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Implementation of the Problem-Based Learning Model to Enhance Student Learning Participation in Pancasila Education

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Abstract
This study aims to enhance student learning participation in the Pancasila Education subject through the implementation of the Problem-Based Learning (PBL) model in Class XI KA 4 at SMK Negeri 13 Bandung. The research subjects consisted of 36 students, comprising 25 female and 11 male students. This study employed a Classroom Action Research (CAR) design conducted over two cycles, with each cycle consisting of four stages: planning, acting, observing, and reflecting. Data were collected through observation and interviews. The results indicate that implementing the Problem-Based Learning model increased student learning participation in Pancasila Education from 41.23% to 77.24%. This improvement is evidenced by the achievement of "Good" to "Very Good" categories across all learning participation indicators. Consequently, the Problem-Based Learning model is proven effective in enhancing student learning participation. The novelty of this study lies in the successful application of the Problem-Based Learning model to the Pancasila Education subject at the vocational high school (SMK) level. These findings suggest that the PBL model can serve as an effective instructional reference or alternative strategy for fostering active student participation in Pancasila Education.

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Introduction

Twenty-first-century education requires students to participate actively in the learning process. In the Pancasila Education subject, learning participation is a crucial aspect because students are not only expected to comprehend the subject matter, but also to think critically, engage in discussions, collaborate, and express their opinions actively throughout the lesson. According to Valenzuela (2022), 21st-century learning emphasizes the mastery of six core competencies, commonly known as the 6Cs: critical thinking, creativity, collaboration, communication, citizenship, and character. These competencies develop through active student involvement, necessitating a student-centered learning process that fosters optimal participation. Learning participation plays a vital role in supporting instructional success. However, many students remain passive recipients of information rather than actively constructing knowledge through questioning, discussing, expressing opinions, or responding to the material being studied. This condition highlights a gap between the demands of 21st-century learning, which emphasizes student engagement and actual classroom practices that still face challenges in maximizing student involvement.

According to Mulyasa (2003), learning participation refers to the physical, mental, and emotional involvement of students in the learning process. It is demonstrated not merely through physical attendance in class, but also through activities such as asking questions, voicing opinions, engaging in discussions, collaborating, and responding to learning materials. High levels of participation indicate active student engagement in constructing meaningful knowledge and learning experiences. Low student participation in learning is also reflected in the 2022 Programme for International Student Assessment (PISA) results reported by the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek, 2023), which showed that Indonesian students' achievements in literacy, numeracy, and science remain below the OECD average. This indicates that student engagement in the learning process is still relatively low, particularly regarding critical thinking, problem-solving, and active information processing. Therefore, classroom instructional processes must be improved to encourage optimal student involvement and support the development of 21st-century skills.

Similar challenges were identified in Class XI KA 4 at SMKN 13 Bandung in the Pancasila Education subject. Pre-cycle observation results revealed that the majority of students were not yet able to participate actively in class. Ginanjar et al. (2019) noted that low learning participation is influenced by six factors: courage to provide responses, student comprehension, courage to answer questions, ability to explain, ability to summarize, and confidence in asking questions. This indicates that the existing instructional process had not fully facilitated active student engagement. Consequently, as agents of change within the school environment, Pancasila Education teachers must possess the knowledge and pedagogical competence to implement instructional models tailored to students' needs to foster active classroom participation.

The theoretical foundation supporting active learning is constructivism, proposed by Jean Piaget and further developed by Lev Vygotsky. This theory posits that knowledge is actively constructed by learners through experience, social interaction, and direct involvement in the learning process. Therefore, instructional approaches that provide opportunities for students to

discuss, solve problems, and collaborate are believed to optimize learning participation. The Problem-Based Learning (PBL) model offers an effective strategy to address low student learning participation. PBL is an instructional approach that situates students within authentic, complex problem scenarios that must be resolved through five syntax stages, ranging from orienting students to the problem to analyzing and evaluating the problem-solving process. Khairunnisa et al. (2024) explained that the PBL model encourages students to develop higher-order thinking skills such as analysis, evaluation, and synthesis, while simultaneously cultivating social skills, including communication, collaboration, and accountability for their learning. Furthermore, Mawu et al. (2025) stated that problem-based learning enhances students' ability to articulate arguments, thereby fostering an active and positive learning atmosphere. Thus, PBL is well-suited to creating an interactive, student-centered learning environment.

Several studies have demonstrated the effectiveness of the Problem-Based Learning model in increasing student participation. Elya and Ratnaningsih (2025) found that PBL enhances both learning outcomes and student participation. Similarly, Khumaiyah (2026) stated that implementing PBL significantly improves students' active participation. The PBL model creates meaningful learning through students' direct involvement in contextual problem-solving, shifting their role from passive recipients of information to active subjects in the learning process. These findings confirm that PBL fosters active participation in developing 21st-century skills. Nevertheless, most prior studies have focused on specific subjects and general educational levels, with limited research examining learning participation in Pancasila Education, particularly at the vocational high school (SMK) level.

The novelty of this study lies in implementing the Problem-Based Learning model through Classroom Action Research in Pancasila Education to enhance student participation. Specifically, this study focuses on Grade XI Analytical Chemistry students at SMKN 13 Bandung. A context that remains underexplored. It also provides insights into applying PBL among vocational high school students, who possess distinct learning characteristics and needs compared to general high school students examined in previous studies. Therefore, the findings are expected to assist teachers in developing active instructional models that optimize student engagement. Accordingly, this article aims to examine the implementation of the Problem-Based Learning model in enhancing student learning participation in the Pancasila Education subject.

Method

This study employed a Classroom Action Research (CAR) method using a qualitative descriptive approach. The research design followed the Kurt Lewin model, which comprises four stages: planning, acting, observing, and reflecting. The study was conducted over two cycles, with each cycle consisting of one classroom meeting. The reflection results from the first cycle served as the basis for refining instructional actions in the subsequent cycle to maximize student learning participation in Pancasila Education. The research subjects were 36 students of Class XI Analytical Chemistry 4 (XI KA 4) at SMKN 13 Bandung, consisting of 25 female and 11 male students, alongside the Pancasila Education subject teacher. Data were collected using

observation sheets, interviews, documentation, and field notes. The collected data were analyzed qualitatively through three stages: data reduction, data display, and conclusion drawing, to illustrate the progression of student learning participation following the implementation of the Problem-Based Learning (PBL) model.

Results and Discussion

Results

Based on the preliminary data analysis, student learning participation in Pancasila Education was initially low. This was evident from pre-cycle observations, which showed that most students were not yet actively involved in the learning process. The observed aspects of student learning participation during the pre-cycle stage are outlined in Table 1.

Table 1. Pre-Cycle Learning Participation Observation Results

No	Observed Aspects	Rating Scale (P / F / G / VG)
1	Listening, paying attention, and respecting whoever is speaking	
2	Asking questions, expressing opinions, and answering questions	
3	Contributing ideas or solutions	
4	Demonstrating a willingness to participate actively in learning	
5	Taking responsibility for assigned tasks	
6	Demonstrating the ability to analyze, evaluate, and solve problems	
7	Displaying discipline and self-confidence	

(Note: P = Poor [Kurang], F = Fair [Cukup], G = Good [Baik], VG = Very Good [Sangat Baik])

Pre-cycle observations revealed that most participation indicators fell into the "Poor" and "Fair" categories. Students remained largely passive when asked to pose questions, express opinions, or propose solutions to the issues discussed in class. To evaluate the development of student participation following the implementation of the Problem-Based Learning (PBL) model, observations were conducted in Cycle I based on three established participation indicators. The results are presented in Table 2.

Table 2. Percentage of Student Learning Participation in Cycle I

Indicator	Percentage	Category
Physical, material, emotional, and mental involvement of students	45.37%	Fair
Student involvement in contributing to achieving learning objectives	43.89%	Poor
Learning activities yielding beneficial outcomes	34.44%	Poor
Average	41.23%	Poor

As shown in Table 2, the average student learning participation in Cycle I reached 41.23%. The highest percentage was recorded in the indicator of physical, material, emotional, and mental involvement at 45.37% ("Fair"), whereas the lowest was recorded in learning activities yielding beneficial outcomes at 34.44% ("Poor"). These results indicated that overall

participation remained low, necessitating instructional refinements for the next meeting. Following optimizations to the Problem-Based Learning implementation, Cycle II was conducted to assess further improvements. The observation results for Cycle II are shown in Table 3.

Table 3. Percentage of Student Learning Participation in Cycle II

Indicator	Percentage	Category
Physical, material, emotional, and mental involvement of students	85.59%	Very Good
Student involvement in contributing to achieving learning objectives	73.06%	Good
Learning activities yielding beneficial outcomes	73.06%	Good
Average	77.24%	Very Good

Cycle II observations demonstrated substantial gains across all participation indicators, with the overall average rising to 77.24% ("Very Good"). Physical, material, emotional, and mental involvement achieved the highest score at 85.59% ("Very Good"), while student contribution to learning objectives and beneficial learning activities each reached 73.06% ("Good"). These findings confirm that the PBL model significantly improved student participation. To provide a clearer overview of the progress between Cycle I and Cycle II, a comparative summary is presented in Table 4.

Table 4. Comparison of Student Learning Participation Between Cycle I and Cycle II

Indicator	Cycle I	Cycle II	Increase
Physical, material, emotional, and mental involvement of students	45.37%	85.59%	40.22%
Student involvement in contributing to achieving learning objectives	43.89%	73.06%	29.17%
Learning activities yielding beneficial outcomes	34.44%	73.06%	38.62%
Average	41.23%	77.24%	36.01%

The comparison in Table 4 confirms consistent improvement across all observed indicators. The greatest increase occurred in physical, material, emotional, and mental involvement (40.22 percentage points), followed by learning activities yielding beneficial outcomes (38.62 percentage points), and student involvement in achieving learning objectives (29.17 percentage points). Overall, average student learning participation rose by 36.01 percentage points, from 41.23% in Cycle I to 77.24% in Cycle II. This demonstrates the effectiveness of the Problem-Based Learning model in enhancing student participation in Pancasila Education.

Discussion

The findings of this study indicate that implementing the Problem-Based Learning (PBL) model integrated with Technological Pedagogical Content Knowledge (TPACK) positively contributes to increasing student participation in Pancasila Education. The progression observed from the pre-cycle stage through Cycle II demonstrates that problem-solving

instructional activities supported by appropriate educational technology effectively encourage students to engage more actively in the classroom. These results directly address the research objective of examining how a TPACK-integrated PBL approach enhances student learning participation.

Prior to the intervention, classroom observations indicated that students were largely passive, particularly during activities requiring them to voice opinions, ask questions, or participate in discussions. Following the implementation of the PBL model, notable behavioral changes emerged. Students became more active in group discussions, shared ideas, and responded to questions posed during lessons. This shift indicates that the learning environment fostered by PBL provided broader opportunities for active interaction, both with the instructional materials and among peers. Consequently, students transitioned from passive recipients of information to active participants in the learning process (Gultom, & Mari, 2025).

The observed increase in participation demonstrates that students gained greater opportunities to construct knowledge through meaningful learning experiences. Through problem identification, group discussion, information gathering, and solution presentations, students engaged directly with the learning process. These activities cultivated critical thinking, communication, and collaboration, essential competencies for 21st-century education. This confirms that student-centered learning fosters deeper engagement than traditional teacher-centered instruction.

These findings align with constructivist learning theory, which emphasizes that knowledge is built through active engagement and meaningful experience. Through problem-based activities, students were encouraged to explore complex issues, exchange ideas, and collaborate in formulating solutions. Integrating technology further supported this process by providing diverse learning resources and facilitating more effective interaction. As a result, students actively constructed their own understanding, thereby optimizing their critical thinking, communication, and collaborative skills throughout the lessons.

Furthermore, these results correspond with the instructional design framework proposed by Walter Dick and Lou Carey, which underscores the importance of aligning instructional strategies with learners' needs and characteristics. The surge in participation indicates that the learning activities were structured to accommodate student preferences and stimulate greater involvement. These findings also corroborate Pertiwi et al. (2022), who noted that student-centered learning is a foundational principle of Indonesia's *Kurikulum Merdeka* (Independent Curriculum). This study provides empirical evidence that a TPACK-based PBL approach effectively operationalizes this principle in classroom practice. Additionally, the results align with Rahmadini (2025), who found that interactive instructional models enhance students' physical, emotional, and cognitive engagement. This consistency is likely attributable to the active learning experiences generated through discussion, collaboration, and problem-solving, which afford students broader opportunities to contribute meaningfully during class (Gultom, 2025).

Overall, integrating Problem-Based Learning (PBL) with Technological Pedagogical Content Knowledge (TPACK) holds strong potential for creating active, engaging, and participatory learning environments. Beyond boosting participation, this approach enables students to interact, collaborate, and hone problem-solving skills through meaningful activities.

Future research could explore the impact of TPACK-integrated PBL on additional educational outcomes, such as academic achievement, critical thinking skills, and learning creativity, across broader educational contexts and variables to provide a more comprehensive understanding of its instructional efficacy.

Conclusion

The implementation of the Problem-Based Learning (PBL) model has been proven effective in enhancing student learning participation in the Pancasila Education subject in Class XI KA 4 at SMKN 13 Bandung. Prior to the intervention, student participation was low, characterized by minimal involvement in asking questions, expressing opinions, proposing solutions, and engaging in classroom activities. Following the application of the PBL model, student participation improved significantly across all observed indicators: physical, material, emotional, and mental involvement; student contribution toward achieving learning objectives; and beneficial learning activities. Observation results revealed that average student participation increased from 41.23% in Cycle I to 77.24% in Cycle II, representing a gain of 36.01 percentage points. This improvement demonstrates that the PBL model fosters student-centered learning, stimulates active involvement, and creates a more interactive and meaningful classroom atmosphere. Therefore, Problem-Based Learning is recommended as an effective alternative instructional strategy for enhancing student participation in Pancasila Education.

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Authors' Note

The authors declare that there is no conflict of interest regarding the publication of this article. The authors confirmed that the paper was free of plagiarism.

References

Dick, W., Carey, L., & Carey, J. O. (2005). *The systematic design of instruction* (6th ed.). Pearson Education.

Elya, N. R. (2025). Penerapan pembelajaran berbasis masalah untuk meningkatkan hasil belajar dan partisipasi belajar siswa. *PTK: Jurnal Tindakan Kelas, 5*(2), 384–400.

Ginanjar, E. G., Darmawan, B., & Suryana, S. (2019). Faktor-faktor yang memengaruhi rendahnya partisipasi belajar siswa sekolah menengah kejuruan. *Journal of Mechanical Engineering Education, 6*(2), 206–219.

Gultom, A. F. (2025a). Revitalizing Pancasila as living philosophy: Socratic-based classroom experimentation to foster critical thinking skills. *Paidea: Jurnal Pendidikan dan Pembelajaran Indonesia, 5*(2), 78–91. https://doi.org/10.56393/paidea.v5i2.4174

Gultom, A. F. (2025b). Toward a transformative multicultural pedagogy: The role of cultural empathy in university. *Didactica: Jurnal Kajian Pendidikan dan Pembelajaran, 5*(2), 60–74. https://doi.org/10.56393/didactica.v5i2.4175

Gultom, A. F., & Mari, G. (2025). The civil religion debate: Is Pancasila a substitute for or a protector of traditional faiths? *Kasta: Jurnal Ilmu Sosial, Agama, Budaya dan Terapan, 5*(3), 154–169. https://doi.org/10.58218/kasta.v5i3.2427

Indawati, N., Wiraningsih, H., & Mulyanti, W. S. (2025). Application of collaborative cultural maps to improve critical thinking skills. *Mindset: Jurnal Pemikiran Pendidikan dan Pembelajaran, 5*(1), 28–34. https://doi.org/10.56393/mindset.v5i1.3280

Janah, F. S., Nadziroh, N., Chairiyah, C., & Pratomo, W. (2024). Pengembangan media kartu gambar kata dalam pembelajaran Pendidikan Pancasila di sekolah dasar. *Sistem-Among: Jurnal Pendidikan Sekolah Dasar, 4*(1), 13–19. https://doi.org/10.56393/sistemamong.v4i1.2098

Kemendikbudristek. (2023). *Peringkat Indonesia dalam PISA 2022 meningkat 5–6 posisi dibandingkan tahun 2018*. Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi. https://www.kemdikbud.go.id

Khairunnisa, K., Vedira, M., Charles, C., & Pratama, A. R. (2024). Guru profesional dalam perspektif Al-Qur'an dan UU No. 14 Tahun 2005: Membangun generasi Rabbani. *Education Achievement: Journal of Science and Research, 5*(3), 1365–1378. https://doi.org/10.51178/jsr.v5i3.2195

Khumaiyah, W. I. M. (2026). Pengaruh penerapan model pembelajaran berbasis masalah terhadap keaktifan siswa dalam pembelajaran fikih kelas VII di MTs Sains Al-Qur'an An-Nur. *Edumasa: Jurnal Pendidikan Islam, 4*, 25–34.

Kunandar. (2012). *Langkah mudah penelitian tindakan kelas sebagai pengembangan profesi guru*. PT Raja Grafindo Persada.

Lessnusa, A., Ritiauw, S. P., & Rusfadir, S. A. (2024). Peran guru dalam mewujudkan sikap sosial siswa di sekolah dasar. *Lucerna: Jurnal Riset Pendidikan dan Pembelajaran, 4*(1), 9–14. https://doi.org/10.56393/lucerna.v4i1.2299

Lestari, L., Pramita, R. A., & Anakota, R. (2025). Character education discipline in Muhammadiyah boarding school dormitory Madrasah Tsanawiyah Muhammadiyah 2 Aimas based on local wisdom. *Pedagogi: Jurnal Pendidikan dan Pembelajaran, 5*(1), 1–12. https://doi.org/10.56393/pedagogi.v5i1.2887

Manobi, A. E. R. P., Sumadi, T., & Abdillah, F. (2024). Pemahaman dan praktik guru Pendidikan Pancasila berbasis pembelajaran berdiferensiasi di sekolah menengah atas. *Educare: Jurnal Penelitian Pendidikan dan Pembelajaran, 4*(2), 32–38. https://doi.org/10.56393/educare.v4i2.2639

Mawu, J. K., Lonto, A. L., & Wuntu, T. D. (2025). Peran model pembelajaran berbasis masalah dalam meningkatkan partisipasi belajar siswa pada mata pelajaran Pendidikan Kewarganegaraan di SMP Alkhairaat Manado. *Jurnal Pendidikan Kewarganegaraan dan Politik (JPKP), 3*(1), 26–41.

Mulyasa, E. (2003). *Kurikulum berbasis kompetensi: Konsep, karakteristik, dan implementasi*. PT Remaja Rosdakarya.

Nurrahman, A. L., & Kharunisa, N. Z. (2024). Peran dukungan sosial dalam meningkatkan motivasi berprestasi pada siswa sekolah menengah atas. *Lentera: Jurnal Kajian Bidang Pendidikan dan Pembelajaran, 4*(2), 66–71. https://doi.org/10.56393/lentera.v4i2.2807

Pertiwi, A. D., Nurfatimah, S. A., & Hasna, S. (2022). Penerapan metode pembelajaran yang berorientasi pada student-centered learning dalam masa transisi Kurikulum Merdeka. *Jurnal Pendidikan Tambusai, 6*(2), 8839–8848. https://doi.org/10.31004/jptam.v6i2.3780

Piaget, J. (1970). *Science of education and the psychology of the child*. Viking Press.

Putri, I. K., Nugroho, W., & Pratiwi, D. J. (2024). Pengaruh model contextual teaching and learning berbasis literasi baca tulis terhadap minat baca siswa. *Pijar: Jurnal Penelitian Bidang Pendidikan dan Pembelajaran, 4*(1), 8–17. https://doi.org/10.56393/pijar.v4i1.2370

Rafifah, H. N., Pratomo, W., Nadziroh, N., & Chairiyah, C. (2024). Implementasi karakter peduli sosial melalui muatan mata pelajaran Pendidikan Pancasila dan Kewarganegaraan di kelas sekolah dasar. *Kognisi: Jurnal Penelitian Pendidikan Sekolah Dasar, 4*(1), 1–7. https://doi.org/10.56393/kognisi.v4i1.2112

Rahmadini, S. (2025). *Penggunaan media permainan monopoli pada mata pelajaran Pendidikan Pancasila dalam meningkatkan partisipasi belajar siswa*. Repositori UPI.

Sholeha, S. M., Rahman, A., & Hermuttaqien, B. P. F. (2024). Analisis tingkat pemahaman dan penerapan literasi digital pada siswa kelas V sekolah dasar. *Pelita: Jurnal Kajian Pendidikan dan Pembelajaran Indonesia, 4*(2), 62–75. https://doi.org/10.56393/pelita.v4i2.2840

Tasane, M. I., Salamor, L., & Ritiauw, S. P. (2024). Peran guru dan orang tua dalam meningkatkan kedisiplinan siswa di sekolah dasar. *Melior: Jurnal Riset Pendidikan dan Pembelajaran Indonesia, 4*(2), 54–63. https://doi.org/10.56393/melior.v4i2.2831

Valenzuela, E. P. (2022). *Memahami peran 6C dalam pembelajaran abad ke-21*. Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi. https://www.kemdikbud.go.id