

Development of Pop-Up Book Learning Media for Strengthening Pillars of Faith Comprehension in Junior High School Students

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Abstract. The lack of visual learning media causes students to have a shallow understanding of the pillars of faith material. This study aims to develop pop-up book-based learning media for Phase D students of grade IX. The study employed the 4D development model (Define, Design, Develop, Disseminate), utilizing data collection techniques that included interviews, questionnaires, tests, and documentation. The validation results showed a feasibility level of 75% (media), 95% (material), and 82.5% (language). The practicality of the media was assessed as high based on teacher responses (93.1%) and students (83.9%). The effectiveness of the media reached 87%. These findings indicate that pop-up book media can increase student involvement and understanding of the pillars of faith material.

Keywords: Pop Up Book, Learning Media, Junior High School Students, Islamic Education.

1. Introduction

Education is a fundamental effort that aims to help individuals develop their skills, knowledge, and character so that they can become productive and valuable members of society and the nation (Hakim & Darajat, 2023). In the education ecosystem, teachers and students are the main components that drive the success or failure of the learning process (Bijani et al., 2024). Teachers are important motivators and facilitators, helping students overcome difficulties in understanding the learning material and creating an engaging and enjoyable learning environment. (Rahmawati et al., 2023). Quality education is highly dependent on the competence of teachers, who must have personal, social, pedagogical, and professional competencies to provide effective teaching.

Supporting teachers with the right learning media is essential in a formal education environment to facilitate a meaningful learning experience. (Rakhman et al., 2024). Learning media is a crucial tool that enhances student engagement and understanding by presenting content in diverse and interactive ways (Hasriadi et al., 2025). Pop-up books stand out for their unique three-dimensional visual appeal among the different types of learning media. Pop-up books utilise thick paper folded into shapes and patterns that create interactive and clear images, offering students an authentic and stimulating educational experience (Jayanti & Wibawa, 2024, p. 5). Such media effectively makes abstract or complex concepts more accessible and memorable.

However, in many classrooms, several challenges still hamper learning activities. Students often lack focus and motivation, making it difficult for teachers to deliver the subject matter

effectively. (Afifah & Utami, 2024). This issue is particularly pronounced in religious education, such as the teaching of the pillars of faith. The abstract nature of religious concepts and limited engagement tools can lead to a superficial understanding and minimal internalisation of values among students. (Duryat, 2021). Teachers often struggle to find media that can capture students' attention while conveying a profound spiritual and moral message.

Overcoming these challenges requires a methodological and pragmatic approach. Methodologically, learning media must be designed to achieve specific educational objectives, making learning more engaging, interactive, and innovative (Zahwa & Syafi'i, 2022). Media development should align with pedagogical principles and incorporate elements that stimulate students' curiosity and cognitive engagement. Pragmatically, the media should provide students with diverse and meaningful learning experiences that motivate them to learn and internalise the material (Casfian et al., 2024).

Recent research underscores the importance of integrating innovative media in religious education. For example (Azkiya et al., 2022) Developed digital e-modules to support Islamic education, and found that interactive and aesthetically engaging media significantly increased student engagement and understanding. (Zahro et al., 2025) Creating multimedia-based learning modules infused with spiritual values demonstrates that culturally and contextually sensitive design improves student acceptance and retention. Moreover (Rahmadani, 2024) Highlighted that easy-to-use digital media incorporating religious contexts can enhance learning effectiveness and facilitate internalising moral values.

Despite this progress, a gap remains. Most previous research has focused on digital or screen-based media, which may not be accessible or attractive to all learners, especially in areas with limited technological infrastructure. Additionally, the unique potential of tactile and three-dimensional media, such as pop-up books, has not been fully explored in religious education, particularly for topics like the pillars of faith. This gap represents a significant opportunity to develop media that combines visual, tactile, and cognitive elements to deepen understanding and foster lasting interest.

Previous research has shown the benefits of media innovation, with few studies providing a comprehensive evaluation that includes validity, practicality, and effectiveness specific to pop-up book media in junior high school settings. There is also a limited focus on how such media contributes to cognitive understanding, character formation, and spiritual development, which is an important goal in religious education.

Given this gap, this study aims to develop a pop-up book-based learning media explicitly designed for Phase D students in grade IX, focusing on strengthening their understanding of the pillars of faith. This research uses a 4D development model—Define, Design, Develop, and Disseminate—to systematically create, validate, and test media. This approach ensures that the media is pedagogically good, practical, and effective in improving student learning outcomes.

Therefore, this study is guided by the following research questions: (1) How valid is the pop-up book learning media developed in terms of content, media design, and language? (2) How practical is the media based on the responses of teachers and students during the implementation in the classroom? (3) How effective is pop-up book media in increasing students' understanding and interest in learning the pillars of faith?

The objectives of this research are: (1) Designing and developing a valid pop-up book learning media for religious education; (2) Examining the practicality of media in the classroom environment from the perspective of teachers and students; (3) Evaluate the effectiveness of the media in increasing students' understanding and motivation towards the pillars of faith.

By addressing these goals, this research makes both practical and theoretical contributions. Practically, this research offers innovative and concrete learning resources that teachers can utilize to enhance religious education and student engagement. Theoretically, this study expands the knowledge base on multimedia learning, religious pedagogy, and media development by exploring the application of pop-up book media in Islamic education.

2. Method

This research employed the Research and Development (R&D) method, aiming to produce and evaluate a learning media product. (Thiagarajan & Stolovitch, 1977). The study was conducted at SMP Negeri 6 Satu Atap Masamba, in Tosapu Hamlet, Pombakka Village. The research activities took place in August 2024. The development process followed the 4D model, which consists of four stages: Define, Design, Develop, and Disseminate. However, in this study, only the first three stages—Define, Design, and Develop—were implemented to create and validate the pop-up book learning media. The Define stage involved identifying the needs and characteristics of students, as well as curriculum requirements. The Design stage focused on planning the media content and layout, while the Develop stage entailed the actual production of the media and expert validation.

The subjects of this research included Grade IX students who are the target users of the developed media and experts serving as validators in the fields of media, subject matter, and language. Data collection was conducted using multiple techniques to ensure a comprehensive evaluation. (Tessmer & Martin, 2013). Questionnaires were distributed to teachers and students to assess the practicality of the media during classroom implementation (Gall et al., 1996). Tests were administered to measure student learning outcomes and the effectiveness of the media. Interviews were conducted to gather qualitative insights from teachers and students about their experiences using the pop-up book. Additionally, documentation techniques were employed to record and analyse the development process and the results obtained.

Data analysis involved both qualitative and quantitative descriptive approaches. Quantitative data from questionnaires and tests were analysed using percentage scores, which were then classified based on predetermined criteria.

Table 1. Validation Results Criteria

Percentage%	Criteria
80 – 100	Very valid
60 – 80	Valid
40 – 60	Quite valid
20 – 40	Invalid
0 – 20	Very invalid

Table 2. Practical Outcome Criteria

Percentage%	Criteria
80 – 100	Very Practical
60 – 80	Practical
40 – 60	Quite Practical
20 – 40	Impractical
0 – 20	Very Impractical

Table 3. Classification of Success

Percentage	Classification
91 – 100	Special
81 – 90	Very good
71 – 80	Good
61 – 70	Enough

≤ 60

Less

This multi-method approach ensures a thorough assessment of pop-up book media in terms of validity, practicality, and effectiveness, thus providing a solid basis for concluding the medium's suitability for educational use.

3. Results

Development Results

Pop-up book-based learning media is developed through a 4D model (Define, Design, Develop, Disseminate) to improve students' understanding of the Pillars of Faith material. Interviews were conducted with Islamic Religious Education teachers to identify problems in learning.

Table 4. Interview Results

No	Question	Answer
1	How do students respond to learning?	Pay attention only at the beginning of learning activities.
2	What curriculum is used?	Independent Curriculum (VII & VIII), Curriculum 2013 (IX).
3	What methods are used?	Q&A and assignments.
4	What media is used?	Islamic Religious Education Books.
5	How to deal with noisy students?	Reprimand and advise.
6	Cognitive assessment techniques?	Written tests.

Table 5. Definition Stage

Conditions	Definition Results
User goals	Grade IX students of SMPN 6 Satu Atap Masamba
Media scrutinised	Pop Up Book Pillar of Faith material.
Required components	Attractive appearance, bright colours, and easy materials to get

The design stage continues the definition stage, which focuses on planning the learning media to be developed. At this stage, the researcher began preparing the initial design of the Pop-Up Book learning media based on student needs and material characteristics. Planning is carried out systematically to ensure that the media developed meets the learning objectives.

The Media Pop-Up Book was chosen because it presents an interactive and visually appealing three-dimensional display in a unique and engaging way. This characteristic is considered to help students understand abstract material more concretely, such as the Pillars of Faith. The material included in the media is referenced from the applicable Islamic Religious Education curriculum and the textbooks used in schools.

Furthermore, the researcher designs the content of the material, text layout, image illustrations, and page design to be used in the media. Visual design is made as attractive as possible to foster students' interest in learning and facilitate the understanding process. The researcher also determines the necessary tools and materials, such as manila paper, cardboard, glue, scissors, and dyeing tools.

These designs are prepared in the form of sketches and used as guidelines in the media development process. Material and media experts will validate the design results before proceeding to the production stage. This stage is a crucial foundation for ensuring that the media produced can be utilized effectively in the learning process.



Figure 1. Pop Up Book Learning Media

Validity Results

Validation is carried out by three experts: media, material, and language. The results of the revision are presented as follows:

Table 6. Expert Revision

Yes	Validator	Evaluation
1	Media Member	Add materials, evaluation questions, and instructions for use
2	Linguist	Consistency of term usage

Table 7. Before and After Revision

Repair	Before Revision	After Revision
Additional materials	Not yet	Already added
Instructions for use	Not yet	Equipped
Evaluation questions	Not yet	Already added
Consistency of terms	Not consistent yet	Already consistent

Table 8. Media Expert Validation Results

Aspects	Value
Media Presentation	18
Presentation of Writing & Pictures	21
Total Score	39
Maximum Score	52
Percentage	75%
Criterion	Valid

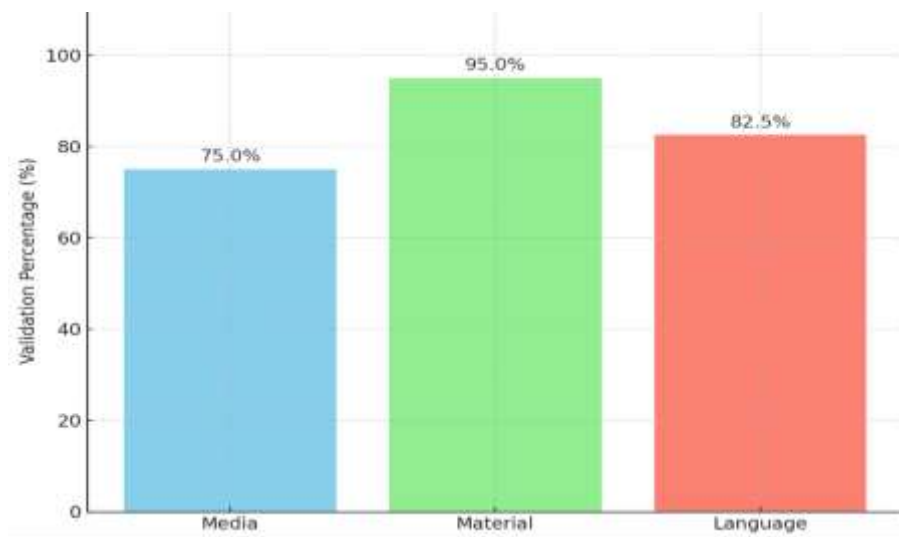
Table 9. Material Expert Validation Results

Aspects	Value
Material	12
Illustration	8
Quality & Appearance	7
Attraction	11
Total Score	38

Aspects	Value
Maximum Score	40
Percentage	95%
Criterion	Highly Valid

Table 10. Linguist Validation Results

Aspects	Total Score
10 Statement Items	33
Maximum Score	40
Percentage	82,5%
Criterion	Highly Valid



Gambar 2. Comparison of Validation Results for Pop-Up Book Media

Practicality Results

The practicality test was conducted through a questionnaire to 16 students and one teacher.

Table 11. Results of Students' Practicality

Assessment Aspects	Score	Maximum Score	Percentage	Category
Material	158	192	82.2%	Very Practical
Illustration	105	128	82.0%	Very Practical
Quality & Appearance	106	128	82.8%	Very Practical
Attraction	135	160	84.4%	Very Practical
Language	84	96	87.5%	Very Practical
Total	588	704	83.5%	Very Practical

Table 12. Results of Teacher Practicality

Assessment Aspects	Score earned	Maximum Score	Percentage	Category
Media & Materials	40	48	83.3%	Very Practical

4. Discussion

Development Results

The results of developing Pop-Up Book-based learning media demonstrate that this media is systematically designed through the stages of the 4D model (Define, Design, Develop, Disseminate) to address problems in learning Islamic Religious Education, particularly in the material on the Pillars of Faith. Based on interviews with Islamic Religious Education teachers, it is evident that learning remains conventional, utilizing question-and-answer methods and assignments, with textbooks serving as the primary medium. As a result, students are initially enthusiastic about learning but tend to become passive in subsequent sessions.

Pop-up book media is relevant because it offers a more concrete and interactive three-dimensional visual approach. The validation results showed that this media was feasible to use, with feasibility percentages of 75% from the media aspect, 95% from the material aspect, and 82.5% from the language aspect. This indicates that this media is visually appealing, relevant in content, and effectively communicates its message.

These findings are in line with research (Maryani, 2022) This demonstrates that Pop-Up Books effectively enhance students' understanding of religious concepts, as they can simplify complex ideas. Research (Khasanah et al., 2024) It also states that Pop-Up Book media can increase students' interest and participation in learning through its visual and interactive elements. Moreover (Agustira & Rahmi, 2022) Found that the use of three-dimensional media can strengthen students' memory of learning materials, especially in thematic and religious learning.

In terms of theory, the development of this media strengthens the principle of constructivism in learning, namely that students build understanding through active interaction with the learning environment, including the media used (Harris & Graham, 1994). The Pop Up Book media acts as a bridge between abstract concepts and concrete experiences, according to the learning characteristics of junior high school students.

Practically, this medium provides an alternative solution for teachers to deliver abstract material, making it easier for students to understand. This media can also be a means to increase student motivation and active engagement. Pop-up books are also relatively inexpensive because the materials are readily available and can be designed by teachers or students.

However, its use presents several challenges, including the lengthy manufacturing time and the limited physical durability of the media. As a solution, teachers can engage students in the creation process as part of project-based learning, or combine this print media with interactive digital media for efficiency and sustainability.

Thus, the development of Pop-Up Book learning media has a positive impact on the understanding of religious materials, strengthening the role of teachers as facilitators in creating innovative, meaningful, and engaging learning experiences. This media has vast potential to be applied to various other materials in Islamic Religious Education and other subjects that require concrete visualisation.

Validity Results

The results of the Pop-Up Book learning media validation indicate that this media has undergone evaluation by three experts: media experts, material experts, and linguists. Based on the validation results, this media received scores of 75% from media experts (valid category), 95% from material experts (very valid), and 82.5% from linguists (also very valid). These figures show that the Pop-Up Book media meets the eligibility criteria for use in the learning process, although some revisions are still needed.

Evaluations from media experts suggest the addition of materials, evaluation questions, and instructions for use. This is crucial to ensure that the media is visually appealing and comprehensive in terms of both functionality and pedagogy. Evaluations from linguists highlight the importance of consistency of terms to avoid confusing students. All of these inputs have been accommodated, and the media have improved in quality after the revision, as shown in the comparison table before and after the revision.

These results are in line with research (Fauziyah & Mulyani, 2024) The people who developed the pop-up book media found that the attractive visual aspect must be balanced with the completeness of the content for optimal effectiveness. Research (Sholiha et al., 2024) It also emphasised that the success of pop-up book media depends on the suitability of the content with the curriculum and the integration of text and illustration. Moreover (Trelease, 2016) In his research, it was concluded that three-dimensional book-based visual media can increase student concentration and engagement. However, it needs to be supported by structured evaluation so that learning outcomes can be measured comprehensively.

Practically, this Pop-Up Book media offers an innovative alternative in Islamic Religious Education, particularly for the abstract material on Rukun Iman. The three-dimensional visualisation makes the concept more concrete and easier for junior high school students to understand. In addition, this media can potentially increase student involvement and motivation to learn, particularly those who have tended to be passive when using ordinary textbooks.

From a theoretical perspective, the development of this media supports a constructivist approach, which posits that students build their knowledge through direct experience. (Mills et al., 2006). Using the Pop-Up Book, students become recipients of information and actively explore the material's content. It also reinforces the dual coding theory by (Paivio, 1991), which states that information conveyed visually and verbally is easier for the brain to process and remember.

As a solution for the future, teachers are advised to integrate Pop-Up Book media with active learning methods, such as group discussions or role-playing, so that the learning experience becomes more comprehensive. Teachers can also engage students in creating media as part of a creative project, simultaneously honing students' collaborative and critical thinking skills.

Thus, the validation of the Pop-Up Book media demonstrates that this medium is not only feasible to use but also has a positive overall impact on the learning process. This result opens up opportunities for further development in various other material themes in Islamic Religious Education or even across subjects.

Practicality Results

The results of the learning media practicality test, conducted on 16 students and one teacher, showed that the media fell into the convenient category. This can be seen from the percentage of scores obtained in each aspect of the assessment, namely material (82.2%), illustration (82.0%), quality and appearance (82.8%), attractiveness (84.4%), and language (87.5%) of students. Overall, the practicality of the media, as assessed by students, reached 83.5%. Meanwhile, the results of teachers' assessments of media and materials obtained a score of 83.3%, which also falls within the convenient category.

The interpretation of these results indicates that the learning media developed is suitable for use in the learning process because it fulfils important aspects that support the effectiveness and comfort of students and teachers when using the media. The high score in the language aspect (87.5%) shows that the language used is easy to understand, and at the students' level of ability. The attractiveness, which also received a high score (84.4%), indicates that this media can increase students' motivation to learn.

These results are in line with research conducted by (Patriani & Kusumaningrum, 2020) Who found that systematically developed interactive learning media could increase students' practicality and interest in learning? In addition, research by (Winatha, 2018) It also shows that learning media with attractive illustrations and good displays have a significant impact on the ease of use and student involvement in learning. Other research by (Hidayah et al., 2020) Emphasised that communicative and simple language in learning media improves students' understanding of the material.

Practically, the results of this practicality imply that the learning media developed can be directly applied in the learning process without requiring much revision. Teachers can use this media as an effective tool to explain the material. At the same time, students can more easily understand the material presented because this media is designed with ease, clarity, and visual appeal in mind.

Theoretically, this finding supports the theory of multimedia learning, which posits that effective learning media must meet both cognitive and affective aspects, namely, providing information clearly while capturing students' attention to facilitate an optimal learning process. (Mayer, 2024). Thus, the development of practicality-oriented learning media like this can serve as a reference for future research and development in learning media.

5. Conclusion

Based on the results of development, validation, and practicality tests, the Pop-Up Book-based learning media on the Pillars of Faith material have proven feasible and practical for use in learning Islamic Religious Education at the junior high school level. This media is systematically developed using a 4D model and can overcome conventional learning limitations that are less interesting and make students passive. Expert validation shows high scores on media, materials, and language aspects. In contrast, student and teacher assessments show that these media are easy to use, engaging, and effective in improving students' understanding and learning motivation. These findings align with constructivist and dual coding theories, which affirm the importance of visual and interactive media in the meaningful learning process.

As a recommendation, teachers are advised to integrate Pop-Up Book media with active learning methods, such as discussion and project-based learning, and involve students in creating media to hone their collaborative skills and critical thinking. This media makes an important contribution as an applicable, economical, and practical learning innovation in improving the quality of religious learning in junior high schools. This research also opens up opportunities for developing similar media for other materials in Islamic Religious Education and other subjects that require concrete visualisation to support a more interactive and engaging learning process.

6. References

- Afifah, Z., & Utami, D. (2024). Komunikasi Interpersonal Guru dan Siswa di Kelas Rendah Madrasah Ibtidaiyah. *Jurnal Ilmu Pendidikan Dasar Indonesia*, 3(3), Article 3. <https://doi.org/10.51574/judikdas.v3i3.1241>
- Agustira, S., & Rahmi, R. (2022). Penggunaan Media Pembelajaran Untuk Meningkatkan Hasil Belajar Siswa Pada Tingkat SD. *MUBTADI: Jurnal Pendidikan Ibtidaiyah*, 4(1), Article 1. <https://doi.org/10.19105/mubtadi.v4i1.6267>
- Azkiya, H., Tamrin, M., Yuza, A., & Madona, A. S. (2022). Pengembangan E-Modul Berbasis Nilai-Nilai Pendidikan Multikultural di Sekolah Dasar Islam. *Jurnal Pendidikan Agama Islam Al-Thariqah*, 7(2), 409–427. [https://doi.org/10.25299/al-thariqah.2022.vol7\(2\).10851](https://doi.org/10.25299/al-thariqah.2022.vol7(2).10851)

- Bijani, H. L., Siregar, E. N., Mutia, Z., & Rizqa, M. (2024). Urgensi Administrasi Pendidikan Bagi Peningkatan Mutu Pendidikan. *PANDU: Jurnal Pendidikan Anak Dan Pendidikan Umum*, 2(2), Article 2. <https://doi.org/10.59966/pandu.v2i2.925>
- Casfian, F., Fadhillah, F., Septiaranny, J. W., Nugraha, M. A., & Fuadin, A. (2024). Efektivitas Pembelajaran Berbasis Teori Konstruktivisme Melalui Media E-Learning. *Jurnal Pendidikan Sosial Dan Humaniora*, 3(2), 636–648.
- Duryat, M. (2021). *Paradigma Pendidikan Islam: Upaya Penguatan Pendidikan Agama Islam Di Institusi Yang Bermutu Dan Berdaya Saing*. Penerbit Alfabeta.
- Fauziyah, D. H., & Mulyani, P. K. (2024). Development and Evaluation of a Digital Pop-Up Book on the Concept of Force for Fourth-Grade Science. *Jurnal Penelitian Pendidikan IPA*, 10(7), Article 7. <https://doi.org/10.29303/jppipa.v10i7.7770>
- Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research: An introduction*, 6th ed (pp. xxii, 788). Longman Publishing.
- Hakim, A. R., & Darajat, J. (2023). Pendidikan Multikultural dalam Membentuk Karakter dan Identitas Nasional. *Jurnal Ilmiah Profesi Pendidikan*, 8(3), 1337–1346. <https://doi.org/10.29303/jipp.v8i3.1470>
- Harris, K. R., & Graham, S. (1994). Constructivism: Principles, Paradigms, and Integration. *The Journal of Special Education*, 28(3), 233–247. <https://doi.org/10.1177/002246699402800301>
- Hasriadi, H., Sholehah, S., & Musdianti, M. (2025). The implementation of innovative “Kantong Sholat” media to enhance students’ learning motivation at integrated Islamic elementary schools. *Mitra PGMI: Jurnal Kependidikan MI*, 11(1), 99–109. <https://doi.org/10.46963/mpgmi.v11i1.2572>
- Hidayah, N., Wahyuni, R., & Hasnanto, A. T. (2020). Pengembangan Media Pembelajaran Gambar Berseri Berbasis Pop-Up Book Untuk Meningkatkan Keterampilan Menulis Narasi Bahasa Indonesia | Terampil: Jurnal Pendidikan dan Pembelajaran Dasar. <https://ejournal.radenintan.ac.id/index.php/terampil/article/view/6182>
- Jayanti, L. S. S. W., & Wibawa, K. S. (2024). Menumbuhkan Minat Baca Melalui Pop Up Book. *Uwais Inspirasi Indonesia*.
- Khasanah, Q., Lestari, S., & Mulyani, S. (2024). Peningkatan Minat Belajar Siswa Pada Materi IPS Melalui Media Pop Up Book Pada Siswa Kelas IV. *Seminar Nasional Paedagogia*, 4(1), 538–543.
- Maryani, D. (2022). Media Pop Up Book dalam Pembelajaran PAI untuk Meningkatkan Minat Belajar Peserta Didik. *Jurnal Educatio FKIP UNMA*, 8(1), Article 1. <https://doi.org/10.31949/educatio.v8i1.1600>
- Mayer, R. E. (2024). The Past, Present, and Future of the Cognitive Theory of Multimedia Learning. *Educational Psychology Review*, 36(1), 8. <https://doi.org/10.1007/s10648-023-09842-1>
- Mills, J., Bonner, A., & Francis, K. (2006). Adopting a constructivist approach to grounded theory: Implications for research design. *International Journal of Nursing Practice*, 12(1), 8–13. <https://doi.org/10.1111/j.1440-172X.2006.00543.x>
- Paivio, A. (1991). Dual coding theory: Retrospect and current status. *Canadian Journal of Psychology / Revue Canadienne de Psychologie*, 45(3), 255–287. <https://doi.org/10.1037/h0084295>
- Patriani, R. P., & Kusumaningrum, I. (2020). Pengembangan Media Pembelajaran Interaktif Berbasis Android Untuk Pembelajaran Teknik Animasi 2 Dan 3 Dimensi Kelas XI Sekolah Menengah Kejuruan. *Jurnal Penelitian IPTEKS*, 5(2), Article 2. <https://doi.org/10.32528/ipteks.v5i2.3651>

- Rahmadani, S. (2024). Strategi Pembelajaran Pendidikan Agama Islam Di Era Digital: Tinjauan Literatur Kualitatif. *Jurnal Media Akademik (JMA)*, 2(6), Article 6. <https://doi.org/10.62281/v2i6.515>
- Rahmawati, H., Iskandar, S., Rosmana, P., Nabilah, A. P., Rahmawati, A., Herlina, P., & Agustiani, N. (2023). Peran Guru Penggerak Terhadap Penerapan Pembelajaran Kurikulum Merdeka Untuk Meningkatkan Motivasi Belajar Siswa. *Innovative: Journal Of Social Science Research*, 3(2), Article 2.
- Rakhman, P. A., Salsyabila, A., Nuramalia, N., & Gustiani, P. E. (2024). Meningkatkan Motivasi Belajar Siswa di SDN Cilampang melalui Media Pembelajaran Digital dan Konvensional. *Jurnal Inovasi Pembelajaran di Sekolah*, 5(2), Article 2. <https://doi.org/10.51874/jips.v5i2.293>
- Sholiha, D. M., Karim, A., & Agoro, S. (2024). Development of Pop-Up Book Media Based on Heroic Values in Madrasah Ibtidaiyah. *EDUCARE: Journal of Primary Education*, 5(1), Article 1. <https://doi.org/10.35719/educare.v5i1.254>
- Tessmer, T., & Martin, M. (2013). *Planning and Conducting Formative Evaluations*. Routledge. <https://doi.org/10.4324/9780203061978>
- Thiagarajan, S., & Stolovitch, H. D. (1977). *Evaluation of a Mediated Program for Training Teachers of Exceptional Children in Instructional Development. Final Report 51.2*. Indiana University, Center for Innovation in Teaching the Handicapped, School of Education, Bloomington, Indiana 47401 (\$3. <https://eric.ed.gov/?id=ED162461>
- Trelease, R. B. (2016). From chalkboard, slides, and paper to e-learning: How computing technologies have transformed anatomical sciences education. *Anatomical Sciences Education*, 9(6), 583–602. <https://doi.org/10.1002/ase.1620>
- Winatha, K. R. (2018). Pengembangan E-modul Interaktif Berbasis Proyek Mata Pelajaran Simulasi Digital. *Jurnal Pendidikan Teknologi Dan Kejuruan*, 15(2), Article 2. <https://doi.org/10.23887/jptk-undiksha.v15i2.14021>
- Zahro, F., Syahda, S. L., & Ni'mah, L. (2025). Implementasi Model Pembelajaran Berbasis Multimedia Untuk Meningkatkan Pemahaman dan Minat Belajar Siswa Pada Mata Pelajaran PAI Di SMP Namira. *Journal of Islamic Education and Pedagogy*, 2(01), 69–77. <https://doi.org/10.62097/jiep.v2i01.2186>
- Zahwa, F. A., & Syafi'i, I. (2022). Pemilihan Pengembangan Media Pembelajaran Berbasis Teknologi Informasi. *Equilibrium: Jurnal Penelitian Pendidikan Dan Ekonomi*, 19(01), Article 01. <https://doi.org/10.25134/equi.v19i01.3963>