



Development of Malaya Cards: Learning Natural Features and Their Utilization in Primary Education

**Winda, Khusnul Khotimah, Iksam*

**Primary School Teacher Education Study Program, Faculty of Teacher Training and Education, Universitas Mulawarman, Samarinda, Indonesia*

*Correspondence: E-mail: winwindaaa25@gmail.com

ABSTRACT

Elementary school students require meaningful and enjoyable learning experiences, making the use of media that meets their needs essential for fostering enthusiasm in learning activities. The purpose of this research and development study is to describe the development process and evaluate the feasibility of the Malaya Cards. The ADDIE model was applied as the research methodology, encompassing the following steps: analysis, design, development, implementation, and evaluation. The research subjects consisted of fourth-grade students (class IV-B) from SD Negeri 004 Sungai Kunjang, divided into two groups: small-scale and large-scale trials. Data collection techniques used in the study included interviews, questionnaires, and documentation. The results of the study, following one cycle of revisions, showed that the feasibility of the language, content, and media aspects achieved scores of 96.66%, 96.00%, and 93.33%, respectively. The small-scale trial yielded a score of 88.66%, the large-scale trial achieved 92.35%, and the teacher's response scored 96.19%. These findings indicate that the Malaya Cards is feasible for use, with suggestions for further improvement. Future research should consider refining the rules of the Malaya Cards to ensure a more conducive and orderly learning environment for students.

ARTICLE INFO

Article History:

Submitted/Received 12 March 2024

First Revised 09 Mei 2024

Accepted 18 July 2024

First Available Online 28 July 2024

Publication Date 01 August 2024

Keyword:

ADDIE Model, Elementary Education, Game-Based Learning, Malaya Cards.

1. INTRODUCTION

Education is a key element in developing high-quality human resources. As an institution responsible for shaping the nation's future generations, education must continually innovate to meet the demands of the times. Innovation is particularly critical in the era of globalization and technological advancement, where 21st-century skills such as critical thinking, communication, collaboration, and creativity are essential (Haryati et al., 2022; Thornhill-Miller et al., 2023). Understanding educational components, including the curriculum, is fundamental in building relevant and meaningful learning experiences (Ramadhon et al., 2023; Sulindawati, 2018).

In the context of education in Indonesia, the COVID-19 pandemic accelerated the need for innovation, especially in teaching methods and learning media. One strategic response was the implementation of the Merdeka Curriculum. This curriculum provides students and teachers with flexibility to explore learning through more adaptable approaches, emphasizing the development of 21st-century skills. The approach not only aligns education with contemporary demands but also creates opportunities for teachers to develop more interactive and engaging teaching methods (Caena & Redecker, 2019; Maskur, 2023; Susilana et al., 2022).

Meaningful and enjoyable learning is essential to creating education that meets students' needs. Teachers are encouraged to implement active learning methods that challenge students to think critically and involve them directly in the learning process (Maskur, 2023; Pratama et al., 2023). These methods enable students to learn through experiences, discussions, and collaboration, ensuring they are actively engaged in constructing deeper understanding rather than passively receiving material.

Significant challenges arise in implementing these methods. Teachers face obstacles related to the diverse characteristics of students, including varying learning abilities. Limited access to effective learning media further hampers efforts to create interactive and engaging learning environments. Many teachers rely on conventional methods such as lectures, textbooks, and worksheets, which fail to address the increasingly complex needs of students (Ramadhani et al., 2021; Srinivasa et al., 2022; Zulaiha & Meisin, 2020).

Learning media play a crucial role in addressing these challenges. Media facilitate the clear delivery of educational content, enhance students' attention, and provide uniform learning experiences (Arsyad, 2014). Effective media not only convey information but also foster student engagement in the learning process, ultimately boosting motivation and learning outcomes. Several criteria must be considered when selecting learning media. According to Morrison et al. (2019), effective learning media should align with expected learning outcomes, be relevant to the material being taught, practical to use, flexible, and durable. Media must also be tailored to students' needs and characteristics to ensure effective learning.

Preliminary findings at SD Negeri 004 Sungai Kunjang revealed significant challenges in teaching. Teachers in class IV-B struggled to help students understand the topic of natural features and their utilization due to limitations in the available learning media. The media used—textbooks, whiteboards, and worksheets—were insufficient for creating interactive and enjoyable learning experiences. As a result, students found it difficult to gain a deep understanding of the material, and learning outcomes were suboptimal.

Previous studies indicate that game-based learning media hold significant potential for improving students' motivation and learning outcomes. Harlin (2023) reported that the use of Uno card games in learning improved students' understanding, with a feasibility rating of

89.29%. Similarly, [Kamalia & Subroto \(2022\)](#) demonstrated that Uno-based learning media were valid and effective in enhancing students' writing skills, achieving excellent feasibility ratings in both small-scale trials (82.5%) and large-scale trials (90.5%). These findings suggest that card games can serve as effective learning tools.

Existing research, however, tends to focus on the general effectiveness of card games without addressing students' specific needs for particular subjects. This creates a research gap that must be addressed, particularly in developing game-based learning media tailored to specific student needs, such as understanding natural features and their utilization.

To address these challenges, this study developed a game-based educational learning medium called Malaya Cards. This name stands for "Uno cards on natural features and their utilization." The decision to use Uno cards as the basis for development was due to the game's popularity and appeal. Students in class IV-B were already familiar with Uno, making it easier to adopt and use the medium for learning. Malaya Cards was designed not only as a learning tool but also as a means to support the development of 4C skills (critical thinking, communication, collaboration, and creativity) in line with the principles of the Merdeka Curriculum. By combining gaming elements with educational content, the cards aim to create a learning experience that is both enjoyable and meaningful.

The primary objective of this research is to explain the development process and evaluate the feasibility of Malaya Cards as a learning medium. The study aims to provide an innovative solution to help class IV-B students at SD Negeri 004 Sungai Kunjang better understand the topic of natural features and their utilization. This approach is expected to position Malaya Cards not only as a teaching aid but also as a tool for enhancing students' motivation and engagement in the learning process.

2. METHODOLOGY

2.1 Research Design

This research utilized a Research and Development (R&D) approach incorporating the ADDIE development model. The ADDIE model consists of five main stages: Analysis, Design, Development, Implementation, and Evaluation ([Molenda, 2015](#)). This framework was chosen for its systematic methodology in creating effective and measurable instructional media.

During the Analysis stage, the instructional needs and challenges faced by students were identified. The Design stage involved the formulation of instructional media based on the findings from the Analysis stage. The Development stage included the creation and expert validation of the instructional media. In the Implementation stage, the media were tested with fourth-grade students (class IV-B) at SD Negeri 004 Sungai Kunjang. Finally, the Evaluation stage encompassed analyzing the results of the trials and incorporating feedback from students, teachers, and expert validators to refine the media. The objective of this research was to develop Malaya card-based instructional media that are both valid and effective in improving students' understanding of natural features and their practical applications.

2.2 Data Collection Technique

Data collection methods employed in this study included interviews, questionnaires, and documentation. Interviews were conducted with teachers to gather detailed information about instructional challenges and needs in class IV-B. Questionnaires were distributed to expert validators, students, and teachers to evaluate the validity, practicality, and attractiveness of the Malaya card instructional media. The questionnaire responses were

analyzed using a Likert scale with the following scoring criteria: very good (5), good (4), sufficient (3), poor (2), and very poor (1). Documentation methods included collecting records of the media development process, implementation procedures, trial results, and student responses to the instructional media. These records served as supplementary data to support the findings.

2.3 Data Analysis Technique

Data were analyzed using both quantitative and qualitative methods. Quantitative data derived from questionnaire responses were analyzed using percentage calculations based on the following formula (Arikunto, 2010).

$$P = \frac{\sum R}{N} \times 100\%$$

Explanation of Variables:

P : Percentage score.

ΣR : Total score obtained.

N: Maximum possible score.

The percentage scores were then classified according to the feasibility criteria:

Tabel 1. Media Feasibility Criteria by Experts

Percentage (%)	Category
81 – 100	Very Feasible
61 – 80	Feasible
41 – 60	Sufficiently Feasible
21 – 40	Less Feasible
0 – 20	Very Unfeasible

These categories were consistently applied to evaluations conducted by expert validators, students, and teachers. Qualitative data from interviews and documentation were analyzed to identify the strengths and weaknesses of the instructional media. This analysis provided insights for refining the Malaya card-based instructional media prior to full-scale implementation.

3. RESULT AND DISCUSSION

3.1 Result

This study developed the Malaya Cards learning media to assist students in understanding the topic of Natural Features and Their Utilization. The media were designed using the ADDIE model, which encompasses the stages of analysis, design, and development, and employed a Research and Development (R&D) approach. During the analysis stage, interviews with the class IV-B teacher revealed that students faced difficulties comprehending the material due to the abstract nature of the information, such as distinguishing types of natural features (straits, bays, highlands, and lowlands). Findings also indicated that the learning media previously used were limited to books and whiteboards, with no implementation of game-based media, which contributed to low student interest and understanding.

Further analysis demonstrated that class IV-B students have diverse learning styles, with a predominant preference for visual learning. This provided a strong rationale for developing game-based media that incorporate visual, auditory, and kinesthetic elements. The Malaya Cards learning media were designed to integrate educational content through card games, adapting the concept of Uno cards with modifications for learning purposes, such as the addition of information cards, question cards, and answer key cards.

The design stage involved developing the media concept, including modified game rules to encourage active student participation. The media were designed using Canva, focusing on visually engaging elements aligned with the Merdeka curriculum. The production phase used high-quality materials, including 260 gsm art paper for the cards and 190 gsm A4 art paper for the game instruction brochures. The development stage ensured that the media were appropriate for primary school students, particularly those in the concrete operational stage (ages 9–10), who benefit from visual and concrete learning approaches.

Validation results from experts indicated that the Malaya Cards met the criteria of being highly feasible for use in learning. Evaluations by language experts yielded an average score of 96.66%, content experts 96.00%, and media experts 93.33%. The media were assessed as clear, readable, and well-designed to support student learning. With strong validation outcomes, the Malaya Cards learning media are ready for implementation to facilitate interactive, effective, and student-centered learning.

Table 2. Evaluation by Language Experts

Aspect	Score Obtained	Maximum Score	%
Clarity	10	10	100%
Readability	10	10	100%
Accuracy	9	10	90%
Average Percentage		96.66%	
Category		Highly Feasible	

Table 3. Evaluation by Content Experts

Aspect	Score Obtained	Maximum Score	%
Content	28	30	93.33%
Learning Support	15	15	100%
Interaction	5	5	100%
Average Percentage		96,00%	
Category		Highly Feasible	

Table 4. Evaluation by Media Experts

Aspect	Score Obtained	Maximum Score	%
Text and Language Quality	23	25	92%
Design	19	20	95%
Graphics	5	5	100%
Color	9	10	90%

Aspect	Score Obtained	Maximum Score	%
Average Percentage		93,33%	
Category		Highly Feasible	

The Malaya Cards, which had been validated by expert validators and revised based on suggestions from content experts, was subsequently tested with students to assess its feasibility during the implementation stage. The media were trialed with students and one teacher, the homeroom teacher of class IV-B at SD Negeri 004 Sungai Kunjang. The trials were conducted in two stages: a small-scale trial and a large-scale trial.

The small-scale trial was conducted on Tuesday, May 21, 2024, with 10 students from class IV-B. Following this, the large-scale trial was carried out on Wednesday, May 22, 2024, involving 25 students from the same class. Students were first instructed to form groups, as group-based learning fosters active participation and creates a more enjoyable learning experience. This was evident in the students' enthusiasm and excitement while playing the Malaya Cards game.

The implementation of the Malaya Cards learning media was facilitated by the researcher and the homeroom teacher, who acted as an observer to monitor the process and evaluate how the students utilized the game-based learning media. After using the Malaya Cards in both small-scale and large-scale trials, students and the teacher completed response questionnaires to assess whether the media were feasible for use in the classroom. The evaluation stage aimed to gather feedback and measure the feasibility of the Malaya Cards learning media. This assessment was based on the questionnaires completed by students and the teacher, providing valuable insights to refine and improve the media further.

Table 5. Student Response Evaluation (Small-Scale Trial)

Aspect	Score Obtained	Maximum Score	%
Engagement	361	400	90,25%
Learning Support	259	300	86,33%
Media Usability	178	200	89%
Average Percentage		88,66%	
Category		Very Good	

Although the Malaya Cards learning media received a "very good" category rating, it faced time constraints during implementation, which limited the effectiveness of the trials. The extended duration required for playing the game hindered the optimal execution of the activity. To address this limitation, the rules of the game were revised by increasing the number of members in each group. Initially, each group consisted of 5–6 students, but this was adjusted to 6–7 students per group. The purpose of this revision was to reduce the time needed to complete the game.

The adjustment in group size proved to be efficient. During the small-scale trial, the game, along with the completion of the student response questionnaire, required approximately one hour. After revising the group size, the duration during the large-scale trial was reduced to 40 minutes, which included both gameplay and the completion of the questionnaire. These findings indicate that revising the group size in the game rules effectively optimized the time required for implementing the Malaya Cards learning media.

Table 6. Student Response Evaluation (Large-Scale Trial)

Aspect	Score Obtained	Maximum Score	%
Engagement	948	1000	94,8%
Learning Support	677	750	90,26%
Media Usability	453	500	90,6%
Average Percentage		92,35%	
Category		Very Good	

Tabel 7. Teacher Response Evaluation (Large-Scale Trial)

Aspect	Score Obtained	Maximum Score	%
Text and Language Quality	24	25	96%
Design	20	20	100%
Graphics	5	5	100%
Color	10	10	100%
Content Relevance	29	30	96,66%
Learning Support	9	10	90%
Interaction	4	5	80%
Average Percentage		96,19%	
Category		Very Good	

3.2 Discussion

The development and implementation of the Malaya Cards as an educational medium for primary school students align with the increasing demand for innovative and interactive learning tools in modern classrooms. This study aimed to address specific learning challenges in the subject of Natural Features and Their Utilization, emphasizing the use of game-based learning strategies to foster engagement, understanding, and retention. The findings highlight both the strengths and limitations of the Malaya Cards, supported by a rigorous validation process and empirical trials. The discussion elaborates on these aspects while linking them to relevant educational theories and recent studies.

The results demonstrate that the Malaya Cards effectively addresses challenges in teaching abstract topics, such as distinguishing natural features like straits, bays, and plateaus. Traditional teaching methods, which rely heavily on books and verbal explanations, were found to be insufficient for engaging students. This finding aligns with the conclusions of Mayer (2014), who emphasized the limitations of text-heavy instructional approaches for young learners.

Game-based learning, as implemented in the Malaya Cards, is consistent with constructivist theories, which propose that active engagement in learning activities fosters deeper understanding. The game format enabled students to interact dynamically with the material, allowing them to construct knowledge collaboratively. Design modifications, such as the inclusion of information and question cards, reflect principles of active learning, which are widely recognized for enhancing cognitive engagement (Borda et al., 2022; Lombardi et al., 2021; Susilana et al., 2022).

The expert validation process underscored the high feasibility of the Malaya Cards, highlighting its strong pedagogical alignment and media quality. Language experts rated

the media as highly feasible across key aspects such as clarity, readability, and accuracy. These attributes are critical for ensuring that instructional content effectively communicates with learners, a conclusion consistent with emphasized the importance of readability in educational resources (Alshehri et al., 2019; Harris et al., 2009).

Content experts similarly evaluated the media as highly feasible, emphasizing its alignment with curriculum standards and its ability to meet targeted learning objectives. These evaluations corroborate the work of Alkin & King (2020), who argue that instructional materials must align with clearly defined educational outcomes to optimize learning effectiveness. The alignment of the Malaya Cards with national curriculum standards ensures its relevance and adaptability in diverse instructional settings.

Media experts also rated the Malaya Cards as highly feasible, emphasizing its appealing design, graphical quality, and usability. Research by Moreno & Mayer (2007) supports this assessment, noting that educational media integrating high-quality visuals and interactive elements reduces cognitive load while enhancing learner engagement. The overall expert consensus affirms the robustness of the Malaya Cards as an instructional tool that meets high pedagogical and technical standards.

Student responses during the trials further validated the efficacy of the Malaya Cards. In both small-scale and large-scale trials, students consistently rated the media as very good in terms of engagement, usability, and learning support. This reflects the motivational impact of the gamified design, consistent with gamification principles outlined by Deterding et al. (2019). The inclusion of game elements such as collaborative play, immediate feedback, and visually engaging components captured students' interest, making the learning process both enjoyable and impactful.

The usability of the Malaya Cards, rated as very good, highlights its accessibility and intuitive design. Adjustments made during the iterative testing process, such as increasing group sizes to improve time efficiency, reflect a design thinking approach (Henriksen et al., 2017; Micheli, 2019). This methodology emphasizes continuous refinement based on user feedback to enhance functionality and usability. The ability to adapt the rules of the game without compromising its educational value demonstrates the flexibility of the Malaya Cards in addressing practical classroom challenges.

Moreover, the high levels of student engagement reported align with the ARCS Model of Motivation (Fang, 2023), which identifies attention, relevance, confidence, and satisfaction as critical components of motivation in learning. By integrating these components through interactive gameplay and relevant content, the Malaya Cards creates a positive and engaging learning environment that supports diverse learning styles.

Teacher evaluations rated the practicality and feasibility of the Malaya Cards as very good, with strong endorsements for its design, graphical elements, and alignment with curriculum objectives. Teachers particularly appreciated the visual appeal of the media, emphasizing its capacity to simplify complex concepts and address diverse learning needs. These findings align with Lohr's (2020) work, which highlights the importance of professional and visually compelling instructional materials in fostering effective teaching practices.

However, teacher feedback also identified areas for improvement, particularly in fostering interaction among students. While the game format facilitated collaborative learning, teachers suggested incorporating additional features such as role-based gameplay and peer feedback mechanisms to enhance social interaction Yang et al.

(2023) advocate for structured cooperative activities to maximize teamwork and communication skills, which could further enrich the learning experience provided by the Malaya Cards.

The feasibility of implementing the Malaya Cards across different classroom settings underscores its scalability. Its alignment with the Merdeka Curriculum supports its integration into the broader educational framework, reflecting Indonesia's emphasis on competency-based and student-centered learning. This scalability is a significant advantage, enabling the Malaya Cards to be adapted for use in other subjects and educational levels, contributing to its long-term utility.

4. CONCLUSION

The development and implementation of the Malaya Cards highlight the transformative potential of game-based learning in overcoming the challenges of teaching abstract and complex concepts in primary education. Through the integration of engaging, interactive, and visually appealing elements, the Malaya Cards enhances student engagement and comprehension while aligning effectively with curriculum objectives. Its effectiveness as a pedagogical tool is evident from the iterative design process, which incorporated feedback from experts, students, and teachers, underscoring the importance of adaptability and collaboration in developing instructional media that cater to diverse learners.

This research contributes significantly to the field of education by presenting a practical model for gamified learning. It emphasizes the value of integrating visual, auditory, and kinesthetic elements to address diverse learning styles, aligning with global educational trends that prioritize student-centered approaches and competency-based curricula. However, the findings also identify areas requiring improvement, particularly in promoting deeper interaction and collaboration among students, which should inform future iterations of similar instructional tools.

Future research should investigate the long-term impact of game-based learning tools, such as the Malaya Cards, on academic achievement, critical thinking, and cognitive retention. Expanding the scope to include digital integration could enhance accessibility and interactivity, particularly in remote or hybrid learning environments. Additionally, customizing content for diverse cultural and linguistic contexts could broaden its applicability and inclusivity. Addressing these areas would enable subsequent studies to build upon the foundational insights provided by this research, advancing the development and application of innovative pedagogical strategies in modern.

REFERENCES

- Alkin, M. C., & King, J. A. (2016). The historical development of evaluation use. *American Journal of Evaluation*, 37(4), 568-579. <https://doi.org/10.1177/10982140166651>
- Alshehri, A., Rutter, M., & Smith, S. (2019). Assessing the relative importance of an e-learning system's usability design characteristics based on students' preferences. *European Journal of Educational Research*, 8(3), 839-855. <https://doi.org/10.12973/eu-er.8.3.839>
- Arikunto, S. (2010). *Prosedur penelitian: Suatu pendekatan praktik* (Edisi revisi 2010). Rineka Cipta.
- Arsyad, A. (2014). *Media pembelajaran*. Rajagrafindo Persada.

- Borda, E., Schumacher, E., Hanley, D., Geary, E., Warren, S., Ipsen, C., & Stredicke, L. (2020). Initial implementation of active learning strategies in large, lecture STEM courses: Lessons learned from a multi-institutional, interdisciplinary STEM faculty development program. *International Journal of STEM Education*, 7(1), 1-18. <https://doi.org/10.1186/s40594-020-0203-2>
- Caena, F., & Redecker, C. (2019). Aligning teacher competence frameworks to 21st century challenges: The case for the European Digital Competence Framework for Educators (Digcompedu). *European journal of education*, 54(3), 356-369. <https://doi.org/10.1111/ejed.12345>
- Deterding, S. (2019). Gamification in management: Between choice architecture and humanistic design. *Journal of Management Inquiry*, 28(2), 131-136. <https://doi.org/10.1177/10564926187909>
- Fang, X., Ng, D. T. K., Leung, J. K. L., & Xu, H. (2023). The applications of the ARCS model in instructional design, theoretical framework, and measurement tool: a systematic review of empirical studies. *Interactive Learning Environments*, 1-28. <https://doi.org/10.1080/10494820.2023.2240867>
- Harlin, M. D., & Arini, N. W. (2023). Pengembangan media kartu UNO pada materi satuan berat di Kelas IV Sekolah Dasar. *Jurnal Cendekia: Jurnal Pendidikan Matematika*, 7(3), 3027-3038. <https://doi.org/10.31004/cendekia.v7i3.2731>
- Harris, J., Mishra, P., & Koehler, M. (2009). Teachers' technological pedagogical content knowledge and learning activity types: Curriculum-based technology integration reframed. *Journal of research on technology in education*, 41(4), 393-416. <https://doi.org/10.1080/15391523.2009.10782536>
- Haryati, L. F., Anar, A. P., & Ghuftron, A. (2022). Menjawab tantangan era society 5.0 melalui inovasi Kurikulum Merdeka di sekolah dasar. *Jurnal Pendidikan dan Konseling (JPDK)*, 4(5), 5197-5202. <https://doi.org/10.31004/jpdk.v4i5.7441>
- Henriksen, D., Richardson, C., & Mehta, R. (2017). Design thinking: A creative approach to educational problems of practice. *Thinking skills and Creativity*, 26, 140-153. <https://doi.org/10.1016/j.tsc.2017.10.001>
- Kamalia, L., & Subrata, H. (2022). Pengembangan media pembelajaran kartu UNO untuk meningkatkan keterampilan menulis sandhangan swara Siswa Kelas IV Sekolah Dasar. *Jurnal Penelitian Pendidikan Guru Sekolah Dasar*, 10(5), 1127–1136.
- Lohr, J. K. (2020). *Professional Learning Communities and Their Impact on Student Achievement in a Rural Pennsylvania Middle School* (Doctoral dissertation, Indiana University of Pennsylvania).
- Lombardi, D., Shipley, T. F., & Astronomy Team, Biology Team, Chemistry Team, Engineering Team, Geography Team, Geoscience Team, and Physics Team. (2021). The curious construct of active learning. *Psychological Science in the Public Interest*, 22(1), 8-43. <https://doi.org/10.1177/1529100620973974>

- Maskur. (2023). Dampak pergantian kurikulum pendidikan terhadap peserta didik sekolah dasar. *Jurnal Keguruan dan Ilmu Pendidikan (JKIP)*, 1(3), 190–203. <https://doi.org/10.61116/jkip.v1i3.172>
- Mayer, R. E. (2014). Incorporating motivation into multimedia learning. *Learning and instruction*, 29, 171-173. <https://doi.org/10.1016/j.learninstruc.2013.04.003>
- Micheli, P., Wilner, S. J., Bhatti, S. H., Mura, M., & Beverland, M. B. (2019). Doing design thinking: Conceptual review, synthesis, and research agenda. *Journal of Product innovation management*, 36(2), 124-148. <https://doi.org/10.1111/jpim.12466>
- Molenda, M. (2015). In search of the elusive ADDIE model. *Performance Improvement*, 54(2), 40–42. <https://doi.org/10.1002/pfi.2146>
- Moreno, R., & Mayer, R. (2007). Interactive multimodal learning environments: Special issue on interactive learning environments: Contemporary issues and trends. *Educational psychology review*, 19, 309-326. <https://doi.org/10.1007/s10648-007-9047-2>
- Morrison, G. R., Ross, S. J., Morrison, J. R., & Kalman, H. K. (2019). *Designing effective instruction*. John Wiley & Sons.
- Pratama, M. F., Yoenanto, N. H., & Nawangsari, N. A. F. (2023). Implementation of the Merdeka Belajar - Kampus Merdeka Program in the perspectives of students: an integrative literature review. *Pedagogia Jurnal Ilmu Pendidikan*, 21(3), 207-218. <https://doi.org/10.17509/pdgia.v21i3.57163>
- Ramadhani, W., Laurens, T., Molle, J. S., & Sapulette, F. (2021). Pelatihan pengembangan media pembelajaran berorientasi Merdeka Belajar. *PAKEM : Jurnal Pengabdian Kepada Masyarakat*, 1(1), 1–8. <https://doi.org/10.30598/pakem.1.1.1-8>
- Ramadhan, S., Emilzoli, M., & Rullyana, G. (2023). Desain kurikulum pelatihan digitalisasi pembelajaran kolaboratif bagi widyaiswara. *EDUTECH*, 22(3), 255-268. <https://doi.org/10.17509/e.v22i3.63147>
- Srinivasa, K. G., Kurni, M., & Saritha, K. (2022). *Learning, teaching, and assessment methods for contemporary learners* (pp. 1-15). Singapore: Springer. <https://doi.org/10.1007/978-981-19-6734-4>
- Sulindawati, N. L. G. E. (2018). Analisis unsur-unsur pendidikan masa lalu sebagai dasar penentuan arah kebijakan pembelajaran pada era globalisasi. *Jurnal Ilmiah Ilmu Sosial*, 4(1), 51–60. <https://doi.org/10.23887/jiis.v4i1.14363>
- Susilana, R., Dewi, L., Rullyana, G., Hadiapurwa, A., & Khaerunnisa, N. (2022). Can microlearning strategy assist students' online learning. *Jurnal Cakrawala Pendidikan*, 41(2), 437-451. <https://doi.org/10.21831/cp.v41i2.43387>
- Susilana, R., Rusmana, N., Rullyana, G., Nur, L., & Ardiansah, A. (2022). Hybrid learning based training for elementary school teachers in improving pedagogical competence. *Pedagogia Jurnal Ilmu Pendidikan*, 20(3), 233-242. <https://doi.org/10.17509/pdgia.v20i3.60430>
- Thornhill-Miller, B., Camarda, A., Mercier, M., Burkhardt, J. M., Morisseau, T., Bourgeois-Bougrine, S., ... & Lubart, T. (2023). Creativity, critical thinking, communication, and

- collaboration: assessment, certification, and promotion of 21st century skills for the future of work and education. *Journal of Intelligence*, 11(3), 1-32. <https://doi.org/10.3390/jintelligence11030054>
- Walton, V., Hogden, A., Long, J. C., Johnson, J., & Greenfield, D. (2020). Exploring interdisciplinary teamwork to support effective ward rounds. *International Journal of Health Care Quality Assurance*, 33(4/5), 373-387. <https://doi.org/10.1108/IJHCQA-10-2019-0178>
- Yang, G., Zheng, D., Chen, J. H., Zeng, Q. F., Tu, Y. F., & Zheng, X. L. (2023). The effects of a role-play-based micro-game strategy on students' computational thinking, learning engagement and learning motivation. *Interactive Learning Environments*, 1-21. <https://doi.org/10.1108/IJHCQA-10-2019-0178>
- Zulaiha, S., & Meisin. (2020). Problematika guru dalam menerapkan kurikulum Merdeka Belajar. *Jurnal Pendidikan dan Pembelajaran Dasar*, 9(2), 163–177. <http://dx.doi.org/10.24042/terampil.v9i2.13974>