

Development of Flipbook-Based Digital Comic Learning Media to Improve Student Learning Outcomes in Pancasila Class V SDN Paduraksa Pemalang

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ABSTRACT

The 21st century is characterized by technological advances that affect various aspects of life, including education. The purpose of this research is to enhance the Pancasila Education curriculum in fifth grade at SDN 04 Paduraksa in Pemalang District, Pemalang Regency by creating digital comic learning media in the form of flipbooks to teach students about their rights and responsibilities as school citizens. The method used is development research (Research and Development) with the Borg and Gall model, which includes eight stages (1) potential and problems, (2) data collection, (3) product design, (4) design validation, (5) design revision, (6) product trial 1, (7) product revision 1, (8) trial use. The results showed that the average pretest score of students before using the media was 51.59, while the average posttest score after using the media increased to 86.14. The average N-Gain value of 0.73 shows an increase that is classified as quite effective. Based on the results of this study, digital comic learning media in the form of flipbooks has the potential to be a fresh and effective way to teach Pancasila Education in the modern digital age.

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1. INTRODUCTION

The 21st century is a digital century, an era characterized by technological advances such as the internet (Hesti et al., 2024). Technological advances have an impact on various aspects of human life, especially in the context of education (Boentolo et al., 2024). Education is an effort to improve the quality of human resources which is very important for the operation of the state, society, and nation based on Pancasila. This is in line with the objectives of national education, which include helping students develop their capacity to become devout individuals who are devoted to God Almighty, noble, healthy, intelligent, capable, creative, independent, and democratic as well as responsible citizens. Education

needs to foster and assimilate the values of the country's cultural ideology as a whole, thoroughly, and periodically

In improving the quality of "Pancasila education", an educator must make new innovations in teaching (Zega et al., 2023). Some examples of new innovations in modern teaching that can increase student participation are the use of online learning platforms, educational applications, and social media by instilling values and national character to students, especially in online learning in the 4.0 era (Lukman et al., 2025). However, teaching Pancasila in grade V elementary school is not easy. Students at this age are in the concrete operational phase of development, where they begin to understand more complex and abstract concepts (Modjo et al., 2024). Thus, fifth grade students have varying understanding of the abstract ideas taught in Pancasila learning. This can be a challenge for teachers in delivering material effectively, so the right approach is needed to help students understand and internalize the values of Pancasila better (Mu'afifah et al., 2024a).

The learning approach used to increase activity in the student learning process can be more effective when supported by utilizing innovative learning media (Mu'afifah et al., 2024a). Any medium that may convey information with the purpose of facilitating learning is considered learning media (Dewi & Wulandari, 2024). In the era of increasingly sophisticated technology, many creative applications and websites are available that can be used as learning media, one of the prominent choices is flipbook-based comic media. The use of flipbook-based comics in learning can provide a memorable and interesting experience for children involved in the learning process (Boentolo et al., 2024). Flipbook-based comics are multimedia that integrates narration, images, and animation in one format and allows visualization of abstract concepts in a way that is interesting and easily understood by students (Mu'afifah et al., 2024b; C. W. Rahayu & Wibawa, 2024).

According to previous research (Ramadanti & Bektiningsih, 2023), digital comics in the form of flipbooks can facilitate learning activities and enhance learning outcomes for students. Additionally, research has shown that digital comics presented in the form of flipbooks can inspire students to learn more (Afriliani et al., 2022). There is a pressing need to incorporate electronic media into the teaching and learning process, according to the results of interviews with teachers at SDN 04 Paduraksa. Teachers stated that the development of increasingly sophisticated times requires innovation in teaching methods. Currently, the learning media available in schools are still limited to printed books and PowerPoint presentations, while more innovative media such as learning videos and educational comics are rarely used. In learning Pancasila, teachers more often use lecture and discussion methods, which can make students less involved and lose interest in the material being learned, especially on concepts that require concrete visualization such as examples of the application of rights and obligations as school citizens.

This condition shows the need for alternative media that can increase student engagement and their critical thinking skills. One such approach is to utilize digital comic material in the style of flipbooks. Students will have an easier time understanding and internalizing the Pancasila values through the use of this media because it is both aesthetically pleasing and diversified. This phenomenon shows the need for alternative media that can increase student engagement and their critical thinking skills. One solution that can be implemented is the use of flipbook-based digital comic media. This media is not only visually appealing, but also effective and efficient, so it can help students understand and internalize Pancasila values in a more enjoyable way (Zega et al., 2023).

From the results of the background and supporting research, researchers are interested in using flipbookbased digital comics as learning media on Pancasila material in class V SDN 04 Paduraksa. This research uses the type of Research and Development (R&D) development research entitled "*Development of FlipbookBased Digital Comic Learning Media to Improve Student Learning Outcomes in Pancasila Class V SDN Paduraksa Pematang*". The novelty in development research from previous media includes flipbook-based digital comic media containing material presented against the background of life as a school citizen, comics that can be scanned via QR-Code, and several interesting features in reading comics, such as the backsound. It is believed that students' engagement and interest in the subject matter will improve as a

result of the development of these media, leading to better learning results overall and particularly in the area of students' rights and responsibilities as school citizens.

The following problem formulations can be advanced in light of the above-mentioned context: (1) "How can the content of rights and responsibilities as school citizens be taught in Pancasila Education grade V at SDN Paduraksa Pemalang through the use of digital comic media based on flipbooks?", (2) "How do fifth graders at SDN Paduraksa Pemalang would react to a digital comic book that teaches them their rights and responsibilities as school citizens as part of Pancasila Education?", (3) "In the context of Pancasila Education in fifth grade at SDN Paduraksa Pemalang, how beneficial are digital comic books as a medium for enhancing students' understanding of their rights and responsibilities as school citizens?" According to the problem statement, the following are the research aims. (1) Create digital comics based on flipbooks that cover the topic of school citizenship rights and responsibilities for fifth grade "Pancasila Education" at SDN Paduraksa Pemalang. (2) Investigating the potential of digital comic books as a way to teach fifth graders at SDN Paduraksa Pemalang about their rights and responsibilities as citizens through the "Pancasila Education" curriculum. (3) Investigating the efficacy of digital comic book flipbooks as a medium for enhancing fifth grade "Pancasila Education" students' understanding of their rights and responsibilities as school citizens at SDN Paduraksa Pemalang.

This research is expected to provide benefits for teachers in improving the quality of "Pancasila Education" learning, especially on the material of rights and obligations as school citizens, and facilitate teachers in creating innovative, creative, and efficient learning media. This research can also be an alternative for schools in providing learning media for the material of rights and obligations as school citizens. Furthermore, this research is expected to contribute to the field of education, especially in the development of learning media and become a theoretical basis for further flipbook-based digital comic media development research.

2. METHODS

Using the Borg and Gall approach, this study is a development study. The benefits of providing thorough and comprehensive stages led to the selection of the Borg and Gall model, so that it can be adjusted to the situation and conditions in the field (Waruwu, 2024). In the development process, this research implements a waterfall approach. This model has stages with 10 steps, namely: (1) potential and problems, (2) data collection, (3) product design, (4) design validation, (5) design revision, (6) product trial 1, (7) product revision 1, (8) trial use, (9) product revision 2, (10) mass production (Ramadanti & Bektiningsih, 2023).

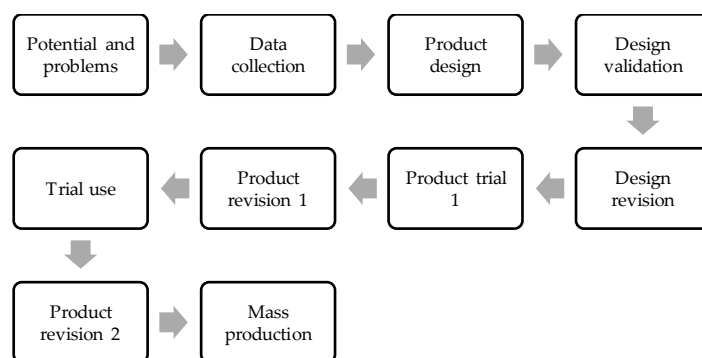


Figure 1. Bagan Model Borg and Gall (Ramadanti & Bektiningsih, 2023)

This research was conducted at SD Negeri 04 Paduraksa, Pemalang District, Pemalang Regency with a population of all fifth grade students totaling 22 students. Data collection techniques in this study used test and non-test techniques. The test technique was carried out with a pre-test and post-test. In the test technique both pre-test and post-test, for high grade elementary school children (4, 5, and 6) the data used in measuring students' concept understanding is obtained from the results of the

analysis of questions with cognitive level C4-C6 with a total of 20 multiple choice questions. C4-C6 cognitive level is included in the Higher order thinking skills (HOTS) category (Gunartha et al., 2024). There have been empirical assessments of construct and content as well as validity, reliability, difficulty level, and distinguishing power conducted on the questions before they are employed as a testing technique. Below, you can see the results of the empirical tests in Tables 1 and 2.

Table 1. Validity test results

Valid Question	Invalid Question
2, 4, 7, 8, 9, 11, 17, 22, 24, 31, 33, 37, 41, 42, 45, 46, 47, 48, 49, 50	1, 3, 5, 6, 10, 12, 13, 14, 15, 16, 18, 19, 20, 21, 23, 25, 26, 27, 28, 29, 30, 32, 34, 35, 36, 38, 39, 40, 43, 44

Table 2. Reliability test results

Score variance	Reliable Coefficient	Reliable status
34.25	0.951171	Reliabel

Furthermore, non-test techniques in this study were carried out through observation, interviews, and questionnaires. Data analysis methods are used to gather information about the effectiveness of digital comic learning media based on flipbooks in "Pancasila Education" subjects, as well as information about the criteria for eligibility. In this study, there are three data analysis methods applied. First, qualitative descriptive analysis to examine various inputs and suggestions obtained from experts and responses from students and teachers regarding flipbook-based digital comic learning media in "Pancasila Education" Subjects.

Second, to analyze the results of the assessment in the form of scores given by experts, student and teacher responses to learning media, quantitative descriptive analysis is used. Media expert validators were carried out by lecturers of the UNNES PGSD study program who are experts in the field of media, namely Mr. Moh. Fathurrahman, S.Pd., M.Sn, while material validators were carried out by lecturers of the UNNES PGSD study program who are experts in the field of "Pancasila Education", namely Mr. Susilo Tri Widodo, S.Pd., M.H. In the data collection process, researchers used an instrument in the form of a questionnaire. The learning media eligibility category is as follows.

Table 3. Categories of media feasibility score assessment results

Rentang persentase	Kategori
76% - 100%	Very decent/very good
51% - 75%	Decent/Good
26% - 50%	Less feasible / Sufficient
0% - 25%	Not feasible/Lacking

(Nisaa' Novitaningtyas et al., 2024)

Third, the N-Gain test was administered to determine the efficacy of the digital comic flipbook learning medium for "Pancasila Education" courses. This test seeks to determine if the average learning outcomes of students are improved as a result of using this medium. The results of the N-Gain analysis are presented in Table 4 below.

Table 4. N-Gain value categories

N-Gain Value	Category
$g > 0,7$	High
$0,3 \leq g \leq 0,7$	Medium
$g < 0,3$	Low

(Haka et al., 2022)

The categorization of the effectiveness of the N-Gain Score is presented in Table 5, as follows.

Table 5. Categories of interpretation of effectiveness of N-Gain score

Percentage (%)	Interpretation
< 40	Ineffective
40 - 55	Less effective
56 - 75	Effective enough
> 76	Effective

(Olivia Febrianti et al., 2024)

3. FINDINGS AND DISCUSSION

The goal of creating digital comics based on flip books was to enhance the “Pancasila Education” learning outcomes for fifth graders at SD Negeri 04 Paduraksa Pematang. The R&D approach, based on the development model proposed by Borg and Gall, is used in this study. The Borg and Gall model has 10 stages, the researcher made modifications to 8 stages according to existing needs and limitations (Ramadanti & Bektiningsih, 2023). These eight stages include: (1) potential and problems, (2) data collection, (3) product design, (4) design validation, (5) design revision, (6) product trial 1, (7) product revision 2, (8) trial use. The explanation of several stages in making flipbookbased digital comic media is as follows.

3.1. Findings

3.1.1. Potential and problems

Researchers begin their work by identifying both problems and potential opportunities. In obtaining preliminary data, researchers conducted pre-research using three data collection methods, namely observation, interviews, and documentation in class V of SD Negeri 04 Paduraksa Pematang. Based on the pre-research, researchers can collect information about the potential that exists and the problems faced. Class V at SD Negeri 04 Paduraksa has a number of issues that require fixing, according to the data analysis. The most prominent problem is the lack of student interest in “Pancasila Education” subjects. The requirements analysis indicates that students find learning Pancasila tedious due to insufficient diverse learning material. This is due to the suboptimal integration of information technology (IT) in educational media. Furthermore, pupils reported challenges in comprehending the concepts of rights and responsibility as school citizens within “Pancasila Education” curricula, and students find it easier if the material is delivered with more interesting media associated with daily life at school.

3.1.2. Data Collection

The second stage carried out by researchers is data collection. At this stage, starting with collecting various references commonly used by educators regarding the material of rights and obligations as school citizens, including examples of its application in everyday life. From the various

examples of application, the most suitable one was chosen to be developed into a comic story. Next, the learning outcomes and objectives are determined, which will be the basis for creating a storyline related to the learning material. The process continues with making a synopsis of the story and determining the character of the comic character. The final stage is to determine the application that will be used in the development of learning media.

3.1.3. Product Design

The third stage carried out by researchers is product design. The design begins with making visual concepts and narrative flow of digital comics using editing applications such as *CorelDRAW* and *Canva*. The design is adjusted to the material and learning objectives that have been determined previously. The comics made use the background atmosphere of learning implementation in the classroom and interaction in the school environment. Furthermore, the characters in the comic are made into six characters, consisting of five learners and one teacher. The five learners show differences in their characters regarding knowledge of their rights and obligations at school. With the differences in these characters, then the visual concept is made by compiling a storyboard using *Canva* with the aim of making digital comics easier. After the design is finished, the comic is converted into a flipbook using the *FlipHTML5* web and can be shared in the form of the following QR-ScanCode.



Figure 2. QR-ScanCode of digital comic learning media "Andi's Adventure"

3.1.4. Design Validation

The fourth stage in this research involves design validation. Once the product design is completed, evaluation is conducted by experts, including media specialists and subject matter authorities. For this validation process, various instruments were prepared, comprising inquiries and assertions pertaining to the developed products for evaluation by expert validators. The validation test results from these experts are presented in the following table of digital comic learning media feasibility test outcomes.

Table 6. Calculation of validation by experts

Assessment Aspect	Percentage	Category
Learning aspects	83%	Very Feasible
Language Aspect	83%	Very Feasible
Presentation aspect	87%	Very Feasible
Average percentage	85%	
Category		Very Feasible

Table 7. Calculation of validation by media experts






Assessment Aspect	Percentage	Category
Presentation	93.7%	Very Feasible
Illustration	87%	Very Feasible
Storyline	100%	Very Feasible
Material	95%	Very Feasible
Language	95%	Very Feasible
Average percentage	93.73%	
Category	Very Feasible	

3.1.5. Design Revision

The fifth stage of this research involves design revision. Material and media experts conducted design validation to identify areas for improvement in suboptimal components prior to the trial phase. During this process, researchers incorporated suggestions and feedback from validators as guidelines for enhancing the digital comic learning media, including additional design steps for the digital comics. The results of revisions from media experts include the addition of pages consisting of the addition of comic title layouts, class descriptions, learning objectives, bios of supervisors, and media bibliographies.

Table 8. Revision Results

Initial Product	Final Product	Advice
		<p>Added class information and changed the layout of the author's name, supervisor, and material title.</p>
		<p>Addition of learning outcome information.</p>

Initial Product	Final Product	Advice
-		<p>Addition of learning objective information</p>
		<p>Addition of reading sequence numbers so that the flow of reading comics is clearer.</p>
-		<p>Addition of the supervisor's biography after the author's biography.</p>
-		<p>Adding a bibliography for making digital comic media.</p>

3.1.6. Product Trial 1

In the sixth stage, researchers conducted a small-scale product trial in the sixth grade of SD Negeri 04 Paduraksa Elementary School. This trial employed a purposive sampling technique. According to the Bord and Gall model, development research of this nature only requires 6-12 subjects based on intellectual heterogeneity (Ramadanti & Bektiningsih, 2023). Due to subject limitations, the researchers selected 6 samples representing various intelligence levels: 2 students with the highest academic ranking, 2 students with middle rankings, and 2 students with the lowest rankings. The study gathered student feedback through questionnaires, with assessment results as follows:

Table 9. Small Scale Student Response Results

Number of students	Score	Max Score	Average	Description
6	409	480	85.20	Very feasible

3.1.7. Product Revision 1

The next stage is product revision. After knowing the results of the small-scale trial in the table above, researchers did not receive too much criticism and suggestions from students. Some responses from grade VI students considered that the font on the comic writing was less clear and too small, namely with size seven, making it difficult to read. This response became the researcher's input so that the product was revised by improving what was not optimal. According to the students in the small-scale trial, the flipbook-based digital comics developed were good.

3.1.8. Trial Use

After conducting small-scale trials and product revisions according to input on digital comic writing fonts, the next stage is product testing on a large scale. Large-scale trials were carried out on fifth grade students of SD Negeri 04 Paduraksa with a total of 22 children. This test aims to assess the efficacy of flipbook-based digital comic learning media in enhancing student learning outcomes in "Pancasila Education", particularly regarding the material on rights and obligations as school citizens. The evaluation procedure involves administering an initial assessment (PreTest) and a concluding assessment (PostTest), alongside data gathering via instructor response surveys and student feedback on the created media.

Based on the data analysis from the extensive product trial, students showed improved learning outcomes during the trial period. This improvement was measured by comparing results before and after using the digital comic media with flipbook functionality. To obtain a more precise measurement of the enhancement in student performance, the research team utilized the N-Gain test methodology. The N-Gain test results for the large-scale participant group who used the flipbook-based digital comic learning materials are displayed in the table below:

Table 11. N-gain Test Results

Category	Value Average	The difference average	Average ideal value	N-Gain	Interpretation
Pretest	51.5909	34.5455	48.4091	0.732465	Effective enough
Posttest	86.1364				

The analysis conducted through the N-Gain test on large-scale groups yielded positive outcomes. According to the best results, an average N-Gain value of 0.73 was achieved, which falls into the quite effective category. The data indicates a substantial improvement in average student learning outcomes, as evidenced by the comparison between pretest-posttest score. Consequently, it can be inferred that the implementation of flipbook-based digital comic media significantly improves student learning results.

Table 12. Results of student and teacher response analysis

Respondent	Total	Score	Max Score	Average	Category
Students	22	1548	1760	87.95	Very feasible
Teacher	1	76	80	95	Very feasible

Flipbook-based digital comic media received very good responses from 22 fifth grade students of SD Negeri 04 Paduraksa. Based on the data analysis that has been carried out, the level of positive responses from students reached 87.95% and the acquisition of teacher responses of 95%. This percentage indicates that the developed learning media is highly suitable for implementation in the "Pancasila Education" curriculum regarding the rights and obligations of school citizens.

3.2. Discussion

Research on the development of flipbook-based digital comic learning media for "Pancasila Education" in class V at SD Negeri 05 Paduraksa demonstrated positive impacts on academic performance. Several key factors contributed to this success. Primarily, the flipbook-based digital comic format proved effective in enhancing student learning outcomes in "Pancasila Education". Specifically, student comprehension of rights and obligations as members of the school community showed marked improvement following the introduction of this digital comic learning approach. Material experts have conducted validation and the results are very good also in terms of the suitability of the material with the targeted competencies, to enhance student learning outcomes. Learning materials that are in accordance with targeted competencies will have an impact on the level of student understanding in the learning process. This assertion is corroborated by prior research demonstrating that educational materials presented as digital comics can enhance students comprehension of rights and obligations (Septiana et al., 2024; Wulandari & Suniasih, 2022). This study uses learning media in the form of digital comics that have educational value content, so that they are effectively used as media in teaching and learning activities. In addition, instilling educational values is very important for students in order to develop their character for the better (Puniatmaja & Renda, 2021). Other research also shows that comic media can be developed in accordance with the content of the material and effectively used in the teaching and learning process. The use of this media helps students more easily absorb and understand the material conveyed by the teacher (Febriyandani, 2021; Hanifah et al., 2023).

Second, the implementation of digital comic learning media in a flipbook format for "Pancasila Education" courses has been shown to enhance students motivation to learn. Student learning motivation can also increase when the learning material is in accordance with the content of the story presented in the comic (Afriliani et al., 2022; Rahmawati et al., 2024). Effective educational media not only disseminates information but also stimulates cognition, emotions, and motivation, thereby facilitating a more efficient learning process and aiding in the attainment of educational objectives (Kurniawan & Wuryandani, 2017; Ramadhany et al., 2024; Wijayanti et al., 2018). The use of technology as a learning medium can be used as an innovative solution in making learning media in increasing student learning motivation in the 21st century era (S. Rahayu & Afrita, 2023). Comic is defined as a work that combines characters and images. designed to provide entertainment as well as education to its readers. (Anggraeni et al., 2021; Rahmawati et al., 2024; Takengon et al., 2020). This agrees with

(Amral & Sumiharti, 2024; Ramadhany et al., 2024). Comic media can be described as a medium consisting of sequential, harmoniously arranged narratives that captivate readers. Comics are further enhanced by illustrations that complement the storyline, facilitating reader comprehension and boosting their motivation to continue reading.

Third, implementing flipbook-based digital comic learning media in "Pancasila Education" courses creates an enjoyable learning environment for students. The alignment between learning materials and assessment methods, combined with the use of accessible language, enhances students' ability to effectively utilize this educational resource. According to the opinion (Saniyyah et al., 2024), digital comics serve as educational media that deliver instructional content and information through engaging comic narratives. This is also in line with the characteristics of comics that are entertaining and able to attract the attention of readers. (Anggraeni et al., 2021; Febriyandani, 2021; Rahmawati et al., 2024). Comics represent an innovative educational medium that can be effectively integrated into school teaching and learning processes. As such, digital comic learning resources are particularly valuable in helping students comprehend and apply concepts within "Pancasila Education" subjects. This is because the media can increase student motivation to learn the material taught, so that it can have a positive impact, namely improving student learning outcomes. As in research (Ayu et al., 2021; Wulandari & Suniasih, 2022), proving that comic media is suitable for development as learning media because of its ability to improve learning outcomes.

The digital comic learning media based on flipbook technology offers benefits in terms of more diverse and appealing visual presentation, which can enhance students' learning enthusiasm. Prior studies have also indicated that flipbooks are specifically designed to facilitate students' comprehension of educational content, enhance academic performance, foster creative thinking abilities, and boost motivation to learn (Fortune & Suranto, 2023; Nasution et al., 2024). In addition, according to the opinion (Purnomo et al., 2024), the utilization of flipbook technology can enhance student engagement in learning. This study demonstrates that flipbook-based digital comic learning material offers several significant advantages. This media successfully overcomes student boredom in reading learning materials and facilitates effective delivery. In addition to increasing learning motivation, this media also makes it easier for students to understand reading. Another advantage is the flexibility of use, where students can access learning materials through various electronic devices such as smartphones, laptops, or computers anytime and anywhere.

4. CONCLUSION

Flipbook-based digital comic learning media has been successfully developed using the Borg and Gall model with eight stages, namely: (1) potential and problems, (2) data collection, (3) product design, (4) design validation, (5) design revision, (6) product trial 1, (7) product revision 1, and (8) trial use. This media is designed with the background of school life, equipped with QR-Code for access, and supporting features such as interesting background. This learning media was declared "very feasible" based on validation results from material experts (with an average score of 85%) and media experts (with an average score of 93.73%). In addition, positive responses were also obtained from students with a feasibility level of 87.95% and from teachers at 95%, which indicates that this media is very feasible to be implemented in learning Pancasila Education, especially the material on rights and obligations as school citizens. This learning media is proven to be effective in improving student learning outcomes, as evidenced by the increase in student average scores from 51.59 in the pretest to 86.14 in the posttest. The N-Gain test results show an average value of 0.73 which is included in the "moderately effective" category, indicating a significant increase in learning outcomes after the use of flipbook-based digital comic media.

REFERENCES

- Afriliani, D., Murdiono, M., & Hajuan, M. A. (2022). Increasing Student Activity Using The TSTS Learning Model Assisted By Digital Comics Media. *AL-ISHLAH: Journal of Education*, 14(4), 5873-5884. <https://doi.org/10.35445/alishlah.v14i4.2043>
- Amral, S., & Sumiharti, S. (2024). Digital Comic Strips Integrated with 4C Skills of the 21st Century for Syntax Learning. *Journal of Education: Journal of Research Results and Literature Review in the Field of Education, Teaching and Learning*, 10(3), 1043. <https://doi.org/10.33394/jk.v10i3.12640>
- Anggraeni, L., Darmawan, C., Tanszil, S. W., & Jubaedah, E. (2021). Promoting Ksatria Bela Negara comic through the Webtoon for the prevention and control of Covid-19. *Journal of Civics: Media for Citizenship Studies*, 18(1), 138-147. <https://doi.org/10.21831/jc.v18i1.39377>
- Ayu, S., Pinatih, C., & Semara Putra, N. (2021). Development of Digital Comic Media Based on the Scientific Approach to Science Content. *Journal of Educational Research and Development*, 5(1), 115-121. <https://ejournal.undiksha.ac.id/index.php/JJL/index>
- Boentolo, F., Manu, C.-C. C. R., Saragih, O. G., & Zalukhu, S. (2024). THE ROLE OF TEACHERS UTILIZING AI IN BUILDING A SUPERIOR GENERATION TOWARDS GOLDEN INDONESIA 2045. *Aletheia Christian Educators Journal*, 5(1), 42-48. <https://doi.org/10.9744/aletheia.5.1.42-48>
- Dewi, D. G. M. L., & Wulandari, I. G. A. A. (2024). Contextual-based Digital Comic Media for Civics Content on the Material of Practicing the Precepts of Pancasila for Third Grade Elementary School Students. *Journal of Educational Media and Technology*, 4(3), 318-326. <https://doi.org/10.23887/jmt.v4i3.78869>
- Febriyandani, R. (2021). Development of Comic Media in Learning Mathematics Fraction Material for Grade IV Elementary School. *Journal of Pedagogy and Learning*, 4(2), 323-330. <https://ejournal.undiksha.ac.id/index.php/JP2/index>
- Fortune, A. P., & Suranto, S. (2023). The Impact of Flipbook Maker Media on Learning Outcomes of Class XI High School Students in History Subjects. *AL-ISHLAH: Journal of Education*, 15(3). <https://doi.org/10.35445/alishlah.v15i3.4083>
- Gunartha, W., Widiarsi, D. A., Ayu, I., & Ekasriadi, A. (2024). SANDIBASA II (National Seminar on Indonesian Language and Literature Education). 2(1). <https://ojs.mahadewa.ac.id/index.php/sandibasa/article/view/3711>
- Haka, N. B., Masya, H., Hamid, A., Citraningrum, M., & Wulandari, E. (2022). The Development of Android-Based Basic Services Media to Measure Conceptual Understanding of Adolescents Sexual Behavior. *Tadris: Journal of Teacher Training and Tarbiyah Science*, 7(2), 305-321. <https://doi.org/10.24042/tadris.v7i2.14401>
- Hanifah, H., Aeni, A. N., & Kurnia Jayadinata, A. (2023). Development of Digital Comics on Rights, Obligations, and Responsibilities to Improve the Understanding of Grade VI Students. *ASANKA: Journal of Social Science and Education*, 04. <https://jurnal.iainponorogo.ac.id/index.php/asanka>
- Hesti, Murtiyasa, B., Markamah, Prayitno, Muhibbin, & Anif. (2024). Wahana Didaktika LITERATURE STUDY: IMPLEMENTATION OF PERFORMING ARTS MODULE FOR. *Wahana Didaktika*.
- Kurniawan, M. W., & Wuryandani, W. (2017). The effect of problem-based learning model on learning motivation and learning outcomes of Civics. *Journal of Civics: Media for Citizenship Studies*, 14(1), 10-22. <https://doi.org/10.21831/civics.v14i1.14558>
- Lukman, E. N., Hadiwijaya, P., Rifaldy, S., Juliansyah, A., Rahmat, & Antoni, H. (2025). Innovation of Pancasila Education Learning Methods in the Digital Era. *Journal of Social Humanities and Education Research*, 3(1), 255-266. <https://doi.org/10.62383/risoma.v3i1.569>
- Modjo, D., Baliu, W., & Muhammadiyah Gorontalo, U. (2024). *Achievement of Children's Cognitive Development at SD Muhammadiyah 1 Limboto*. 5(2).

- Mu'afifah, A. N., Luthfiyah, R., Jannah, R., Sihabudin, S., & Khoiriyah, N. (2024a). Development of Flipbook-Based Digital Comic Media in Pkn Subjects to Increase Learning Motivation of Grade V Students MI / SD. *Journal of Instructional and Development Researches*, 4(4), 245-255. <https://doi.org/10.53621/jider.v4i4.339>
- Mu'afifah, A. N., Luthfiyah, R., Jannah, R., Sihabudin, S., & Khoiriyah, N. (2024b). Development of Flipbook-Based Digital Comic Media in Civics Subjects to Increase Learning Motivation of Fifth Grade MI / SD Students. *Journal of Instructional and Development Researches*, 4(4), 245-255. <https://doi.org/10.53621/jider.v4i4.339>
- Nasution, Y. P., Rizal, F., Irfan, D., Refdinal, R., & Sari, A. K. (2024). Developing Flipbook-Based on Competency for Vocational High School Teacher. *AL-ISHLAH: Journal of Education*, 16(3), 3322-3334. <https://doi.org/10.35445/alishlah.v16i3.5044>
- Nisaa' Novitaningtyas, A., Fariha Sari, E., Teacher, P., Dasar, S., & Semarang, U. N. (2024). Development of Saintifik-based Big Bobatar Media to Improve Mathematics Learning Outcomes of Iv Class Students of Sdn Tambakaji 01 Semarang City. *Pendas: Scientific Journal of Basic Education*. <https://doi.org/https://doi.org/10.23969/jp.v9i04.22252>
- Olivia Febrianti, F., Retno Wahyuningati, N., & Pramono Adi, E. (2024). The Effectiveness of Using Learning Media "BOPAKA" Based on Problem Based Learning to Improve Learning Outcomes of Grade 3 Elementary School Students. *Journal of Integration and Harmony of Innovative Social Sciences*, 4(2), 2024. <https://doi.org/10.17977/um063.v4.i2.2024.10>
- Puniatmaja, I. G., & Renda, N. (2021). Civics Learning Module with Tolerance Character Values in Grade V Elementary School. *Journal of Pedagogy and Learning*. <https://doi.org/https://doi.org/10.23887/jp2.v4i3.39058>
- Purnomo, P. E. A., Agustini, K., & Sudatha, I. G. W. (2024). The Role of Flipbooks as Innovative Learning Media in 21st Century Learning. *Journal of Learning Research and Innovation*, 4(3), 2001-2015. <https://doi.org/10.51574/jrip.v4i3.2286>
- Rahayu, C. W., & Wibawa, S. (2024). Development of Project Based Learning Based Flipbooks Media on Creative Thinking Skills. *Pendas: Scientific Journal of Basic Education, Volume 09 Number 01*. <https://doi.org/https://doi.org/10.23969/jp.v9i1.11932>
- Rahayu, S., & Afnita, A. (2023). *Effect of project-based learning models and achievement motivation on students' short story text writing skills-NC-SA license*. 9(4), 230-240. <https://doi.org/10.29210/0202312775>
- Rahmawati, S., Sundari, N. D., Hassan, N. A. B., & Permana, S. A. (2024). Promoting Pancasila ideology through comic based learning media. *Journal of Civics: Media for Citizenship Studies*, 21(2). <https://doi.org/10.21831/jc.v21i2.56665>
- Ramadanti, A., & Bektiningsih, K. (2023). Development of Flipbook-Based Digital Comic Learning Media on IPAS Content to Improve Student Learning Outcomes. *Journal for Lesson and Learning Studies*, 6(3), 506-515. <https://doi.org/10.23887/jlls.v6i3.68053>
- Ramadhany, E. P., Darmayanti, M., Kurniasih, K., & Syaripudin, T. (2024). Development of Digital Comic Media Based on Education for Sustainable Development (ESD) to Improve Cultural and Citizenship Literacy of Elementary Students. *Journal of Education: Journal of Research Results and Literature Reviews in the Fields of Education, Teaching and Learning*, 10(1), 353. <https://doi.org/10.33394/jk.v10i1.10866>
- Saniyyah, A., Lastu Nurul Fatim, A., & Abdul Hamid, M. (2024). *Comic Media on Arabic Language Learning Speaking Skills: The Analysis of Students' Creative Thinking*. 8(2). <https://ojs.unm.ac.id/eralingua>

- Seftriyana, E., Indah Febriani, E., & Ilmiati, C. (2023). *Pancasila Education Teacher's Guide* (Erminawati, Ed.; 2nd ed.). Ministry of Education, Culture, Research, and Technology. <https://buku.kemdikbud.go.id>
- Septiana, R., Fauziah, M., & FKIP PGRI University Yogyakarta, P. (2024). Development of Canva-Based Comic Media in PPKN Learning on the Material of Rights and Obligations of Grade IV Elementary School. *Pendas: Scientific Journal of Basic Education*. <https://doi.org/https://doi.org/10.23969/jp.v9i04.21318>
- Takengon, I., Tengah, A., & Rahmadani, R. (2020). Comic Learning Media "Three Friends" in the Akidah Akhlak (Moral Creed) Subject Awal Kurnia Putra Nasution. In *Awal Kurnia Putra Nasution 1 Rina Rahmadani* (Vol. 2, Issue 2). <https://doi.org/https://doi.org/10.23887/jet.v4i2.25071>
- Wijayanti, R., Hasan, B., & Loganathan, R. K. (2018). Whiteboard animation-based comic math media in mathematics lessons. *Journal of Mathematics Education Research*, 5(1), 53-63. <https://doi.org/10.21831/jrpm.v5i1.19207>
- Wulandari, L. P. M., & Suniasih, N. W. (2022). Contextual-based Literacy Comic Media on the Rights and Obligations of Civics Content for Grade V Elementary School. *Journal of Pedagogy and Learning*, 5(1), 33-41. <https://doi.org/10.23887/jp2.v5i1.45286>
- Zega, R. R., Bawamenewi, A., Study, P., Language, P., Indonesian Literature, D., & Nias, U. (2023). DEVELOPMENT OF FLIPBOOK-BASED DIGITAL COMIC MEDIA IN INDONESIAN LANGUAGE SUBJECTS IN JUNIOR HIGH SCHOOL (SMP). *PRIMARY EDUCATION JOURNALS*, 3(2).