

The practices of digital comic media based on the PBL model in elementary school

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ABSTRACT

Lack of use of media that is interesting, fun, and easy for students to understand makes students have difficulty understanding the material and often feel bored and lack motivation to learn. The requirement for learning media tailored to students' interests spurred this study's development of useful PBL-based digital comic learning media in Class IV Elementary Schools. Comics in learning follow students' thinking levels, especially elementary school students. Techniques are used sequentially to make communication and interaction between teachers and students more effective in the learning and teaching process. A teacher's success in the learning process is when students can understand the material conveyed by the teacher to shape students' character through learning media. This study uses the ADDIE development methodology for analysis, design, development, implementation, and evaluation. Students at SDN 32 Andalas in the fourth grade participated in this study. 95.8% of teachers responded to the teacher response survey, and 98.8% of students responded to the student response survey, both of which were "very practical." Thus, digital comic learning media in PKN learning in class IV of elementary school has been declared practical.



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INTRODUCTION

Developmental technology in education can streamline and hasten the learning process through learning media (Zakiyah & Dwiningsih, 2022). The media can encourage stimulus responses between students and teachers to impart the concepts and messages taught effectively. The right technology may be incredibly beneficial in giving students the resources they need to become productive and help create a learning environment that encourages active student engagement (Firdaus et al., 2023). Learning media is a tool that can help encourage learning intentions following the initial focus of learning and can communicate messages or information that will be conveyed (Putri & Reinita, 2020).

Educational media is a crucial component of the learning process (Ramdhani & Muhammadiyah, 2015). Learning media come in a variety of forms, including auditory (sound), visual (pictures), and audiovisual (sound plus image). According to Nurrita (2018), to effectively transmit learning materials, learning media are guidelines for teachers to complete learning objectives. The first step in choosing learning resources is to assess the needs (need assessment). Its needs analysis is based on the criteria for selecting media, including examining student characteristics, expected competencies, and learning material features (Kustianingsari & Dewi, 2021).

Learning now uses Kurikulum Merdeka, where Kurikulum Merdeka was designed as part of the Ministry of Education and Culture's efforts to overcome the learning crisis we have been facing for a long time and which has become increasingly exacerbated due to the pandemic. This crisis is characterized by low learning outcomes and character-building of students, even in fundamental matters such as reading literacy. According to Achmad et al. (2022), Kurikulum Merdeka will result in active learning. The skills and creativity of a teacher are needed to present exciting and fun learning. Fun learning allows students to accept the concept of the subject matter easily. The three stages of implementation are independent learning, independent transformation, and independent sharing (Wahono et al., 2022). Kurikulum Merdeka focuses on freedom and creative thinking (Rahayu et al., 2021). This Kurikulum Merdeka relates to how a teacher might impart material by connecting it to the development of students' characters (Marisa, 2021). Character development of pupils through social skills such as cooperation, assistance, relationship building, asking for aid, emotion management, empathy development, awarding, and respect (Salimi et al., 2021).

Based on their observations and interviews in class IV at SDN 32 Andalas, Information obtained shows that students' motivation in learning still needs to be improved. Students find it challenging to focus and not concentrate on learning, and children are often bored studying. They are not interested in learning if there is a lot of reading text. They can be seen from the low interest in reading students. The teacher added that when learning activities use media in the form of images, students are more interested because there are color images. However, not every image media material is used. It is due to the limited time in making learning media. So in the interview, the writer knows that students prefer text accompanied by interesting, fun, easy-to-understand pictures in learning activities, and it can shape students' character in learning. In this regard, teachers must be more creative and innovative in using learning media so students become motivated and active in the learning process.

According to Putri and Reinita (2022), the endeavor to update and use technology can result in the teaching and learning process through learning media. One of the media that utilizes technology is digital comic media. According to Khairi (2016), comic media can convey subject matter while creating character traits through pictorial messages that are simple enough for elementary school students to understand. Comics make the reader's desire to read as a direct means of getting pleasure from the story (Sagri et al., 2018).

Comic media is a type of visual media that combines well-illustrated visuals with a straightforward narrative to make it simpler for pupils to comprehend the contents. Comics can improve kids' literacy in the twenty-first century (Saputri et al., 2021). According to Prasetyo (2018), Comics with pictures can be used for pleasure and to help students develop their characters. According to Khairi (2016), the subject matter can be presented through comic media while simultaneously instilling character values with pictorial messages easily understood by elementary students. Comics as a learning tool is one of the mediums considered useful for instructing and fostering students' creativity (Saputro, 2015). Characters in comics are usually often used as idols by children, and colorful comic images attract children's attention (Daulay, 2018).

In addition to using digital comic learning media, the use of models in implementing learning also plays an urgent role. It is due to achieving learning objectives. One learning model that can make students active is the Problem-Based Learning model. According to (Shofiyah & Wulandari, 2018), the Problem-Based Learning model is a method of instruction that gets students thinking by posing a challenge they must resolve. The problem-Based Learning model can enhance pupils' learning processes (Krismayanti & Mansuridin, 2020). Students can enhance their capacity to absorb their surroundings' creativity (Rahmi, 2019). The problem-Based Learning (PBL) model

(Gusriyenti & Reinita, 2020) is a learning model that involves students solving a problem so that students can learn knowledge related to the problem and, at the same time, have the skills to solve problems. The steps for implementing the Problem-Based Learning model are (1) Orienting students to problems, (2) Organizing students for learning, (3) Guiding individual and group investigations, (4) Developing and presenting work results, (5) Analyzing and evaluating the problem-solving process (Putri & Reinita, 2022).

Based on this, the contribution of this research is to improve learning. Researchers are interested in creating and developing digital comic media using the ADDIE model with steps according to (Pribadi, 2020): Analysis, Design, Development, Implementation or Delivery, and Evaluation. With the title “The Practices of Digital Comic Media Based on PBL Model In Elementary School.”

METHOD

The type of research conducted by researchers is known as research and development (R&D). The development model used in this study is the ADDIE model. According to Anggraini and Reinita (2021), the ADDIE model has five stages: analysis, design, development, implementation, and evaluation. The first stage produces an analysis of the curriculum, teaching materials, and student analysis. The second stage has according to the needs of the learning process. The third stage, product design, is standardized through validity testing by experts and practitioners. Product revisions were made following the assessment and suggestions from experts and practitioners. The fourth stage is product use activities (preliminary field testing). And finally, in the evaluation stage, analyze each action and product phase to see if they follow the set plan.

Practicalization in instructional media development is intended to test and measure the practicality and impracticality of the developed learning media. Practical instruments are used to collect data through the usefulness of developed materials. The valuable tools used are teacher answers to a questionnaire about the practicality of learning media. Then questionnaire to students regarding the practical suitability of learning media.

The scoring in the learning media practicality questionnaire using the Likert scale assessment category and modification from Pratama (2019) and Yanto (2019) can be seen in Table 1 and Table 2.

Table 1. Questionnaire Rating Scale

Score	Category
4	Very Good
3	Good
2	Good Enough
1	Less Good

Table 2. Practicality Value Scale

Range %	Category
75,01% - 100,00%	Very Practical
50,01% - 75,00%	Practical
25,01% - 50,00%	Less Practical
00,00% - 25,00%	Not Practical

Source: Firdawela & Reinita (2021)

The practicality of learning media instruments helps collect data in the form of the practicality of the developed learning media. A media can be practical if it has been field tested and can be assessed through practicality sheets by users. Media is practical if its implementation is included in the excellent category.

RESULTS AND DISCUSSION

Results

The novelty of this research is that researchers develop digital learning media that adapt to the demands of 21st-century learning, utilizing technological developments and developing digital comic media. Digital comic media was developed based on the Problem-Based Learning model, which will make students play an active role in solving a problem that is adapted to students' daily life in comic stories so that students can think critically. In addition, digital comic media contains material focusing on the formation of student attitudes developed by researchers according to the current curriculum, namely the independent curriculum. The independent curriculum illustrates how educators communicate topics by connecting them to forming student character.

In the analysis stage, The actions taken assess the requirements for learning media development. Needs analysis is carried out to determine the problems teachers face and determine what kind of product is suitable to be developed in dealing with these teacher problems. Its needs analysis is also used to examine the characteristics of students following the design of the development of independent curriculum learning media. Next is created with the demands of the learning process. The product design is standardized through validity tests by experts and practitioners. Following the assessment and advice from experts and practitioners, revisions are made to the product—furthermore, the activity of using the product (preliminary field testing). Moreover, finally, assess whether every step of the activities and products made are in accordance with the specified.

In the first stage, after conducting observations and interviews, researchers identified that learning using digital learning media had yet to be implemented optimally. In the second design stage, researchers designed learning media as digital comics. Comics consist of text accompanied by pictures and sounds of the material to be studied and are designed with an attractive appearance and language that is easy to understand. These designed comics can increase students' enthusiasm for learning. Comics are made in several stages, starting from finding and selecting suitable characters using several applications, tools, and websites, followed by making comic story content in the form of text balloons which are also given various colors to make it look more attractive [Figure 1](#), [Figure 2](#), [Figure 3](#), [Figure 4](#), [Figure 5](#).



Figure 1. Comic cover



Figure 2. Comic reading guide



Figure 3. Character introduction

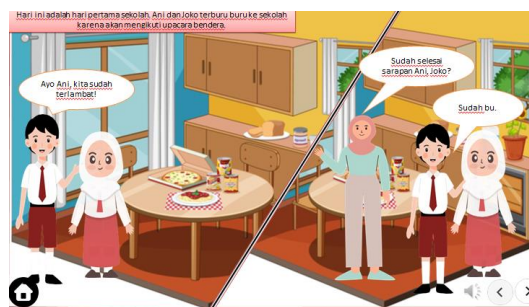


Figure 4. First view of comic story contents



Figure 5. Ending view of comic story contents

The third stage is to produce valid digital comic learning media that was developed based on the input and directions of experts. This stage includes material validation, language validation, and design validation. In the fourth stage, researchers can use learning media that experts in the learning process have validated. This stage starts with preparing learning equipment and a conditioned learning environment. After all, if it is available, the researcher can already implement the product developed in the learning process. The author can use learning media validated by experts in the learning process. This stage starts with preparing learning equipment and a conditioned learning environment.

Furthermore, finally the evaluation stage, this stage is carried out to provide value to the learning program. The evaluation consists of formative and summative. Formative evaluation can be observed in assessing students' process and learning outcomes in learning Pancasila and Citizenship Education using digital comic media that has been developed. A summative evaluation can be developed based on the opinion of experts about the digital comic media that has been developed.

Analysis of Practical Test Results Teaching Materials Teacher Response

The criteria used in determining research subjects were: (1) the condition of the school according to needs, (2) the willingness of schools to accept updates, and (3) the lack of development of digital comics in PKN learning. After using the learning media developed, students and teachers are given a questionnaire to ascertain the practicality of the generated product. The

teacher observes student activity while monitoring students during the learning process using digital comic media and taking the teacher's response as the teacher for class IV SDN 32 Andalas, which was held on January 6, 2023. Based on the practicality calculation results [Table 3](#), the results obtained are a percentage of 95.83% in the convenient category. Thus, this digital comic media is efficient and can be used as an innovative learning medium.

Table 3. The results of the analysis of the responses of SDN 32 Andalas teachers to the practicality of teaching materials

No.	Rated Aspect	Score
1	Media makes it easy for teachers to deliver material to students	4
2	The language used in the media is appropriate for EYD	3
3	The presentation of sentences is easy to understand	4
4	Images in learning media make it easier for teachers to help students understand the material	4
5	Placement of a picture or illustration layout appropriate to the description of the media	4
6	Learning media makes it easier for teachers to interest students in learning	4
Earned Score		23
Maximum Score		24
Practicality Percentage (%)		95.8%
Category		Very Practical

Analysis of Practical Test Results Teaching Materials Student Response

After learning to use digital comic media was completed, the researcher directed students to fill out student response sheets as a practicality test. It was held on January 6, 2023, in class IV of SDN 32 Andalas with 25 students. Based on the calculation results obtained, namely the percentage of 98.8% with an outstanding category. Based on [Figure 6](#), this digital comic media is practically used in classroom learning. Students are also very enthusiastic during the learning process.

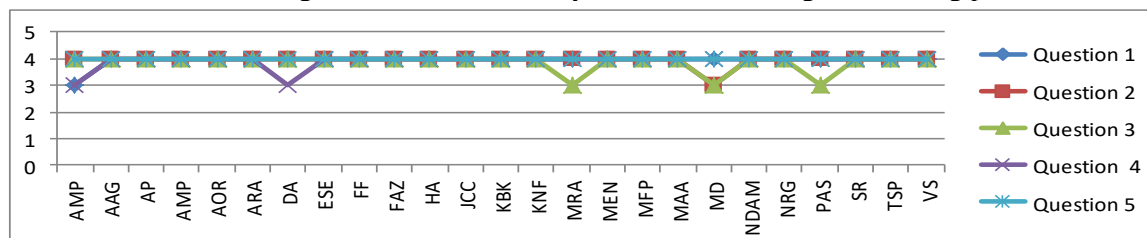


Figure 6. Results of the analysis of student responses at SDN 32 Andalas on the practicality of teaching materials

Discussion

Based on the media practicality questionnaire results, it was stated to be very practical. Following this, digital comic media can be used by educators to help students understand the material and improve student character. Researchers develop digital learning media that adapts to the demands of 21st-century learning, utilizing technological developments and developing digital comic media.

This digital comic media is packaged as a PowerPoint file, then put on Google Drive, and the link is copied so that when the link is shared, the media can be opened and used digitally. Digital comic media presents the material as a sound-illustrated story, text balloons, and cartoon images that are interesting and colorful. The comic uses language that students easily understand and is equipped with menus designed in the comic. This finding reinforces research that has been conducted by [Pribadi \(2020\)](#) regarding language and the ease of using media.

The steps that researchers take in making comics from ideas to character designs are as follows: determine ideas, create scripts, especially scripts that are ready to be staged, create various characters and their roles, precisely determine the symbols or characters that will play in comics

such as; good characters, flawed characters, and neutral characters or companion roles, as well as creating character images according to the scripts that have been made, editing in the form of interactive PowerPoint using the hyperlink feature, adding comic story sounds and after that adding videos containing pictures and sound so that more exciting and varied. Because comic media is so attractive in students' lives and some students recognize and remember the characters from the comics they watch, the use of comics plays an essential role as a learning tool that is considered valuable and helpful for teaching and developing student creativity.

This media practicality test can be used in a problem-based learning model, so it supports pupils' learning processes (Krismayanti & Mansurdin, 2020), enhance their capacity to absorb their surroundings' creativity (Rahmi, 2019), and foster skills to solve problems (Gusriyenti & Reinita, 2020).

There are limitations in this development research; the digital comics produced only reach the practicality stage. However, material, language, and media are very feasible to use in the learning process. This research is expected to help make it easier for teachers to convey learning material, and students can be assisted in understanding learning material and the formation of positive character/attitude.

CONCLUSION

Digital comics are digitally packaged tools for communicating educational content through graphic story text provided by comic characters. The results of the practicality test of learning media in the form of digital comics were stated to be very practical for fourth-grade elementary school students. The results of this practicality test were obtained through teacher and student responses. The results of the teacher's response show a 95.83% convenient category, and the results of the students' responses get a percentage of 98.8% convenient category. The digital comic learning media developed is not only used during face-to-face learning but can be used anywhere without the need for an internet network so that students can access learning media but must still pay attention to the characteristics and needs of students.

REFERENCES

- Achmad, G. H., Ratnasari, D., Amin, A., Yuliani, E., & Liandara, N. (2022). Penilaian autentik pada kurikulum merdeka belajar dalam pembelajaran pendidikan agama Islam di sekolah dasar. *Edukatif: Jurnal Ilmu Pendidikan*, 4(4), 5685–5699. <https://doi.org/10.31004/edukatif.v4i4.3280>
- Anggraini, T. S., & Reinita. (2021). Pengembangan media interaktif Articulate Storyline 3 berbasis kontekstual pada pembelajaran tematik terpadu di kelas IV sekolah dasar. *Journal of Basic Education Studies*, 5, 9853–9859. <https://jptam.org/index.php/jptam/article/view/2215>
- Daulay, M. I. (2018). Developing Social science-history's comics- based learning media for the fifth grade of primary school in Pekanbaru City. *International Journal of Research in Counseling and Education*, 1(1), 15. <https://doi.org/10.24036/008za0002>
- Firdaus, R., Surur, M., & Seituni, S. (2023). The effectiveness of using interactive multimedia in solving problems for class VIII MTS Nurul Jadid students in Informatics learning. *Jurnal Inovasi Teknologi Pendidikan*, 9(3), 299–311. <https://doi.org/10.21831/jitp.v9i3.50554>
- Firdawela, I., & Reinita, R. (2021). Pengembangan media pembelajaran Articulate Storyline menggunakan model think pair share di kelas IV sekolah dasar. *Jurnal PGSD: Jurnal Ilmiah Pendidikan Guru Sekolah Dasar*, 14(2), 99–112. <https://doi.org/10.33369/pgsd.14.2.99-112>
- Gusriyenti, M. P., & Reinita, R. (2020). Peningkatan hasil belajar siswa dalam pembelajaran PKN dengan model problem based learning (PBL). *E-Journal Pembelajaran Inovasi Sekolah Dasar*, 8(5). <http://ejournal.unp.ac.id/students/index.php/pgsd/article/view/9462>

- Khairi, A. (2016). Pengembangan media komik berbasis karakter untuk siswa sekolah dasar. *Jurnal PPKn & Hukum*, 11(1), 98–110. <https://ejournal.unri.ac.id/index.php/JPB/article/view/3658>
- Krismayanti, W., & Mansurdin. (2020). Proses pembelajaran tematik terpadu dengan model problem based learning (PBL) di sekolah dasar integrated thematic learning process with models problem based learning (PBL) in elementary schools. *E-Jurnal Inovasi Pembelajaran SD*, 8, 102–110. <https://doi.org/http://dx.doi.org/10.24036/e-jpsd.v10i1.10322>
- Kustianingsari, N., & Dewi, U. (2021). Pengembangan media komik digital pada mata pelajaran bahasa Indonesia tema lingkungan sahabat kita materi teks cerita manusia dan lingkungan untuk siswa Kelas V SDN Putat Jaya III/379 Surabaya. *Jurnal Mahasiswa Teknologi Pendidikan*, 6(2), 1–9. <https://core.ac.uk/download/pdf/230607407.pdf>
- Marisa, M. (2021). Inovasi kurikulum “Merdeka Belajar” di era society 5.0. *Santhet: (Jurnal Sejarah, Pendidikan Dan Humaniora)*, 5(1), 72. <https://ejournal.unibabwi.ac.id/index.php/santhet/article/view/1317>
- Nurrita, T. (2018). Pengembangan media pembelajaran untuk meningkatkan hasil belajar siswa. *MISYKAT: Jurnal Ilmu-Ilmu Al-Quran, Hadist, Syari'ah Dan Tarbiyah*, 3(1), 171. <https://doi.org/10.33511/misykat.v3n1.171>
- Prasetyo, S. (2018). Kontribusi pengembangan media komik IPA bermuatan karakter pada materi sumber daya alam untuk siswa MI/SD. *Al-Bidayah : Jurnal Pendidikan Dasar Islam*, 9(2), 75. <https://doi.org/10.14421/jpdi.2017.0902-07>
- Pratama, R. A. (2019). Media Pembelajaran berbasis Articulate Storyline 2 pada materi menggambar grafik fungsi di SMP Patra Dharma 2 Balikpapan. *Jurnal Dimensi*, 7(1), 19–35. <https://doi.org/10.33373/dms.v7i1.1631>
- Pribadi, B. A. (2020). *Desain dan pengembangan program pelatihan berbasis kompetensi- implementasi model ADDIE*. Kencana.
- Putri, A., & Reinita, R. (2022). Pengembangan media video Powtoon pada pembelajaran tematik terpadu berbasis model problem based learning (PBL) di kelas IV sekolah dasar. *Jurnal Muara Pendidikan*, 7(1), 1–8. <https://doi.org/10.52060/mp.v7i1.692>
- Putri, M. E., & Reinita. (2020). Media pembelajaran tematik terpadu berbasis Adobe Flashcs6 sebagai upaya penanaman pendidikan karakter di SD. *Jurnal Pendidikan Tambusai*, 4(2), 1203–1215.
- Rahayu, R., Rosita, R., Rahayuningsih, Y.S., & Hernawan, A., & Prihantini, P. (2021). Implementasi kurikulum merdeka belajar di sekolah penggerak. *Jurnal Basicedu*, 6(4), 6313-6319. <https://doi.org/10.31004/basicedu.v6i4.3237>
- Rahmi, A. (2019). Peningkatan hasil belajar siswa dengan model problem based learning di sekolah dasar. *Jurnal Basicedu*, 3(4), 2113–2117. <https://doi.org/10.31004/basicedu.v3i4.242>
- Ramdhani, M. A., & Muhammadiyah, H. (2015). The criteria of learning media selection for character education in higher education. *Proceeding International Conference of Islamic Education: Reforms, Prospects and Challenges Faculty of Tarbiyah and Teaching Training*, 174–182. https://www.researchgate.net/publication/311736080_The_Criteria_of_Learning_Media_Selection_for_Character_Education_in_Higher_Education
- Sagri, M., Sofos, F., & Mouzaki, D. (2018). Digital storytelling, comics and new technologies in education: Review, research and perspectives. *International Education Journal*, 17(4), 97–112. <https://openjournals.library.sydney.edu.au/IEJ/article/view/12485>

- Salimi, M., Dardiri, A., & Sujarwo. (2021). The profile of students' social skills of Bengawan Solo elementary nature school. *European Journal of Educational Research*, 10(1), 211–226. <https://doi.org/10.12973/EU-JER.10.1.211>
- Saputri, A. D., Sunardi, S., & Musadad, A. A. (2021). Digital comics as a media in EFL reading classrooms. *AL-ISHLAH: Jurnal Pendidikan*, 13(2), 1097–1102. <https://doi.org/10.35445/alishlah.v13i2.758>
- Saputro. (2015). Aplikasi komik sebagai media. *Muaddib*, 05(ISSN 2088-3390), 01.
- Shofiyah, N., & Wulandari, F. E. (2018). Model Problem based learning (PBL) dalam melatih scientific reasoning siswa. *Jurnal Penelitian Pendidikan IPA*, 3(1), 33. <https://doi.org/10.26740/jppipa.v3n1.p33-38>
- Wahono, E. R., Idris, I. & Wiradmadja, A. (2022). Partisipasi masyarakat dan makna simbolik tradisi nyadran di dusun Semanding Kabupaten Blitar. *Sejarah, Budaya dan Pengajarannya*, 16 (1), 344–354. <http://dx.doi.org/10.17977/um020v16i12022p119-128>
- Yanto, D. T. P. (2019). Praktikalitas Media Pembelajaran interaktif pada proses pembelajaran rangkaian listrik. *INVOTEK: Jurnal Inovasi Vokasional Dan Teknologi*, 19(1), 75–82. <https://doi.org/10.24036/invotek.v19i1.409>
- Zakiyah, W. I., & Dwiningsih, K. (2022). The effectivity of interactive e-module to increase the students' visual-spatial intelligence on ionic. *Jurnal Inovasi Teknologi Pendidikan*, 9(1), 91–100. <https://doi.org/10.21831/jitp.v9i1.46561>