims to cultivate and develop numeracy skills as practice in daily life, develop basic mathematics skills as a foundation for further learning, and foster logical, critical, careful, creative, and disciplined attitudes (Anggreni & Agustika, 2020); (Atikah et al., 2021); Florentina Turnip & Karyono (2021); (Pasmawangi et al., 2023). The use of the Canva application can optimize elementary school mathematics learning, preventing students from becoming bored easily during learning activities due to its attractive presentation (Miftahul Jannah et al., 2023).

The implementation phase is the final stage of the Plomp development model, involving the application of the Canva-based e-module—which has been validated as

valid, practical, and effective—into the actual learning process. During this phase, teachers and students utilize the e-module while studying the topic of fractions to assess the product's practical application and its impact on students' multiliteracy skills. The implementation phase aims to gather information regarding the product's ease of use, user acceptance, and effectiveness in achieving learning objectives (Arifah & Helsa, 2024).

In this study, implementation was carried out with fourth-grade elementary school students serving as the research subjects. Before instruction began, teachers received a briefing on how to operate the Canva-based e-module, the available features, and the planned instructional steps. Subsequently, students used the e-module—either individually or in groups—under teacher guidance while learning the material on fractions.

During the implementation phase, students engaged with the material through various components within the e-module, such as conceptual explanations, visual illustrations, instructional videos, "Let's Observe" activities, practice exercises, interactive quizzes, and evaluations. The use of the Canva-based e-module provided a more engaging learning experience by combining text, images, colors, infographics, and digital media, thereby enhancing student involvement in the learning process (Sari et al., 2025).

The results of the study indicate that the developed e-module obtained a very valid category. The high level of validity indicates that the material content is in accordance with learning outcomes, the presentation of the material is systematic, the use of easy to understand language, and the visual design is attractive and appropriate to the characteristics of elementary school students. Canva provides ease in integrating various learning elements such as images, icons, colors, videos, interactive links, and an attractive layout, resulting in learning media that is more communicative and easy for students to understand. The results of this study are in line with research on Canva-based interactive modules on fractions, which showed that the developed product obtained a very valid category based on the assessment of material experts and media experts, making it suitable for use in elementary school mathematics learning (Sari et al., 2025).

In addition to meeting validity requirements, the developed e-module also

demonstrated a high level of practicality. This practicality was evident in the results of a student questionnaire, which indicated that the e-module was easy to use, accessible across various devices, had simple navigation, and increased student motivation. The attractive display, accompanied by illustrations, instructional videos, interactive exercises, and evaluations, enabled students to engage more actively during the learning process. This finding is supported by research by Laoly et al., which demonstrated that the Canva-based e-module had a very high level of practicality based on individual, small group, and field trials, making it easier for teachers and students to engage in the learning process (Laoli et al., 2025).

The effectiveness aspect also showed positive results. The use of the Canva-based e-module improved learning outcomes while developing students' multiliteracy skills. This was evident in the students' increased ability to understand fraction concepts through pictorial representations, mathematical symbols, text, and activities that connected the material to contextual problems (Hafizah et al., 2024). Learning not only focused on mastering concepts but also trained students to read information, interpret visuals, understand mathematical symbols, think critically, and communicate problem-solving results (Firdaus et al., 2024). Thus, the developed e-module is able to integrate various forms of literacy in accordance with the concept of multiliteracy, which emphasizes the ability to understand various types of information through various media (Husnia & Nuryami, 2024).

Students' multiliteracy skills develop because the Canva-based e-module presents material in various representations, such as text, images, infographics, videos, contextual illustrations, and problem-solving exercises (Amelia et al., 2024). This presentation provides students with the opportunity to construct knowledge through various information sources, making the learning process more meaningful. In addition to improving reading and numeracy literacy, the e-module also trains digital literacy through the use of technology in the learning process (Ratri et al., 2024). This condition aligns with the characteristics of 21st-century learning, which emphasizes critical thinking, communication, collaboration, creativity, and the use of digital technology (Fatkurochman et al., 2024).

The results of this study also align with various studies on the development of Canva-based e-modules, which demonstrate that the developed products consistently

meet the criteria for validity, practicality, and effectiveness. Similarly, research by Yahya et al. stated that the Canva-based e-module they developed met all product quality indicators and is therefore suitable for implementation in learning (Sari et al., 2025). Therefore, this e-module can be used as an alternative, innovative teaching material for mathematics, particularly fractions, while also supporting the implementation of 21st-century learning focused on strengthening literacy and utilizing technology.

CONCLUSION

The conclusion of this study is that the Canva-based e-module media for fraction material to foster multiliteracy is declared valid with a validation value of 3,88, practical with a questionnaire response value of 91% and effective as shown by an increase in pretest and posttest of 0,72. Based on these results, the development of Canva-based e-module learning media for fraction material to foster multiliteracy is suitable for use in mathematics learning for fraction material in elementary schools. Based on the results of this study, several suggestions can be put forward for future e-module development: a) Developing e-modules for other elementary school materials; b) Making the e-module more interactive by adding additional features, and c) disseminating the e-module to elementary school teachers outside Pekalongan.

REFERENCES

- Alyusfitri, R., Sari, S. G., Jusar, I. R., & Pratiwi, N. (2023). Pengembangan E-Modul Berbasis Multimedia Interaktif Dengan Pendekatan Kontekstual Teaching and Learning Untuk Siswa Sekolah Dasar Pada Materi Bangun Ruang. *Jurnal Cendekia : Jurnal Pendidikan Matematika*, 7(1), 302–312. <https://doi.org/10.31004/cendekia.v7i1.1750>
- Amelia, D. J., Ulum, B., & Utami, I. W. P. (2024). Pembelajaran multiliterasi pada mahasiswa pendidikan guru sekolah dasar. *Journal on Education*, 6(2), 15029–15037. <https://doi.org/10.31004/joe.v6i2.5378>
- Anggreni, N. W. Y., & Agustika, G. N. S. (2020). Model Pembelajaran Problem Based Learning Berbasis Penilaian Portofolio Terhadap Kompetensi Pengetahuan Matematika. *Jurnal Ilmiah Pendidikan Profesi Guru*, 3(1), 61–72. <https://doi.org/10.23887/jippg.v3i1.26814>
- Arifah, G., & Helsa, Y. (2024). Pengembangan Modul Berbasis PMRI Menggunakan Aplikasi Canva pada Materi Bangun Datar Kelas IV Sekolah Dasar Ghassani. *Jurnal Basicedu*, 8(5), 3791–3798.

<https://jbasic.org/index.php/basicedu/article/view/8671/3522>

- Atikah, N., Gistituati, N., Syarifuddin, H., & Fitria, Y. (2021). Validitas E-Modul Matematika Sekolah Dasar Berbasis Pendekatan Realistic Mathematics Education (RME). *Jurnal Basicedu*, 5(6), 6103–6109. <https://jbasic.org/index.php/basicedu/article/view/1799/pdf>
- Bian, Yullyatty; Lilianti; Mokodompit, Multi; Sari, Y. P. N. (2024). Pemanfaatan Canva For Education dalam Membangun Literasi Digital di Era Kurikulum Merdeka: Sebuah Analisis Studi Pustaka. *Jurnal Ilmu Manajemen Sosial Humaniora (JIMSH)*, 6(1), 12–20. <https://doi.org/10.51454/jimsh.v6i1.404>
- Budiastini, N. P. P., I Gede Astawan, & Widiana, I. W. W. (2022). Instrumen Multiliterasi pada Literasi Baca Tulis, Literasi Numerasi, dan Literasi Sains bagi Siswa Sekolah Dasar. *Mimbar Pendidikan Indonesia*, 3(3), 357–367. <https://doi.org/10.23887/mpi.v3i3.58894>
- Catubig, M. J. A., Kilat, R. V. B., Laurito, M. E., Patoc, T. M. T., & Valle, L. C. (2024). Visual Literacy in the Lived Experiences of BSED Students in Utilizing Canva. *Journal of Educational and Social Research*, 14(4), 117–131. <https://doi.org/10.36941/jesr-2024-0090>
- Faishal, M., & Efriyanti, L. (2025). Integrasi Canva dalam Pengembangan Media Video Pembelajaran Matematika Kelas IV SDIT Insan Kamil. *Intellect: Indonesian Journal of Learning and Technological Innovation*, 4(1), 135–144. <https://doi.org/10.57255/intellect.v4i1.1340>
- Fatkurochman, M., Slamet, I., & Pramudya, I. (2024). Contextually based mathematics learning module improves students' mathematical literacy abilities. *Journal of Educational Research and Evaluation*, 8(1), 67–77. <https://doi.org/10.23887/jere.v8i1.73940>
- Firdaus, F. M., Fadhilah, N., Wuryandari, I. T., & Fadhli, R. (2024). Liveworksheet interactive e-module effect on equal fractions comprehension at 4th grade elementary school. *Jurnal Prima Edukasia*, 12(1), 156–164. <https://doi.org/10.21831/jpe.v12i1.64526>
- Garay Abad, L., & Hattie, J. (2025). The impact of teaching materials on instructional design and teacher development. *Frontiers in Education*, 10(April), 1–12. <https://doi.org/10.3389/educ.2025.1577721>
- Hafizah, N., Ahmad, S., Zainil, M., & Bentri, A. (2024). Validity of the elementary school mathematics e-module on fractional material based on the Realistic Mathematics Education (RME) approach. *Mimbar Sekolah Dasar*, 11(2), 328–338. <https://doi.org/10.53400/mimbar-sd.v11i2.72099>
- Hamidah, I. S., Purnama, Z. rizka, Hermin, H., Tukan, K., & Wuwute, J. (2025). Pelatihan Literasi Numerasi Anak SD dengan Metode Kolaboratif Meningkatkan Kemampuan Siswa Secara Signifikan. *Jurnal Pendidikan Indonesia*, 6(2), 683–687. <https://doi.org/10.59141/japendi.v6i2.7312>
- Husnia, H., & Nuryami, N. (2024). Pengembangan media pembelajaran digital smart book berbantuan aplikasi Canva pada materi pecahan untuk meningkatkan pemahaman siswa kelas IV MI Nurul Islam Mayangan. *Jurnal Karya Pendidikan*

- Matematika, 11(2), 116–125. <https://doi.org/10.26714/jkpm.11.2.2024.116-125>
- Irkhamni, I., Izza, A. Z., Salsabila, W. T., & Hidayah, N. (2021). Pemanfaatan Canva Sebagai E-Modul Pembelajaran Matematika terhadap Minat Belajar Peserta Didik. Konferensi Ilmiah Pendidikan Universitas Pekalongan 2021, 127–134. <https://proceeding.unikal.ac.id/index.php/kip/issue/view/12>
- Kamila, Z., & Kowiyah. (2023). Pengembangan media z pembelajaran k Interaktif berbasis Canva. Jurnal Pendidikan Matematika, 07(1), 72–83. <https://doi.org/10.31004/cendekia.v7i1.1663>
- Laoli, J., Ndruru, M., Bu'ulolo, Y., & Harefa, N. A. J. (2025). Jurnal Kata (Bahasa, Sastra, dan Pembelajarannya). Jurnal Kata (Bahasa, Sastra, Dan Pembelajarannya), 13(1), 273–282. <https://jurnal.pbs.fkip.unila.ac.id/index.php/Kata/article/view/430>
- Ma'arif, M. R. ., Fitiria, P. ., Al Amin, S. ., Nurussama, A., & Rahayu, T. . (2025). Pengembangan Media Pembelajaran Interaktif Matematika Berbasis Canva pada Materi Ciri-ciri Bangun Datar menggunakan Teori Bruner di Sekolah Dasar. Didaktik : Jurnal Ilmiah PGSD STKIP Subang, 10(04), 121–135.
- Mahendra, A. Y. N., Pramesti, D. R., Sari, A. D. P., Hidayah, N., Selani, D. A., & Mayasari, N. (2024). Memanfaatkan aplikasi Canva sebagai media pembelajaran matematika. Journal of Technology, Mathematics and Social Science, 5(1), 1–7. <https://doi.org/10.30734/jthoms.v5i1.5200>
- Miftahul Jannah, F. N., Nuroso, H., Mudzanatun, M., & Isnuryantono, E. (2023). Penggunaan Aplikasi Canva dalam Media Pembelajaran Matematika di Sekolah Dasar. Jurnal Pendidikan Dasar, 11(1). <https://doi.org/10.20961/jpd.v11i1.72716>
- Nengsih, D., Febrina, W., Maifalinda, M., Junaidi, J., Darmansyah, D., & Demina, D. (2024). Pengembangan Modul Ajar Kurikulum Merdeka. Diklat Review : Jurnal Manajemen Pendidikan Dan Pelatihan, 8(1), 150–158. <https://doi.org/10.35446/diklatreview.v8i1.1738>
- Novitasari, A. D., & Pratiwi, E. Y. R. (2023). E-Modul Interaktif Berbasis Canva Untuk Meningkatkan Kemandirian Belajar Siswa Pada Sekolah Dasar. Journal of Social Science Research, 3(3), 3437–3455. <https://j-innovative.org/index.php/Innovative/article/view/2301>
- Pasang, R; Basir, F.; K. (2019). Penerapan Model Pembelajaran Multiliterasi Terhadap Kemampuan Pemahaman Konsep Matematis Siswa. Pedagogy, 9(1), 384–398. <https://doi.org/https://e-journal.my.id/pedagogy/article/view/4967>
- Pasmawangi, N. L. A., Husniati, H., & Rosyidah, A. N. K. (2023). Pengembangan Modul Matematika Cetak Menggunakan Canva Pada Materi Keliling dan Luas Bangun Datar Kelas IV SD. Jurnal Ilmiah Profesi Pendidikan, 8(1), 433–441. <https://doi.org/10.29303/jipp.v8i1.1198>
- Permatasari, Ria Yuli; Margiyati, S. (2025). Development of Indonesian Language Digital Literacy E-Module and Its Effectiveness In Improving Reading Comprehension Skills Of Fifth Grade Students at SD Negeri 3 Randulawang. Schola Journal, 3(2), 37–43. <https://doi.org/10.26877/schola.v3i2.3179>
- Plomp, T., & Nieveen, N. M. (2010). An introduction to educational design research.
- Putri, R. R. R.; Kaspul & Arsyad, M. (2022). Pengembangan Media Pembelajaran

- Modul Elektronik (E-Modul) Berbasis Flip Pdf Professional Pada Materi Sistem Peredaran Darah Manusia Kelas XI SMA. *JUPEIS : Jurnal Pendidikan Dan Ilmu Sosial*, 1(2), 93–104. <https://doi.org/10.55784/jupeis.vol1.iss2.46>
- Ratri, T. M., Muhtar, T., & Herlambang, Y. T. (2024). Urgensi pedagogik multiliterasi dalam membangun generasi emas 2045 yang berkarakter. *Literasi: Jurnal Ilmiah Pendidikan Bahasa, Sastra Indonesia dan Daerah*, 14(1), 110–119. <https://doi.org/10.23969/literasi.v14i1.9351>
- Ridwan, S. L. (2025). Pemanfaatan Canva untuk Meningkatkan Literasi Digital Siswa dalam Pembelajaran. *Jurnal Didaktika Pendidikan Dasar*, 9(2), 479–500. <https://doi.org/10.26811/didaktika.v9i2.1291>
- Salamah, U., Lumbanraja, S., Salsabila, N. A., & Wibowo, R. (2024). Pemanfaatan Canva Sebagai E-Modul Pembelajaran Matematika terhadap Minat Belajar Peserta Didik. *Konferensi Ilmiah Pendidikan Universitas Pekalongan 2021*, 19–24. <https://proceeding.unikal.ac.id/index.php/kip/issue/view/12>
- Sari, N. K., Naba, D. M., & Arifendi, R. F. (2025). Inovasi Pembelajaran Pecahan: Pengembangan Dan Efektivitas Modul Ajar Interaktif Berbasis Canva Untuk Siswa Sekolah Dasar. *SJME (Supremum Journal of Mathematics Education)*, 9(2), 265–275. <https://doi.org/10.35706/sjme.v9i2.203>
- Selayani, N. K., & Bayu, G. W. (2023). Pembelajaran Berbasis Multiliterasi di Sekolah Dasar: Bagaimana Mengoptimalkannya? *Jurnal Ilmiah Pendidikan Profesi Guru*, 5(3), 466–478. <https://doi.org/10.23887/jippg.v5i3.57400>
- Setiani, I., & Hendikawati, P. (2024). Kemampuan representasi matematis peserta didik pada pembelajaran Think Pair Share berbantuan media Canva. *Primatika. J. Pend. Mat*, 13(2), 115–124. <https://doi.org/10.30872/primatika.v13i2.4118>
- Silalahi, D. W., Tangkin, W. P., & Purba, S. D. (2024). The Study of User Responses to the Quality of E-Modules in Blended Learning (Number Iclique). *Atlantis Press SARL*. https://doi.org/10.2991/978-2-38476-301-6_5
- Simarmata, Y., Wedyawati, N., & Hutagaol, A. S. R. (2020). Analisis Literasi Matematika pada Penyelesaian Soal Cerita Siswa Kelas V Sekolah Dasar. *Jurnal Pendidikan Matematika*, 2(1), 100–105. <https://jurnal.stkipppersada.ac.id/jurnal/index.php/jpimat/article/view/654/0>
- Tambunan, L., & Tambunan, J. (2023). Pengembangan Bahan Ajar E-Modul Matematika Berbantuan Aplikasi Canva pada Materi Grafik Fungsi Eksponen dan Logaritma. *Jurnal Cendekia : Jurnal Pendidikan Matematika*, 7(2), 1029–1038. <https://doi.org/10.31004/cendekia.v7i2.2212>
- Wulandari, D., Risdianto, E., & Setiawan, I. (2022). Development of E-Module Materials of Quantities and Units Using Canva to Increase Students' Interest in Learning. *JENTIK : Jurnal Pendidikan Teknologi Informasi Dan Komunikasi*, 1(1), 25–34. <https://doi.org/10.58723/jentik.v1i1.27>
- Yanah, T., Soleh, M., & Naufal, M. (2024). Penerapan Model Multiliterasi Berbasis Media Canva dalam Pembelajaran Menulis Teks Prosedur pada Siswa Kelas VII SMPN 1 Sliyeg Tahun Ajaran 2024/2025. *Pendas : Jurnal Ilmiah Pendidikan Dasar*, 09(04), 831–842. <https://doi.org/https://doi.org/10.23969/jp.v9i4.19019>