Jurnal Fundadikdas (Fundamental Pendidikan Dasar)
Vol. 8, No. 3, November 2025, pp. 162-172
ISSN 2614-1620
http://journal2.uad.ac.id/index.php/fundadikdas

Transformation of Pancasila education learning through a joyful learning approach based on educational monopoly games in elementary schools

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ARTICLE INFO

Received 2025-08-26
Revised 2025-10-09
Accepted 2025-11-18

Keywords
Culturally responsive teaching;
Pancasila education;
Educational monopoly game;
Joyful learning;
School well-being

ABSTRACT

This study is a classroom action research that examines the use of an educational monopoly game as a learning medium in Pancasila Education for elementary school students. The research employed a mixed-methods approach, combining qualitative descriptive analysis with quantitative data. The participants were 21 fifth-grade students of Muhammadiyah Nitikan Elementary School, Yogyakarta. Data were collected through observation, interviews, and evaluation tests, and analyzed using the Wilcoxon Signed Rank Test with IBM SPSS Statistics to measure differences in students' learning outcomes and activeness between two learning cycles. The results showed significant improvements in both cognitive achievement and student participation, with a significance value of $p < 0.001$. Qualitative findings indicated that the joyful learning approach supported by the monopoly game created an engaging and interactive learning atmosphere, encouraged active participation, and helped students understand and reflect on Pancasila values through play. These findings suggest that the use of monopoly-based learning media is effective in improving learning outcomes and student engagement in Pancasila Education in accordance with the Merdeka Curriculum.

1. Introduction

Pancasila education in elementary schools plays an important role in shaping the character, national values, and moral identity of students from an early age. However, the reality in the field shows that learning Pancasila Education is often still centered on memorizing conventional values and lectures that do not involve the affective and social aspects of students. As a result, learning tends to be purely cognitive and has not touched the dimension of meaningful experiences that can foster a sense of belonging to the values of Pancasila. In this context, a more participatory, contextual, and fun learning transformation is needed so that the nation's noble values can be fully internalized through a lively and humane learning process. Pancasila education in Indonesia still faces various challenges in its implementation, especially in forming democratic, critical, and participatory citizens [1]. The main problems raised in this study are the low involvement of students and the lack of a pleasant learning atmosphere in learning Pancasila Education in elementary schools. Pancasila education is one of the monotonous subjects in the classroom. The delivery of material that is just that makes learning boring and

learning less meaningful. This has an impact on the weak internalization of Pancasila values, and the achievement of school well-being is not optimal [2], [3].

Although previous studies have demonstrated that joyful learning and educational game-based learning positively influence student motivation, engagement, character development, and school well-being [7], [8], [9], [10], [11], most of these studies focus on general learning contexts or character education without explicitly examining their application in Pancasila Education at the elementary school level. Research by Fatima *et al.* [12] and Ariesta and Anggraeni [13] confirms that board-based educational games can foster ethical values, collaboration, and national character; however, these studies emphasize developmental outcomes and effectiveness testing rather than reflective classroom-based implementation. Moreover, existing literature predominantly applies experimental or developmental research designs [6], [10], while limited studies employ classroom action research to examine the iterative improvement of joyful learning practices through learning cycles. Studies integrating joyful learning with Culturally Responsive Teaching and Problem-Based Learning highlight the importance of contextual, exploratory, and collaborative learning experiences [11], [14], yet empirical evidence demonstrating how these approaches function together in authentic Pancasila learning settings remains limited.

In addition, while joyful learning has been linked to emotional engagement and school well-being [9], [11], [15], few studies simultaneously analyze cognitive learning outcomes, student activeness, and social-emotional involvement as interconnected indicators within a single instructional intervention. Therefore, there is a need for research that examines the use of Educational Monopoly as a joyful learning medium in Pancasila Education through classroom action research, providing empirical evidence on its effectiveness in improving learning outcomes, student participation, and value internalization in accordance with the Merdeka Curriculum. Based on this study, a clear gap is identified between the ideals of value-oriented Pancasila Education and classroom practices that remain predominantly cognitive and instructional. This research addresses that gap by providing empirical evidence on the implementation of a joyful learning approach using the Educational Monopoly game in elementary Pancasila Education. The study contributes by demonstrating that this approach improves not only students' cognitive understanding of Pancasila values but also their social-emotional engagement, as reflected in increased student activeness, comfort, and participation during learning activities. Furthermore, the findings show that learning through educational games supports a positive learning atmosphere and strengthens students' school well-being. Therefore, this study contributes a practical and classroom-based learning strategy that integrates value internalization, student engagement, and well-being within Pancasila Education at the elementary school level.

2. Method

2.1. Type and Design

This study uses a mixed-methods approach with a qualitative descriptive design. This approach was chosen to obtain a comprehensive overview of the process and results of Pancasila Education learning transformation through the application of joyful learning based on the Educational Monopoly game. A qualitative approach is used to examine in depth the learning experience of students and teachers, while quantitative data is used to support findings through measuring increased participation and understanding of Pancasila values. This design is relevant because it is able to combine the power of narrative and numerical data in analyzing changes in student learning behavior as a whole.

2.2. Data and Data Sources

1) Research Subject and Location

The subjects of the study included 21 grade V students of SD Muhammadiyah Nitikan Yogyakarta and one Pancasila Education teacher as key informants. The selection of subjects is carried out purposively based on active involvement in the implementation of Pancasila Education learning. SD Muhammadiyah Nitikan was chosen as the location for the research because it is a school that has committed to implementing an active and characterful learning approach as part of the implementation of the Independent Curriculum. This condition makes the school contextual to test the effectiveness of educational game-based learning strategies.

2) Research Procedure

The research process is carried out through three main stages: (1) planning, (2) learning implementation, and (3) evaluation of results. In the planning stage, researchers and collaborative teachers designed a joyful learning scenario for Pancasila Education based on joyful learning with the media of the Educational Monopoly game. Each aspect of the game is developed to be in harmony with the values of Pancasila and the daily context of students. The implementation stage was carried out during two learning cycles with play activities, discussions, and reflection on values. The teacher acts as a facilitator who directs social interaction and problem-solving during the game. The evaluation stage is carried out through observation of student behavior, in-depth interviews with teachers and students, and document analysis of student reflection results. In addition, measures of active participation and cognitive comprehension were carried out before and after the activity to see the comparison of changes using the help of SPSS (Statistical Package for the Social Sciences).

2.3. Data Collection Technique

Data was collected through three main techniques, namely: first, participatory observation, to record student interactions during learning activities, including emotional expression, social engagement, and collaboration. Second, semi-structured interviews were conducted with Pancasila Education teachers and several students to gain views on the effectiveness of the learning model. Third, documentation studies, in the form of reflection notes, student activity sheets, and photo/video documentation during the learning process. These techniques were chosen to provide a comprehensive picture of behavior change and learning achievement. Triangulation was carried out by comparing the results of observations, interviews, and documentation; member checking was carried out by confirming the researcher's interpretation with teachers and students. Meanwhile, peer debriefing is carried out through discussions with peers to ensure the objectivity of interpretation. These steps are carried out to ensure the validity and credibility of the research results.

2.4. Data Analysis

The validity of the data is maintained through triangulation of sources and methods, member checking, and peer debriefing. Data analysis was carried out using the Miles and Huberman interactive model, which included four main steps: data collection, data reduction, data presentation, and conclusion drawn. Qualitative data from observations and interviews were analyzed thematically to find patterns of meaning related to increasing involvement and internalizing Pancasila values. Meanwhile, for quantitative data analysis, the researcher used the Wilcoxon Signed Rank Test to test the research hypothesis. The analysis process is carried out simultaneously during the learning activities so that the findings reflect real dynamics in the field. The following is a visualization of the Miles and Huberman interactive model data analysis techniques (See Fig. 1).

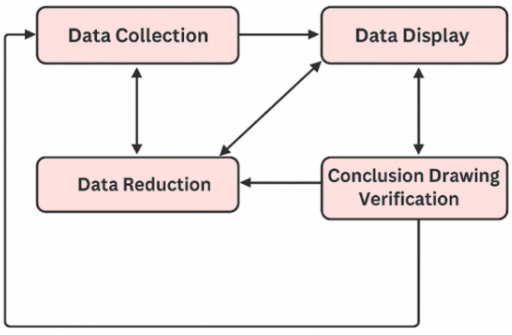

Fig. 1. Data Analysis Techniques [16]

3. Results and Discussion

The implementation of Pancasila Education learning through a *joyful learning* approach based on the Educational Monopoly game showed significant results in increasing social-emotional engagement and cognitive understanding of students. This learning is carried out in

two cycles of meetings that emphasize the integration of play activities, value exploration, and moral reflection.

3.1. Quantitative Findings

To determine the effectiveness of the learning that has been implemented, an analysis was carried out on the results of student learning evaluation in Cycle 1 and Cycle 2. This analysis aims to see the extent to which there is an increase in learning outcomes after learning improvements are made in the next cycle. The data used were in the form of student evaluation scores in both cycles, then analyzed using the Wilcoxon Signed Rank Test through IBM SPSS Statistics. This test was chosen because the data came from the same measurement at two different times and on an ordinal scale, so it could show whether or not there was a significant difference between the results of the evaluation in the two cycles. Based on the results of the Wilcoxon Signed Rank Test in Fig. 2, the results of the student learning evaluation in Cycle 1 and Cycle 2 showed that all students (21 people) experienced an increase in evaluation scores. The results of the analysis showed the number of negative ranks as many as 0 students, positive ranks as many as 21 students, and ties as many as 0 students. The statistical test value obtained was Z = -4.054 with Asymp. Sig. (2-tailed) = <0.001. Because the significance value is less than 0.05, it can be concluded that there is a significant difference between the results of the learning evaluation in Cycle 1 and Cycle 2. Thus, the learning applied in Cycle 2 has a positive impact on improving student learning outcomes, see Table 1.

Table 1. SPSS Wilcoxon Signed Rank Test Results from Student Evaluation Results

Ranks

		N	*Mean Rank*	*Sum of Ranks*
Cycle 2 - cycle 1	Negative Ranks	0[a]	.00	.00
	Positive Ranks	21[b]	11.00	231.00
	Ties	0[c]		
	Total	21		

[a] Cycle 2 < Cycle 1
[b] Cycle 2 > Cycle 1
[c] Cycle 2 = Cycle 1

Test Statistics [a]

	Active Learning Second – Active Learning First
Z	-4.095[b]
Asymp. Sig. (2-tailed)	<.001

[a] Wilcoxon Signed Ranks Test
[b] Based on negayive ranks

To obtain a more comprehensive picture of learning effectiveness, the analysis is not only focused on the results of student learning evaluations, but also includes aspects of learning activity during the learning process. Learning outcome evaluation is used to see the extent to which students understand the material, while learning activity reflects student participation and involvement in learning activities. Both aspects were analyzed using the Wilcoxon Signed Rank Test through IBM SPSS Statistics, as the data obtained came from paired measurements in two learning cycles. Based on the results of the Wilcoxon Signed Rank Test in Table 2, the level of student learning activity in active learning between the first and second cycles showed that all students (21 people) experienced an increase in activeness. This can be seen from the results of the analysis, which showed the number of negative ranks as many as 0 students, positive ranks as many as 21 students, and ties as many as 0 students. The statistical test value obtained was Z = -4.095 with Asymp. Sig. (2-tailed) = <0.001. Because the significance value is less than 0.05, it can be concluded that there is a significant difference between student learning activity in the first and second cycles. These results show that the implementation of active learning in the second cycle has a positive effect on increasing student learning activity compared to the previous cycle.

Table 2. SPSS Wilcoxon Signed Rank Test Results from Student Activeness Results

Ranks				
		N	***Mean Rank***	***Sum of Ranks***
Active Learning Second – Active Learning First	Negative Ranks	0 [a]	.00	.00
	Positive Ranks	21[b]	11.00	231.00
	Ties	0 [c]		
	Total	21		

[a] Active Learning Second < Active Learning First
[b] Active Learning Second > Active Learning First
[c] Active Learning Second = Active Learning First

Test Statistics [a]	
	Active Learning Second – Active Learning First
Z	-4.095[b]
Asymp. Sig. (2-tailed)	<.001

[a] Wilcoxon Signed Ranks Test
[b] Based on negayive ranks.

3.2. Qualitative Findings

Qualitatively, data from observations, interviews, and reflections show that the learning process with Educational Monopoly media creates a warm, laughing, and supportive learning atmosphere. Students seem to be more open, help each other, and show positive behavior that reflects the values of Pancasila. The teacher revealed that, "Students who were previously passive began to dare to speak their minds and show enthusiasm in group discussions. One student stated that "learning Pancasila feels like playing with friends, not like an exam." This statement shows the internalization of values through positive emotional experiences. Fig. 2 shows an interactive learning process that uses a monopoly board media as a means of educational games. It is seen that students sit in a circle and actively participate in learning activities. The learning atmosphere seemed dynamic, shown by the expression of enthusiasm, involvement in taking turns, and intense interaction between students. The teacher acts as a facilitator who provides direction and guidance during the game. The use of this game media has succeeded in creating a fun, collaborative, and participatory learning environment. These findings show that the integration of educational games can increase student activity, encourage two-way communication, and strengthen understanding of concepts through contextual and meaningful learning experiences.

Fig. 2. Documentation of Learning Activities Using Monopoly Board

The results of the observation show changes in three main aspects: first, Social involvement: students actively interact, dialogue, and cooperate when deciding on the steps of the game, which shows the practice of the values of "deliberation" and "mutual cooperation". Second, reflection of values, students begin to associate actions in games with the values of Pancasila, for example, when "sharing assets" or "paying taxes" on the game board, which they interpret as social justice. Third, independence and responsibility: students show improvement in making their own decisions without waiting for the teacher's instructions. These phenomena reinforce the quantitative results that game-based learning not only affects the cognitive domain, but also enriches the affective and social domains of learners.

4. Discussions

The above research findings support the view of Cronqvist [7] that a sense of pleasure and happiness in the learning process is an important factor in creating a meaningful learning experience. The *joyful learning approach* implemented through the Educational Monopoly game has succeeded in fostering curiosity, collaboration, and student learning enthusiasm, aspects that have been difficult to emerge in the learning of Pancasila Education, which is verbalistic. A similar approach has also been shown to be effective in research, Hall *et al*, [17], which shows that non-digital games increase students' cognitive and social engagement in math learning. Moreover, Othman and Ching [6] emphasize that *board games* are able to foster healthy learning motivation and social interaction in the classroom, which is in line with the characteristics of *joyful learning* based on educational games.

The integration between *Culturally Responsive Teaching* (CRT) and *Problem-Based Learning* (PBL) in this learning model reinforces the relevance of the learning context to the real lives of students. Parker *et al,* [18] said that *learning through play* allows students to learn collaboratively and reflectively, while Tong *et al* [19] proved that the integration *of PBL* with digital games is able to improve high-level thinking skills in elementary schools. In this study, each element of the game becomes a vehicle for character formation. When students help a friend who is "fined" in a game, they learn about empathy and social responsibility, the core values in Pancasila Education. Similar results were also found by Fatima *et al*, [20], who developed *ethical monopoly games* for bioethics learning and demonstrated significant improvements in students' moral awareness and reflective abilities.

Affectively, the improvement of *school well-being* can be seen from the expression of students' joy and sense of security during the activity. These results are consistent with the findings of Holzer *et al*, [21], which state that learning well-being develops through supportive teacher-student interactions and teaching strategies that facilitate positive emotions. Research by Markus *et al* [22] also shows that healthy social relationships play an important role in improving *school well-being* in primary schools. Moreover, Kiuru *at.al* [23] emphasize the relationship between social relations, school welfare, and academic achievement, especially when students face an educational transition.

These findings reinforce the evidence that *joyful learning* not only builds academic competence, but also children's psychological and social balance. Meanwhile, the reflective aspect of play activities shows the internalization of Pancasila values through contextual social experiences. De Schaepmeester [24] highlights that the effectiveness of civic education depends on consistency between teachers' value beliefs and classroom learning practices. In the context of this research, teachers play the role of facilitators who guide students to find the meaning of Pancasila values through dialogue and reflection on the experience of playing. Slijkhuis *et al* [25] added that the school's ability to develop civic competence is highly dependent on social interaction and collective experience in the classroom. Similarly, Navarro Medina *et al*, [26] affirm the importance of a critical citizenship education model that integrates reflective experiences with democratic and humanitarian values.

The combination of *joyful learning*, *game-based learning*, and the principles *of Culturally Responsive Teaching* has proven to be effective in transforming Pancasila Education learning to be more lively, participatory, and meaningful. These results are also in line with the findings of Mee *et al*. [27], which show that *gamified learning* significantly increases students' positive attitudes and collaboration in language learning. From a social perspective, Mensonider *et al* [28] explained that play activities can strengthen children's roles as *playful citizens* who learn to negotiate values and decisions together in daily life as a real reflection of Pancasila values. Thus, *the joyful learning* approach based on educational games not only increases students' cognitive understanding of the values of Pancasila but also enriches the social-emotional dimension that supports *school well-being* in elementary schools. The following is a summary of research findings and supporting references (See Table 3).

Table 3. Synthesis of Research Findings and Supporting References

Research Findings	Qualitative Description and Implications	Supporting References
Joyful learning increases student engagement and motivation.	Students show enthusiasm, laughter, and active collaboration during learning with Educational Monopoly. This approach makes Pancasila values easy to understand because they are presented through a pleasant experience.	[8], [29], [30], [31]
The integration of CRT and PBL strengthens the context of Pancasila learning.	Game-based learning connects students' experiences with the social realities around them, so students learn to think critically and solve real social problems.	[14], [19], [32], [33], [34]
Joyful learning contributes to improved *school well-being*.	A positive learning environment and warm social interaction increase students' sense of security, confidence, and happiness during learning.	[3], [35], [36], [37], [38]
Play activities foster reflection on Pancasila values.	Through games, students experience situations that demand justice, responsibility, and cooperation. This strengthens the internalization of moral values and social ethics.	[39], [40], [41], [42], [43]
Educational games enrich students' social and collaborative experiences.	The activity of playing together builds empathy, negotiation, and student leadership reflects the values of mutual cooperation and deliberation.	[44], [45], [46], [47]
Joyful learning supports Pancasila's transformative learning model in the era *of the Independent Curriculum*.	This strategy is relevant to 21st-century education that emphasizes a balance between academic competence, character, and student well-being.	[48], [49], [50], [51]

The synthesis table of research findings with the above supporting references can be visualized as follows: (See Fig. 3). Fig. 3 shows the synthesis of research findings on Pancasila learning through the joyful learning and educational games approach, especially educational monopolies. This visualization shows six key findings that are interrelated. First, joyful learning has been proven to increase student engagement and learning motivation. These findings are in line with the results of field observations, where students showed expressions of enthusiasm, laughter, and active collaboration when interacting in a monopoly game [8], [29], [30], [31]. Second, integrasi Culturally Responsive Teaching (CRT) and Problem-Based Learning (PBL) strengthens the learning context of Pancasila by connecting the experience of play with social reality. This allows students to develop critical thinking and social problem-solving skills [14], [19], [32], [33], [34]. Third, joyful Learning contributes to improved school well-being, characterized by warm social interaction and a safe and enjoyable learning environment [3], [35], [36], [37], [38]. Fourth, play activities facilitate reflection on Pancasila values, such as justice, responsibility, and cooperation. The process of internalizing these values occurs naturally through game situations that demand decision-making and negotiation [41], [42], [43], [52], [53]. Fifth, educational games enrich students' social and collaborative experiences, encourage empathy, leadership, and the value of mutual cooperation [44], [45], [46], [47]. Finally, joyful learning supports the transformative Pancasila learning model in the context of the Independent Curriculum, which balances academic competence, character, and student welfare [48], [49], [50], [51]. These findings show consistency between visual representations and scientific literature, while strengthening the argument that educational game-based learning is an effective pedagogic strategy to form the Pancasila Student Profile.

Fig. 3. Synthesis of Research Findings

5. Conclusion

This classroom action research shows that a joyful learning approach using the Educational Monopoly game effectively enhances Pancasila Education learning in elementary schools. The implementation across two learning cycles resulted in significant improvements in students' cognitive outcomes and learning activeness, as confirmed by the Wilcoxon Signed Rank Test ($p < 0.001$). Qualitative findings indicate that play-based activities fostered collaborative, empathetic, and reflective behaviors, enabling students to understand and practice Pancasila values through meaningful social interaction. The integration of Culturally Responsive Teaching (CRT) and Problem-Based Learning (PBL) supported a student-centered learning environment that addressed cognitive, social, and emotional dimensions simultaneously. In addition, the joyful learning atmosphere contributed positively to students' school well-being, reflected in increased enjoyment, confidence, and a sense of safety during learning activities. Although this study was limited by a small sample size, a short intervention period, and subjective social-emotional measurements, the findings offer practical implications for teachers and schools. Game-based joyful learning can be considered an effective alternative strategy for Pancasila Education aligned with the Merdeka Curriculum, and future studies are encouraged to involve larger samples, longer durations, and more objective measurement instruments.

Acknowledgment

The authors acknowledge the academic support and institutional facilities provided by Universitas Ahmad Dahlan, Yogyakarta, Indonesia, and Universiti Teknologi MARA, Selangor, Malaysia, which contributed to the completion of this study.

Declarations

Author contribution	:	All authors contributed equally to the main contributor to this paper. All authors read and approved the final paper.
Funding statement	:	None of the authors has received any funding or grants from any institution or funding body for the research.
Conflict of interest	:	The authors declare no conflict of interest.
Additional information	:	No additional information is available for this paper.

References

[1] Z. F. Luthfi, H. Muchtar, P. Bestari, A. Waldi, and W. H. Prasetyo, "Civic education: Fostering global citizenship among Indonesian students," in *CONVASH 2019: Proceedings of the 1st Conference of Visual Art, Design, and Social Humanities*, K. Saddhono, D. T. Ardianto, K. Sudasna, H. J. B. Saidon, K. Chinda, and A. T. bin Azizan, Eds., Surakarta: European Alliance for Innovation, 2020, pp. 243–249. doi: 10.4108/eai.2-11-2019.2294888.

[2] R. Rachmadtullah, H. Syofyan, and Rasmitadila, "The role of civic education teachers in implementing multicultural education in elementary school students," *Universal Journal of Educational Research*, vol. 8, no. 2, pp. 540–546, 2020, doi: 10.13189/ujer.2020.080225.

[3] L. Losada-Puente, P. Mendiri, and N. Rebollo-Quíntela, "From general well-being to school well-being: a systematic review," *RELIEVE - Revista Electronica de Investigacion y Evaluacion Educativa*, vol. 28, no. 1, 2022, doi: 10.30827/relieve.v28i1.23956.

[4] M. Avcı, "Analyzing the effects of the flipped classroom method on counselling students' competencies and effective counselling characteristics in ethics class," *Br J Guid Counc*, vol. 52, no. 1, pp. 81–93, 2024, doi: 10.1080/03069885.2023.2170980.

[5] R. Novalinda, M. Giatman, Syahril, R. E. Wulansari, and C. T. Tin, "Constructivist Computer-Based Instruction (CBI) Approach: A CBI Flipped Learning Integrated Problem Based and Case Method (PBL-cflip) in Clinical Refraction Course," *International journal of online and biomedical engineering*, vol. 19, no. 5, pp. 42–56, 2023, doi: 10.3991/ijoe.v19i05.37707.

[6] M. K. Othman and S. K. Ching, "Gamifying science education: How board games enhances engagement, motivate and develop social interaction, and learning," *Educ Inf Technol (Dordr)*, vol. 29, no. 18, pp. 24525–24561, Dec. 2024, doi: 10.1007/s10639-024-12818-5.

[7] M. Cronqvist, "Enhanced student joy in learning environment; understanding and influencing the process," *Eur J Educ*, vol. 59, no. 3, Sep. 2024, doi: 10.1111/ejed.12671.

[8] K. Lewandowska and D. Węziak-Białowolska, "The effects of arts-based learning on individual wellbeing and organizational change," *Edukacja Ekonomistów i Menedżerów*, vol. 67, no. 1, 2023, doi: 10.33119/eeim.2023.67.3.

[9] F. W. Ariesta and A. Anggraeni, "The development of MOPAN educational game to building the nationalism character for primary school student," in *AIP Conference Proceedings*, American Institute of Physics Inc., Jun. 2023. doi: 10.1063/5.0143057.

[10] E. Veerman, M. Karssen, M. Volman, and L. Gaikhorst, "The contribution of two funds of identity interventions to well-being related student outcomes in primary education," *Learn Cult Soc Interact*, vol. 38, Feb. 2023, doi: 10.1016/j.lcsi.2022.100680.

[11] A. Fatima, U. Mahboob, R. A. Khan, and S. Rafique, "Development and validation of an ethical monopoly board game to teach bioethics to undergraduate medical students," *BMC Med Educ*, vol. 25, no. 1, Dec. 2025, doi: 10.1186/s12909-025-07454-7.

[12] R. Parker, B. S. Thomsen, and A. Berry, "Learning Through Play at School – A Framework for Policy and Practice," *Front Educ (Lausanne)*, vol. 7, Feb. 2022, doi: 10.3389/feduc.2022.751801.

[13] S. Schwab, S. Markus, and S. Hassani, "Teachers' feedback in the context of students' social acceptance, students' well-being in school and students' emotions," *Educ Stud*, vol. 50, no. 5, pp. 978–995, 2024, doi: 10.1080/03055698.2021.2023475.

[14] M. B. Miles and A. M. Huberman, *Qualitative data analysis: An expanded sourcebook*. sage, 1994.

[15] M. Cronqvist, "Enhanced student joy in learning environment; understanding and influencing the process," *Eur J Educ*, vol. 59, no. 3, p. e12671, 2024. doi: 10.1111/ejed.12671

[16] A. Hall, S. Pais, P. Morando, and M. L. S. Spreafico, "Fun and functional: using non-digital games to promote maths engagement in pre-service teachers," in *Proceedings of the European Conference on Games-Based Learning*, 2024, pp. 337–346. doi: 10.34190/ecgbl.18.1.2675

[17] M. K. Othman and S. K. Ching, "Gamifying science education: How board games enhances engagement, motivate and develop social interaction, and learning," *Educ Inf Technol (Dordr)*, vol. 29, no. 18, pp. 24525–24561, 2024. doi: 10.1007/s10639-024-12818-5

[18] R. Parker, B. S. Thomsen, and A. Berry, "Learning through play at school–A framework for policy and practice," in *Frontiers in Education*, Frontiers Media SA, 2022, p. 751801. doi: 10.3389/feduc.2022.751801

[19] L. C. Tong, M. S. Rosli, and N. S. Saleh, "Enhancing HOTS using Problem-Based Learning and Digital Game in the Context of Malaysian Primary School.," *International Journal of Interactive Mobile Technologies*, vol. 16, no. 2, 2022. doi: 10.3991/ijim.v16i02.27677

[20] L. C. Tong, M. S. Rosli, and N. S. Saleh, "Enhancing HOTS using Problem-Based Learning and Digital Game in the Context of Malaysian Primary School," *International Journal of Interactive Mobile Technologies*, vol. 16, no. 2, pp. 101–112, 2022, doi: 10.3991/ijim.v16i02.27677.

[21] A. Fatima, U. Mahboob, R. A. Khan, and S. Rafique, "Development and validation of an ethical monopoly board game to teach bioethics to undergraduate medical students," *BMC Med Educ*, vol. 25, no. 1, p. 985, 2025. doi: 10.1186/s12909-025-07454-7

[22] J. Holzer, L. Grützmacher, M. Lüftenegger, M. Prenzel, and B. Schober, "Shedding light on relations between teacher emotions, instructional behavior, and student school well-being–evidence from disadvantaged schools," *Learn Instr*, vol. 92, p. 101926, 2024. doi : j.learninstruc.2024.101926

[23] S. Markus, S. Rieser, and S. Schwab, "The gender-specific role of social relationships for school well-being in primary school," *Z Psychol*, 2022. doi: 10.1027/2151-2604/a000500

[24] N. Kiuru, M.-T. Wang, K. Salmela-Aro, L. Kannas, T. Ahonen, and R. Hirvonen, "Associations between adolescents' interpersonal relationships, school well-being, and academic achievement during educational transitions," *J Youth Adolesc*, vol. 49, no. 5, pp. 1057–1072, 2020. doi: 10.1007/s10964-019-01184-y

[25] L. De Schaepmeester, J. van Braak, and K. Aesaert, "Teach what you preach? The relationship between teachers' citizenship beliefs and citizenship education in the classroom," *The Journal of Social Studies Research*, vol. 46, no. 4, pp. 363–378, 2022. doi: 10.1016/j.jssr.2021.10.001

[26] E. Slijkhuis, I. van der Veen, H. de Boer, and A. B. Dijkstra, "Burgerschap in het basisonderwijs. Kenmerken van scholen en competenties van leerlingen [Citizenship in primary education. School characteristics and student competencies].*Pedagogische Studiën*, vol. 100, no. 3, pp. 261–286, 2023. doi: 10.59302/ps.v100i3.17632

[27] E. Navarro-Medina, E. W. Ross, N. Pérez-Rodríguez, and N. De-Alba-Fernández, "Towards an Ideal Model of Education for Critical Citizenship. An Analysis of the Spanish Curricular Change in Social Sciences," *Eur J Educ*, vol. 60, no. 1, p. e70010, 2025. doi: 10.1111/ejed.70010

[28] R. W. M. Mee, L. S. Pek, M. F. Abd Rauf, M. F. M. Amran, and F. S. C. Yob, "Enhancing Language Learning Attitudes Through Gamified Language Camps: A 21st Century Approach," *LLT Journal: A Journal on Language and Language Teaching*, vol. 27, no. 2, pp. 570–581, 2024. doi: 10.24071/llt.v27i2.7037

[29] D. Mensonides, A. Van Cauwenberge, J. Swart, and M. Broersma, "Playful citizens: How children develop and integrate news-related practices in their daily lives," *Journal Stud*, vol. 25, no. 15, pp. 1854–1874, 2024. doi: 10.1080/1461670X.2024.2401396

[30] A. Sriprakash, "'Joyful Learning' in rural Indian primary schools: An analysis of social control in the context of child-centred discourses," *Compare*, vol. 39, no. 5, pp. 629–641, Sep. 2009, doi: 10.1080/03057920903125677.

[31] Y. Takbiri, A. Bastanfard, and A. Amini, "A gamified approach for improving the learning performance of K-6 students using Easter eggs," *Multimed Tools Appl*, pp. 1–19, 2023, doi: 10.1007/s11042-023-14356-7.

[32] N. Majid, W. Warman, W. Wingkolatin, and J. Selvia, "The Implementation Of Character Education On Civics Education Subject For Inclusive Students," *Educational Studies: Conference Series*, vol. 2, no. 2, pp. 288–296, 2023, doi: 10.30872/escs.v2i2.1634.

[33] W. Wuryandani and Herwin, "The effect of the think–pair–share model on learning outcomes of civics in elementary school students," *Cypriot Journal of Educational Sciences*, vol. 16, no. 2, pp. 627–640, 2021, doi: 10.18844/CJES.V16I2.5640.

[34] L. Zakiah, A. P. Kusmawati, Y. Yufiarti, and A. Supena, "Brain Based Learning in Civics Learning to Grow the Responsible Attitude of Elementary School Students," *Jurnal Ilmiah Sekolah Dasar*, vol. 6, no. 3, pp. 534–540, 2022, doi: 10.23887/jisd.v6i3.46126.

[35] J. Holzer, L. Grützmacher, M. Lüftenegger, M. Prenzel, and B. Schober, "Shedding light on relations between teacher emotions, instructional behavior, and student school well-being – Evidence from disadvantaged schools," *Learn Instr*, vol. 92, Aug. 2024, doi: 10.1016/j.learninstruc.2024.101926.

[36] S. Markus, S. Rieser, and S. Schwab, "The Gender-Specific Role of Social Relationships for School Well-Being in Primary School: Do Peers and Teachers Matter Differently?," *Zeitschrift fur*

Psychologie / Journal of Psychology, vol. 230, no. 3, pp. 215–228, Jul. 2022, doi: 10.1027/2151-2604/a000500.

[37] N. Kiuru, M. Te Wang, K. Salmela-Aro, L. Kannas, T. Ahonen, and R. Hirvonen, "Associations between Adolescents' Interpersonal Relationships, School Well-being, and Academic Achievement during Educational Transitions," *J Youth Adolesc*, vol. 49, no. 5, pp. 1057–1072, May 2020, doi: 10.1007/s10964-019-01184-y.

[38] A. Nisar, R. P. Hastings, R. C. Watkins, and S. Williams, "Mainstream and special schools' use of well-being programmes: A regional survey," *Br Educ Res J*, vol. 50, no. 1, pp. 6–31, Feb. 2024, doi: 10.1002/berj.3903.

[39] D. Mensonides, A. Van Cauwenberge, J. Swart, and M. Broersma, "Playful Citizens: How Children Develop and Integrate News-Related Practices in Their Daily Lives," *Journal Stud*, vol. 25, no. 15, pp. 1854–1874, 2024, doi: 10.1080/1461670X.2024.2401396.

[40] B. Cross, "Citizenship practices in school spaces: comparative discourse analysis of children's group decision making," *Pedagogy, Culture and Society*, vol. 32, no. 2, pp. 323–340, 2024, doi: 10.1080/14681366.2022.2037689.

[41] N. S. M. I. A. Donia, "Children as active citizens and Egyptian primary schools," *Review of Economics and Political Science*, vol. 9, no. 6, pp. 513–535, Nov. 2024, doi: 10.1108/REPS-01-2020-0014.

[42] L. Hoek, B. J. H. Zijlstra, A. Munniksma, and A. B. Dijkstra, "Measuring citizenship competences: Assessment of measurement invariance," *Journal of Social Science Education*, vol. 22, no. 2, 2023.

[43] Y. Pérez-Guilarte and R. García-Morís, "The Role of Intangible Heritage in Critical Citizenship Education: An Action Research Case Study with Student Primary Education Teachers," *Educ Sci (Basel)*, vol. 13, no. 8, Aug. 2023, doi: 10.3390/educsci13080801.

[44] A. Dharin, I. A. Lestari, and S. Siswadi, "Communication and Collaboration Ability Through STEAM Learning Based Project Based Learning (PjBL) Grade V Elementary School," *Jurnal Penelitian Pendidikan IPA*, vol. 9, no. 5, pp. 2632–2637, 2023, doi: 10.29303/jppipa.v9i5.3255.

[45] K. W. Guyotte, N. W. Sochacka, T. E. Costantino, N. N. Kellam, and J. Walther, "Collaborative creativity in steam: Narratives of art education students' experiences in transdisciplinary spaces," *International Journal of Education and the Arts*, vol. 16, no. 15, pp. 1–38, 2015.

[46] Y. F. Yeh, K. K. H. Chan, and Y. S. Hsu, "Toward a framework that connects individual TPACK and collective TPACK: A systematic review of TPACK studies investigating teacher collaborative discourse in the learning by design process," *Comput Educ*, vol. 171, no. November 2020, p. 104238, 2021, doi: 10.1016/j.compedu.2021.104238.

[47] H. Al-Samarraie and N. Saeed, "A systematic review of cloud computing tools for collaborative learning: Opportunities and challenges to the blended-learning environment," *Comput Educ*, vol. 124, pp. 77–91, 2018, doi: 10.1016/j.compedu.2018.05.016.

[48] M. Imran, N. Almusharraf, and M. Y. Abbasova, "Digital learning transformation: A study of teachers' post-Covid-19 experiences," *Social Sciences and Humanities Open*, vol. 11, Jan. 2025, doi: 10.1016/j.ssaho.2024.101228.

[49] N. Voulvoulis *et al.*, "Systems thinking as a paradigm shift for sustainability transformation," *Global Environmental Change*, vol. 75, p. 102544, Jul. 2022, doi: 10.1016/j.gloenvcha.2022.102544.

[50] N. A. Razak, R. M. Rasli, S. Subhan, N. A. Ahmad, and S. Malik, "Systematic review on digital transformation among teachers in public schools," *International Journal of Evaluation and Research in Education*, vol. 12, no. 2, pp. 1059–1078, Jun. 2023, doi: 10.11591/ijere.v12i2.24498.

[51] E. N. Purnomo, A. Imron, B. B. Wiyono, A. Y. Sobri, and Z. A. Dami, "Transformation of Digital-Based School Culture: implications of change management on Virtual Learning Environment integration," *Cogent Education*, vol. 11, no. 1, p., 2024, doi: 10.1080/2331186X.2024.2303562.

[52] B. Cross, "Citizenship practices in school spaces: comparative discourse analysis of children's group decision making," *Pedagogy, Culture and Society*, vol. 32, no. 2, pp. 323–340, 2024, doi: 10.1080/14681366.2022.2037689.

[53] D. Mensonides, A. Van Cauwenberge, J. Swart, and M. Broersma, "Playful Citizens: How Children Develop and Integrate News-Related Practices in Their Daily Lives," *Journal Stud*, vol. 25, no. 15, pp. 1854–1874, 2024, doi: 10.1080/1461670X.2024.2401396.