

DEVELOPMENT OF DIGITAL COMICS MEDIA BASED ON PROBLEM BASED LEARNING TO INTERNALIZE SOLIDARITY VALUES IN GRADE V STUDENTS AT SD IT AL-MINAH

Ulina Rahmayani^{1a*}, Yakobus Ndonga^{2b}, Zuraida Lubis^{3c}, Daulat Saragi^{4d}, Samsidar Tanjung^{5e}, Winara^{6f}

^{1,2,3,4,5,6}Program Studi S2 Pendidikan Dasar Fakultas Ilmu Pendidikan, Universitas Negeri Medan

^aE-mail: ulinpasaribu322@gmail.com

^bE-mail: yakobusndonga@unimed.ac.id

^cE-mail: zuraidalubis@unimed.ac.id

^dE-mail: saragidaulat@gmail.com

^eE-mail: samsidartanjung@unimed.ac.id

^fE-mail: winara@unimed.ac.id

(*) Corresponding Author

ulinpasaribu322@gmail.com

ARTICLE HISTORY

Received : 01-07-2026

Revised : 13-07-2026

Accepted : 29-07-2026

KEYWORDS

Digital Comics;
Problem-Based
Learning; Solidarity
Values;
Pancasila Education;

ABSTRACT

The phenomenon of character crisis marked by increasing bullying behavior in elementary schools indicates the need for learning innovations that can instill the value of solidarity from an early age. This study aims to develop, test the feasibility, practicality, and effectiveness of digital comic media based on Problem-Based Learning (PBL) designed using Canva to instill the value of solidarity in fifth-grade students of SD IT Al-Minah. This study is a research and development (R&D) with the ADDIE model involving 21 fifth-grade students. Data were collected through observation, interviews, expert validation questionnaires, teacher and student response questionnaires, and pre- and post-learning tests, then analyzed qualitatively and quantitatively. The novelty of this study lies in the development of PBL-based digital comic media that integrates contextual problem solving with the instillation of solidarity values through interactive learning. The results of the study show that the developed media meets the criteria of being very valid, very practical, and effective for use in learning. The use of PBL-based digital comic media can improve learning outcomes while strengthening students' attitudes of solidarity through collaboration, caring, and sharing. Thus, the developed media can be an innovative alternative in Pancasila Education learning to support character strengthening and reduce bullying behavior in elementary schools.

This is an open access article under the CC-BY-SA license.



INTRODUCTIONS

Character education is a fundamental aspect in developing students who not only possess academic abilities but also attitudes, values, and behaviors consistent with the values of Pancasila. At the elementary school level, character education is aimed at instilling various noble values that can be applied in everyday life, one of which is solidarity. Solidarity is an important character trait because it fosters caring, cooperation, mutual respect, and a sense of responsibility among others in community life (Nur Wira Triana, 2025).

Within the Independent Curriculum, Pancasila Education plays a strategic role in shaping the Pancasila Student Profile through learning centered on students' real-life experiences. In phase C (grade 5 of elementary school), the Unitary State of the Republic of Indonesia (NKRI) material not only emphasizes understanding the concept of nationality but also encourages students to apply the values of mutual cooperation, unity, and solidarity in their daily lives (Ministry of Education, Culture, Research, and Technology, 2022). Therefore, Pancasila Education learning should be able to develop aspects of knowledge, attitudes, and social skills in a balanced manner so that the values learned do not stop at the cognitive level but are internalized in students' behavior.

Theoretically, solidarity is understood as a social bond that encourages individuals to help each other, cooperate, and care for their group members. According to (Durkheim, 1893), solidarity is the glue of social life formed through shared values and a sense of togetherness within a group. In the context of basic education, the value of solidarity can be realized through mutual respect, helping friends in difficulty, working together in groups, and resolving conflicts peacefully. Therefore, schools have a crucial role in fostering a sense of solidarity through meaningful learning processes (Rahayu, 2025).

However, on the ground, strengthening solidarity among students still faces various challenges. According to data from the Indonesian Teachers' Union Federation (FSGI) and the Ministry of Women's Empowerment and Child Protection (KemenPPPA), bullying in educational settings continues to occur and has shown an increasing trend in recent years (Kemen PPPA, 2023). This phenomenon reflects a lack of empathy, social awareness, and solidarity among students, potentially disrupting the creation of a safe and conducive learning environment. This situation demonstrates that character education in schools still needs to be strengthened to foster positive social behavior (FSGI, 2024).

This problem was also found at SD IT Al-Minah, especially among fifth-grade students. Based on the results of initial observations and interviews with class teachers, various problems were found that indicated low solidarity values among students. Some forms of behavior that emerged included grouping in social circles, a lack of concern for friends who were experiencing difficulties, the habit of working together in inappropriate forms such as cheating, frequent arguments between friends, and the emergence of bullying both verbally and physically. These conditions caused social relationships between students to become less harmonious and had an impact on the decline in the quality of interactions during the learning process.

Apart from being influenced by students' social factors, the learning process that takes place in the classroom also does not fully support character strengthening. Pancasila education learning is still dominated by the lecture method, while teachers act as the main source of information and students tend to be passive listeners. The learning media used are still limited to textbooks and whiteboards so that the delivery of material emphasizes memorization aspects rather than meaningful learning experiences. As a result, students understand the concept of solidarity theoretically, but experience difficulties in applying it to real situations in the school environment and everyday life (Tian, 2025).

The characteristics of fifth-grade elementary school students also need to be considered when selecting learning strategies. According to (Piaget, 2002), students aged around 10–11 years are in the concrete operational stage, a stage where children more easily understand concepts through real-life experiences, visual illustrations, and activities related to everyday life. Therefore, delivering character education solely verbally is less likely to provide a meaningful learning experience. Learning media that are engaging, contextual, and able to connect abstract concepts with students' real-life experiences are needed so that the process of internalizing the value of solidarity can take place more effectively.

Based on these conditions, learning innovations are needed that not only convey Pancasila Education material but also actively engage students in understanding and resolving various social issues relevant to their lives. One possible alternative is the development of interactive digital comics combined with the Problem-Based Learning (PBL) model. The integration of digital media and this learning model is expected to create a more contextual, engaging, and meaningful learning experience, enabling students not only to understand the concept of solidarity but also to implement it in their daily lives (Syifa et al., 2026).

The development of digital comics based on Problem-Based Learning (PBL) is seen as an alternative that can address these issues. The Problem-Based Learning model positions students as active subjects in learning through solving real-life problems (Yunita, 2022). According to (Barrows, 1996), PBL encourages students to identify problems, discuss them, collaborate, and find solutions based on their own analysis. In Pancasila Education learning, the application of PBL provides opportunities for students to develop critical thinking skills while instilling social values, such as cooperation, caring, responsibility, and solidarity.

Besides being supported by a student-centered learning model, the use of digital media is also a crucial factor in improving the quality of learning. According to (Mayer, 2009), students will more easily understand material when information is presented through a combination of complementary images and text. Therefore, digital comics are a suitable medium for elementary school students because they can present social issues in the form of engaging illustrations and dialogue, making abstract concepts, such as solidarity, easier to understand and apply to everyday life.

Several previous studies have shown that the use of digital comics has a positive impact on the learning process (Akuba, 2024). The results indicate that digital comics can increase learning motivation, reading interest, and learning outcomes in elementary school students because the presentation of the material becomes more engaging and easier to understand (Rauf et al., 2022). However, most of this research still focuses on improving cognitive learning outcomes and has not directed media development towards building students' social character (Susanto, 2026).

Research on the application of Problem-Based Learning shows that this model is effective in improving critical thinking skills, problem-solving abilities, and student engagement during the learning process. However, most studies still use conventional learning media, so the student learning experience is not supported by digital media that can increase student engagement.

Other research developing character-based learning media generally focuses on instilling moral values such as discipline, responsibility, and honesty. Meanwhile, research specifically developing learning media to instill the value of solidarity in Pancasila Education is still relatively limited, particularly on the Unitary State of the Republic of Indonesia (NKRI) topic in fifth grade elementary school.

Based on the results of previous research, a research gap remains. Previous studies have tended to focus solely on the use of digital comics as a learning medium or the application of Problem-Based Learning as a standalone learning model. Furthermore, most studies have focused more on improving cognitive learning outcomes than on developing student character. Therefore, further research is needed that integrates digital comics with Problem-Based Learning models to instill the value of solidarity in Pancasila Education in elementary schools.

The novelty of this research lies in the development of interactive digital comic media integrated with the Problem Based Learning model in Pancasila Education learning on the Unitary State of the Republic of Indonesia (NKRI) material to instill the value of solidarity in fifth grade elementary school students. Different from previous research that only developed digital comic media or only applied the Problem Based Learning model separately, this research combines both in one learning product so that it is not only oriented towards improving learning outcomes, but also on strengthening the character of solidarity through solving contextual problems that are close to the lives of students.

In addition to producing an interactive digital comic, this research also tested the feasibility, practicality, and effectiveness of the developed media. Therefore, the results are expected to not only contribute to the development of Pancasila Education learning media but also serve as an alternative character learning innovation that elementary school teachers can implement to instill the value of solidarity in students. Based on the background description, this study aims to design, develop, and test the feasibility, practicality, and effectiveness of interactive digital comic media based on Problem Based Learning (PBL) in instilling solidarity values in fifth grade students of SD IT Al-Minah.

METHOD

This research is a research and development (R&D) using the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) development model. This study aims to develop digital comic media based on Problem Based Learning (PBL) to instill the value of solidarity in fifth-grade students of SD IT Al-Minah in the 2025/2026 academic year. The trial and validation process of this media involved subjects consisting of 21 fifth grade students, a class teacher, as well as validators who were material experts, media experts, language experts, and instrument experts. Research subjects were selected using purposive sampling, considering the suitability of student characteristics to the research objectives. Validators were selected based on their competency and experience in their respective fields, enabling them to assess the quality of the developed products.

Research data was collected using several instruments, namely tests (pre-test and post-test) to measure improvements in learning outcomes, Likert scale questionnaires to obtain data on the feasibility and practicality of the media, and observation sheets to observe the development of students' solidarity values during the learning process. Before being used in research, all instruments were validated by expert validators to assess the suitability of the content, construct, and language. Reliability testing was then conducted to ensure the instruments' consistency and suitability for use in data collection.

Quantitative data were analyzed using validity tests, reliability tests, feasibility and practicality percentage analysis, N-Gain tests to determine the increase in learning outcomes, and paired sample t-tests to determine the differences in results before and after using the media. Qualitative data was analyzed through data reduction, data presentation, and drawing conclusions based on criticism and suggestions from the validator and observations during the learning process. This input served as the basis for revising and refining the developed product.

Each stage of the research was carried out according to the ADDIE model procedures, which include needs analysis, product design, product development, product implementation, and evaluation. Each stage is detailed in the research procedures section so that the research can be replicated by other researchers. This research was also conducted after obtaining permission from SD IT Al-Minah as the research location. The entire data collection process was conducted with the approval of the school and class teachers, while maintaining the confidentiality of student identities in accordance with ethical research principles.

RESULT AND DISCUSSIONS

This research resulted in a product in the form of a comic learning media developed through the five stages of the ADDIE model: Analysis, Design, Development, Implementation, and Evaluation. Based on this series of procedures, data was obtained regarding the feasibility, practicality, and effectiveness of the media in improving science and science learning outcomes and fostering patriotism in fifth-grade students at SD IT Al-Minah.

Analysis Stage

This research phase included an analysis of teacher needs, student analysis, learning tools, materials and curriculum analysis, and learning objectives at SD IT Al-Minah. The results of the needs analysis indicated that Pancasila Education learning remained conventional, students tended to be passive, and there were indications of low solidarity (such as rampant bullying and a lack of empathy). Fifth-grade students (in the concrete operational phase) needed interactive visual media to understand abstract concepts. The results of observations conducted in fifth-grade students at SD IT Al-Minah served as a reference and consideration.

Design Stage

In the design stage, researchers developed an initial framework for developing digital comic media based on Problem-Based Learning (PBL), focused on internalizing students' solidarity values. This stage involved mapping and synchronizing Phase C Pancasila Education materials (specifically, respecting diversity and empathy in resisting bullying) in accordance with the Learning Outcomes (CP) in the Independent Curriculum. This material was constructed into a comic storyboard by integrating Problem-Based Learning syntax, from addressing bullying issues in schools to inclusive conflict resolution to stimulate empathy and prosocial behavior in students.

Next, researchers designed a comprehensive evaluation instrument, including validation sheets for instrument experts, material experts, media experts, and language experts, as well as a practicality response questionnaire for teachers and students. To measure the effectiveness of the media on improving learning outcomes and achieving solidarity values, researchers also developed cognitive test instruments (pre-test and post-test), self-assessment questionnaires (affective domain), and behavioral observation sheets (psychomotor domain) aligned with success indicators. All of these tools are designed systematically to ensure that the PBL-based digital comics developed meet the aspects of pedagogical relevance, practicality of implementation, and effectiveness in achieving instructional objectives in class V of SD IT Al-Minah.

Development Phase

The development phase focuses on expert validation and small-scale trials to test the product's feasibility and practicality before field testing. The expert assessment of the product's feasibility using a table shows the following results:

Table 1. Summary of Expert Validation Results

No	Category	Score	Average Percentage	Criteria
1	Cognitive Instrument	23	92%	Very Feasible
2	Affective and Psychomotor Instrument	46	92%	Very Feasible
3	Material Expert Validation	143	92%	Very Feasible
4	Language Expert Validation	86	96%	Very Feasible
5	Media Expert Validation	102	93%	Very Feasible

Source: Research data (2026)

The level of practicality is measured through the responses of educational practitioners (class teachers) as well as gradual trials with students:

Table 2. Summary of Teacher and Student Response Results

No	Evaluation Aspect	Score	Average Percentage	Category
1	Educational Practitioner Evaluation	74	93%	Very Practical
2	Individual Trial Response	85	82%	Very Practical
3	Small Group Trial Response	90	87%	Very Practical

Source: Research data (2026)

Implementation Stage

This stage is a large-scale field test in class V (N=21) to test the effectiveness of the media in the cognitive, affective and psychomotor domains. Cognitive effectiveness is measured through a comparison of pre-test (before intervention) and post-test (after intervention) scores based on Learning Goal Achievement Criteria (KKTP = 75).

Table 3. Assessment of Cognitive Learning Results

Category	Pre-Test		Post-Test	
	frequency	Presentation	frequency	Presentation
Not Completed (0-74)	10	48%	0	0%
Completed (75-100)	11	52%	21	100%

Source: Research data (2026)

The data above shows a jump in classical completion from 52% to 100% after PBL-based digital comic-assisted learning.

Based on descriptive statistical data, the average N-Gain value was 0.6625. As a percentage, the N-Gain value reached 66.25%. Based on Meltzer's criteria, these results indicate that the increase in students' cognitive understanding is in the Moderate category and the level of effectiveness falls into the Fairly Effective criteria. The results of the paired one-sample t-test showed a t-value of -7.775 with degrees of freedom (df) = 20 and a significance value (Sig. 2-tailed) of 0.000. Since the Sig. value = 0.000 < 0.05, the null hypothesis (H0) is rejected and the alternative hypothesis (Ha) is accepted. This proves that there is a statistically significant increase in the cognitive learning outcomes of fifth-grade students at SD IT Al-Minah in the 2025/2026 academic year through the implementation of this digital comic media.

The data on the development of students' solidarity character was analyzed descriptively through a self-assessment questionnaire (affective) and an action observation sheet (psychomotor). Affective, Obtaining an average percentage of 81.62% (Very Good / Cultured Category), which dominates the Spiritual Level based on Max Scheler's value hierarchy. Psychomotor Domain (Action Observation): Obtaining an average percentage of 76.83% (Good / Developing Category). The distribution of student achievement shows that 6 students (33.07%) are Very Good / Cultured, 10 students (48.33%) are Good / Developing, 3 students (12.21%) are Sufficient / Starting to be seen, and only 2 students (6.37%) require intensive guidance.

Evaluation Stage

Based on data from the validation and practicality analysis of the developed media, the resulting product is a digital comic based on problem-based learning that is practical and suitable for use, having gone through validation and field trials. In addition to being practical, digital comics based on problem-based learning are also highly effective as learning media.

Feasibility Analysis of Digital Comic Media Based on Problem-Based Learning

The validation results conducted by experts indicate that the digital comic media based on Problem Based Learning developed has met the eligibility criteria for use in the learning process. Assessment of the aspects of instruments, materials, media, and language obtained a very valid category, indicating that the product has good quality in terms of content, appearance, and language use. The validation percentage shows that the instrument obtained a score of 92%, material 92%, media 93%, and language 96%.

The high level of validity indicates that the digital comic media based on Problem-Based Learning has met the requirements of content, presentation, language, and appearance, making it suitable for use in the Pancasila Education learning process. This suitability indicates that the developed media has been structured according to the characteristics of elementary school students and the learning objectives to be achieved.

This finding can be explained through Piaget's constructivism theory, which states that students at the concrete operational stage more easily construct understanding when they interact with real-world and contextual experiences (Piaget, 2002). In the developed media, the presentation of illustrations, dialogues, and everyday problems provides opportunities for students to connect the concept of solidarity with their experiences in the school environment. Thus, students not only understand the material conceptually but also gain a more meaningful learning experience.

The results of this study also align with research (Nur et al., 2026) which shows that the use of digital comics can increase student engagement in learning because the presentation of material becomes more interesting and easier to understand. Furthermore, the application of the Problem-Based Learning model encourages students to discuss, collaborate, and find solutions to the problems presented, thus making learning more active and contextual. The compatibility between digital comic media and the syntax of Problem-Based Learning is suspected to be one of the factors supporting the high level of feasibility of the developed media.

Nevertheless, the interpretation of the results of this study requires caution. The high level of media suitability based on expert validation indicates that the developed media meets the criteria for use in learning. However, because the study was conducted within a limited scope, these findings reflect the conditions of the research subjects and cannot be generalized to a broader population. Therefore, further research is recommended involving a larger number of respondents and more diverse school characteristics to strengthen the external validity of the research findings.

Practicality Analysis of Digital Comic Media Based on Problem-Based Learning

The practicality assessment results showed that the digital comic media based on Problem-Based Learning achieved a 93% success rate based on practitioner (teacher) assessments and over 82% based on student responses. These results indicate that the developed media meets the criteria for being very practical for use in the learning process.

The high level of practicality indicates that digital comics are easy to use by both teachers and students during the learning process. This ease of use is evident in the media's ease of use, clear instructions, attractive presentation, and the ease with which students can follow the storyline and complete the learning activities presented. This allows for a more effective learning process because students can interact with the media without experiencing significant difficulties.

This finding can be explained through Mayer's (2009) multimedia learning theory, which states that the combination of text and images presented in an integrated manner can help students understand information more easily. The presentation of illustrations, dialogue, and storylines in digital comics provides a more engaging learning experience so that students can actively participate in the learning process. Furthermore, the Problem-Based Learning syntax integrated into the media provides opportunities for students to discuss contextual problems and find solutions together, so that the use of the media is not only easy but also supports student engagement in learning.

The results of this study also align with research (Hatipoğlu & Semerci, 2023), which shows that digital comics can increase student engagement due to the more interactive and engaging presentation of material. Research on the implementation of Problem-Based Learning also shows that students are more active in discussions, collaboration, and engagement in the learning process when faced with problems related to everyday life. These findings indicate that the integration of digital comics with the Problem-Based Learning model provides a learning experience that is more accessible to both teachers and students.

However, interpretation of the results of the media's practicality needs to consider the research context. The high level of practicality indicates that digital comic media based on Problem Based Learning can be used effectively by the research subjects involved. Further research involving a larger number of students and diverse school characteristics is expected to provide broader empirical evidence regarding the media's practicality in various learning contexts.

Analysis of the Effectiveness of Digital Comic Media Based on Problem-Based Learning

The results showed that the internalization of solidarity was in the very good category with an average of 81.62%. This finding indicates that the use of digital comics based on Problem-Based Learning (PBL) can facilitate students in understanding and applying the value of solidarity through learning experiences centered on solving contextual problems. This improvement was influenced not only by the presentation of the material in an engaging visual format, but also by the learning process that encouraged students to discuss, collaborate, and make decisions together.

These findings can be explained through Max Scheler's Hierarchy of Values Theory, which states that a person can develop from an orientation toward self-interest to an appreciation of higher moral values. In this study, the problem-based learning process provides students with the opportunity to consider the consequences of each action when solving problems presented in digital comics. Thus, learning activities are not only oriented toward cognitive achievement but also provide experiences that support the development of attitudes of mutual respect, cooperation, and caring for peers.

Cognitively, the increase in learning completion from 52% to 100% with a significance value of 0.000 indicates that the developed media is effective in helping students understand the learning material. This effectiveness can be explained through Edgar Dale's Cone of Experience Theory which emphasizes that learning experiences involving active participation will provide more meaningful understanding than learning that is only verbal. In the application of PBL, students are actively involved through activities such as observing problems, discussing, expressing opinions, and presenting solutions so that they build knowledge based on the learning experiences obtained during the learning process.

The results of this study also show that the presentation of digital comics that combine illustrations, dialogue, and problems close to students' lives helps them understand the meaning of solidarity more concretely. The engaging visual presentation makes it easier for students to connect the material to everyday experiences, while the Problem-Based Learning syntax encourages them to discuss and find solutions to the social issues presented. These conditions allow students to be actively involved during the learning process, so that their understanding of the material and the value of solidarity develop simultaneously.

The findings of this study align with research by (Haikal et al., 2025), which showed that the implementation of digital media-assisted Problem-Based Learning (PBL) can increase student engagement, collaboration skills, and understanding of learning materials. These similar results indicate that integrating digital media with the PBL model can create a more active, meaningful, and contextual learning experience. However, the results of this study are limited to students in a single class, so the findings obtained need to be understood within the research context and cannot be generalized broadly.

CONCLUSION

This development research using the ADDIE model has successfully produced a digital comic media based on Problem-Based Learning that is feasible, practical, and effective for use in Pancasila Education learning in fifth grade elementary schools. The research findings indicate that integrating digital comics with the Problem-Based Learning model can create more active, contextual, and meaningful learning, supporting increased student understanding while strengthening the value of solidarity through problem-solving, discussion, and collaboration. The developed media contributes as an alternative digital learning medium that can help teachers implement Pancasila Education learning in a more interactive manner and oriented towards character building in accordance with Pancasila values. Therefore, this media has the potential to become a learning innovation that supports the implementation of the Independent Curriculum, particularly in developing student character. This research has limitations because it was conducted in only one school with a limited number of respondents, so the findings are still contextual. Therefore, further research is recommended to test the media's effectiveness with a larger number of respondents, various school characteristics, and to develop digital comic media for Pancasila Education and other subjects to obtain a more comprehensive picture of its effectiveness.

REFERENCES

- Akuba, T. (2024). The Effectiveness Of Using Problem-Based Learning Methods In Improving Students' Reading Comprehension: A Systematic Literature Review. *Education and Linguistic Knowledge Journal (Edulink)*, 6(2), 197–205.
- Barrows, H. S. (1996). Problem-based learning in medicine and beyond: A brief overview. *New Directions for Teaching and Learning*, 1996(68), 3–12. <https://doi.org/10.1002/tl.37219966804>
- Bustomi. (2024). Teori konstruktivisme Jean Piaget dalam pembelajaran eksploratif. *Jurnal Pendidikan Dasar*.
- Durkheim, É. (2014). *The division of labor in society* (W. D. Halls, Trans.). Free Press. (Original work published 1893)
- Habermas, J. (1990). *Moral consciousness and communicative action* (C. Lenhardt & S. W. Nicholsen, Trans.). MIT Press.
- Haikal, M. F., Anwar, S., Rindu, M., Islamy, F., & Indonesia, U. P. (2025). Problem Based Learning Methods in the Digital Era: Measuring the Impact on Students Learning Motivation and Social Character. *Jurnal Iqra' : Kajian Ilmu Pendidikan*, 10(1), 1–17. <https://doi.org/10.25217/ji.v10i1.5053>
- Hake, R. R. (1998). Interactive-engagement versus traditional methods: A six-thousand-student survey of mechanics test data for introductory physics courses. *American Journal of Physics*, 66(1), 64–74. <https://doi.org/10.1119/1.18809>
- Hatipoğlu, C., & Semerci, N. (2023). The effect of a problem-based learning model on high school students' human values. *Netjournals*, 11(April), 157–169. <https://doi.org/10.30918/AERJ.112.23.020>
- Kementerian Pemberdayaan Perempuan dan Perlindungan Anak. (2023). *Data kekerasan anak Sistem Informasi Online Perlindungan Perempuan dan Anak (SIMFONI PPA)*. <https://kekerasan.kemenpppa.go.id/>
- Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi. (2022). *Kajian akademik kurikulum untuk pemulihan pembelajaran*. Pusat Kurikulum dan Pembelajaran.
- Krathwohl, D. R., Bloom, B. S., & Masia, B. B. (1964). *Taxonomy of educational objectives: The classification of educational goals*.

Handbook II: Affective domain. David McKay.

- Mayer, R. E. (2009). *Multimedia learning* (2nd ed.). Cambridge University Press. <https://doi.org/10.1017/CBO9780511811678>
- Nur, W., Firdaus, M., & Purnama, A. W. (2026). Sosialisasi Anti Perundungan Sejak Dini : Membangun Kesadaran Peserta Didik Sekolah Dasar Akan Bahaya Bullying. *Indonesian Journal of Innovation Multidisipliner Research*, 4, 3849–3861.
- Nur Wira Triana. (2025). Pengembangan Komik Digital Dengan Model Problem Based Learning Pada Mata Pelajaran Pendidikan Pancasila. *Jurnal Muara Pendidikan*, 10(2), 303–309. <https://doi.org/10.52060/mp.v10i2.3464>
- Piaget, J. (2002). *The psychology of intelligence*. Routledge.
- Rahayu, D. M. (2025). Pengembangan Media Pembelajaran Komik Menjelajah Keberagaman Berbantuan Problem Based Learning Kelas IV SD. *Pendas : Jurnal Ilmiah Pendidikan Dasar*, 10. <https://doi.org/10.23969/jp.v10i01.21930>
- Rauf, I., Arifin, I. N., & Arif, R. M. (2022). Pengaruh Model Problem Based Learning Terhadap Kemampuan Berpikir Kritis Siswa. *PEDAGOGIKA*, 13(Nomor 2), 163–183. <https://doi.org/10.37411/pedagogika.v13i2.1354>
- Scheler, M. (1973). *Formalism in ethics and non-formal ethics of values: A new attempt toward the foundation of an ethical personalism* (M. S. Frings & R. L. Funk, Trans.). Northwestern University Press. (Original work published 1916)
- Susanto, A. (2026). Efektivitas Model Problem Based Learning Terhadap Peningkatan Sikap Toleransi Siswa di Sekolah Dasar: Systematic Literature Review. *Pendas : Jurnal Ilmiah Pendidikan Dasar*, 11, 211–224. <https://doi.org/10.23969/jp.v11i02.47917>
- Syifa, N. A., Dani, A., Keisya, A., & Slam, Z. (2026). Revitalisasi Pendidikan Pancasila : Upaya Membentuk Karakter Generasi Z yang Beretika dan Berintegritas Abstrak Jurnal Pengabdian Nasional (JPN) Indonesia. *Jurnal Pengabdian Nasional (JPN) Indonesia*, 7(1), 118–127.
- Tian, X. (2025). From Awareness to Behavior: The Empirical Effects of Real Problem-Oriented Learning in Civic and Moral Education. *Sage Journals*, June, 1–16. <https://doi.org/10.1177/21582440251338948>
- Trianto. (2014). *Mendesain model pembelajaran inovatif, progresif, dan kontekstual*. Prenadamedia Group.
- Yunita, S. (2022). Citizenship Learning Through Self Organized Learning Environment On Students' Learning Styles. *Devotion Journal of Community Service*, 3(11), 1054–1065.