Journal of Educational Analytics (JEDA)
Vol. 5 No. 2 (2026): May 2026: 353-368

An Analysis of Teachers' Strategies for Developing Problem-Based Learning in Marketing Vocational Education at SMK Negeri 1 Manado

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A R T I C L E I N F O

Keywords: Teacher Strategies, Problem-Based Learning, Marketing, Education

Received : 20, March
Revised : 25, April
Accepted: 15, May

A B S T R A C T

This study aims to analyze teachers' strategies in developing Problem-Based Learning (PBL) in marketing vocational subjects at SMK Negeri 1 Manado, as well as to identify the obstacles encountered and the efforts made to overcome them. Data analysis was conducted through data reduction, data display, and conclusion drawing. The results show that teachers' strategies in implementing PBL are carried out in three stages: introduction, core activities, and evaluation. In the introductory stage, teachers prepare the learning process by providing apperception, motivation, and presenting contextual problems. In the evaluation stage, teachers assess not only students' knowledge but also their skills and attitudes. However, several obstacles were identified, including low student discipline and concentration, limited participation, disruptive behavior, and classroom management issues. To address these challenges, teachers apply various strategies such as positive reinforcement, effective communication, and conducive classroom management. In conclusion, the implementation of PBL strategies by teachers is able to enhance student engagement and support the development of critical thinking skills. Therefore, strengthening teachers' competencies and continuous instructional innovation are needed to optimize the implementation of PBL.

DOI : https://doi.org/10.55927/jeda.v5i2.21

ISSN-E: 2830-0432
https://journaljeda.my.id/index.php/jeda

INTRODUCTION

Twenty-first century education has undergone significant transformation alongside the rapid advancement of digital technology, which has influenced various aspects of human life, including the learning process (Rizal, 2025). These changes have not only affected the way individuals access information, but have also reshaped the role of teachers in delivering instructional content and the ways students construct and process knowledge. Technological developments such as the internet, social media, mobile devices, and artificial intelligence require educational systems to become more adaptive and responsive to change (Musarrofah, 2022). In this context, education is expected to foster essential twenty-first century skills, including critical thinking, problem solving, and creativity, which are increasingly necessary in a dynamic and complex workforce environment (Lesmana, 2025). However, several challenges remain in implementing learning processes that effectively accommodate these competencies (OECD, 2019). Therefore, innovation in teaching and learning practices, particularly in vocational high schools, is crucial to creating relevant and contextual learning experiences that equip students with competencies aligned with the demands of the twenty-first century.

Despite the growing emphasis on developing twenty-first century skills, the reality of learning practices in vocational high schools, particularly in marketing programs, continues to face several challenges. Learning activities are still largely dominated by conventional teacher-centered approaches, limiting students' active engagement in critical thinking and problem-solving processes (Misla & Mawardi, 2020). In addition, instructional practices are often insufficiently connected to real-world contexts, even though the field of marketing requires competencies such as market analysis, effective communication, creativity in promotion, and adaptive decision-making in response to changing consumer trends (Larumpa et al., 2020). At the same time, the rapid development of business and industry in the digital era has significantly transformed the marketing sector through the increasing use of digital marketing, e-commerce, and social media as platforms for promotion and consumer interaction. These developments create broad employment opportunities for vocational school graduates specializing in marketing; however, they also demand more complex and practical competencies. Consequently, learning approaches should not merely focus on theoretical mastery but also promote practical skills and problem-solving abilities relevant to workplace demands (Husna et al., 2025; Inayati, 2020).

One instructional approach considered relevant to addressing these challenges is Problem-Based Learning (PBL). PBL is a learning model that uses real-world problems as the starting point of learning, encouraging students to actively seek solutions through critical thinking, analysis, and reflection (Nasrulloh, 2020). Through the implementation of PBL, students not only acquire knowledge but also develop critical thinking skills, problem-solving abilities, and active engagement in the learning process. Another major advantage of PBL is its ability to create contextual and meaningful learning experiences, as instructional materials are directly connected to authentic situations encountered

in professional settings (Nurvianti et al., 2025; Suci & Taufina, 2020). In the context of marketing education in vocational high schools, PBL is particularly relevant because it can simulate problems commonly found in business and industry, such as consumer needs analysis, promotional strategy development, and marketing decision-making (Azizah et al., 2019). Therefore, the implementation of PBL is expected to bridge the gap between classroom learning and the competency demands of the workplace.

The successful implementation of Problem-Based Learning in educational settings is closely related to the strategic role of teachers as both instructional designers and facilitators of learning. Teachers are required to design systematic learning scenarios encompassing planning, implementation, and evaluation stages that align with the characteristics of PBL (Safitri et al., 2023). During the planning stage, teachers need to develop contextual problems relevant to real-life situations, particularly in the marketing field, in order to stimulate students' curiosity and engagement. In the implementation stage, teachers act as facilitators who guide, motivate, and support students throughout the inquiry and problem-solving processes (Nur et al., 2016). Meanwhile, in the evaluation stage, teachers are expected to develop assessment strategies that focus not only on learning outcomes but also on students' thinking processes and participation. From the perspective of constructivist learning theory, effective learning occurs when students actively construct knowledge through experience and interaction with their environment. Therefore, teachers' strategies in implementing PBL become a key factor in creating meaningful learning experiences, as teachers no longer function solely as the primary source of information but rather as facilitators who assist students in constructing knowledge and skills independently and collaboratively (Amiruddin et al., 2024; Utami & Giarti, 2020).

Numerous studies have examined the implementation of Problem-Based Learning and have reported positive impacts on learning quality. Research conducted by Budiwiyono (2022) demonstrated that the implementation of PBL improved students' critical thinking skills through active involvement in problem-solving activities. Similarly, Ariyanto et al. (2020) found that teachers' strategies in managing problem-based instruction significantly influenced students' participation and learning independence, particularly in contextual learning environments. Furthermore, studies conducted by Kusumawati et al. (2022) and Saputri (2020) revealed that the implementation of PBL in vocational education enhanced students' problem-solving skills and readiness for the workforce. Based on these findings, it can be concluded that PBL is an effective approach for improving student engagement and critical thinking abilities. However, the present study differs from previous research by focusing specifically on analyzing teachers' strategies in developing PBL, as well as identifying the challenges and solutions encountered in the context of marketing vocational education.

Although many previous studies have investigated the implementation of Problem-Based Learning, particularly in relation to learning outcomes and critical thinking development, research specifically examining teachers' strategies in developing and implementing PBL remains relatively limited. In

fact, the success of PBL is not solely determined by the learning model itself, but also by teachers' abilities to effectively design, implement, and evaluate instruction. This research gap is particularly evident in the context of vocational high schools, especially in marketing vocational subjects characterized by practical and contextual learning demands. Therefore, more in-depth research is needed to analyze teachers' strategies in developing problem-based learning in order to provide a comprehensive understanding of effective instructional practices that are relevant to workplace needs.

Based on the background and research gap described above, this study aims to comprehensively analyze teachers' strategies in developing Problem-Based Learning in marketing vocational subjects at vocational high schools. The analysis focuses on three main aspects: instructional planning, instructional implementation, and instructional evaluation carried out by teachers in implementing PBL. Through this study, it is expected that a comprehensive understanding of teachers' instructional strategies can be obtained, which may serve as a reference for improving the quality of innovative, contextual, and competency-oriented learning practices aligned with the demands of twenty-first century education.

LITERATURE REVIEW

Problem-Based Learning in Vocational Education

Problem-Based Learning (PBL) is a student-centered instructional approach that emphasizes the use of real-world problems as the starting point for learning activities. Through this approach, students are encouraged to actively investigate problems, analyze information, develop solutions, and reflect on their learning experiences (Nasrulloh, 2020). PBL positions students as active learners who construct knowledge through inquiry and collaboration, while teachers function as facilitators who guide the learning process. According to constructivist learning theory, knowledge is more meaningful when learners actively build understanding based on their experiences and interactions with their environment (Utami & Giarti, 2020).

The implementation of PBL has become increasingly relevant in twenty-first century education because it promotes higher-order thinking skills, including critical thinking, creativity, collaboration, and problem-solving abilities (Lesmana, 2025). In vocational education, particularly at vocational high schools, PBL is considered highly appropriate because learning activities are expected to reflect authentic workplace situations and industry demands. Vocational education aims not only to develop theoretical understanding but also to prepare students with practical competencies and professional skills required in the workforce (Husna et al., 2025). Therefore, integrating PBL into vocational learning can support students in developing both conceptual understanding and practical problem-solving competencies.

In the context of marketing vocational education, PBL enables students to engage with realistic business and marketing problems, such as identifying consumer needs, developing promotional strategies, analyzing market trends, and making marketing decisions (Azizah et al., 2019). By engaging in these activities, students are encouraged to think analytically and apply theoretical

concepts to practical situations. Moreover, the contextual nature of PBL helps students connect classroom learning with real-world business environments, thereby increasing learning relevance and student motivation (Nurvianti et al., 2025).

Teachers' Strategies in Implementing Problem-Based Learning

The successful implementation of Problem-Based Learning largely depends on teachers' instructional strategies in designing, facilitating, and evaluating learning activities. Teachers play a strategic role in ensuring that the learning process aligns with the principles and objectives of PBL (Safitri et al., 2023). In this regard, teachers are not merely transmitters of knowledge but facilitators who create learning environments that encourage inquiry, collaboration, and independent learning.

In the planning stage, teachers are responsible for designing contextual and meaningful problems that are relevant to students' experiences and vocational competencies. The problems presented should stimulate curiosity, encourage critical thinking, and promote collaborative discussion among students (Nur et al., 2016). Teachers also need to prepare learning resources, determine instructional procedures, and develop assessment instruments that support the implementation of PBL.

During the implementation stage, teachers facilitate students' learning processes by guiding discussions, encouraging participation, and supporting students in conducting investigations and finding solutions to problems. Teachers are also expected to create interactive learning environments that allow students to express ideas, ask questions, and collaborate effectively. According to constructivist perspectives, learning becomes more meaningful when students actively participate in constructing knowledge through social interaction and experiential learning (Amiruddin et al., 2024).

In the evaluation stage, teachers need to apply authentic assessment methods that measure not only learning outcomes but also students' problem-solving processes, critical thinking abilities, collaboration skills, and participation in learning activities. Assessment in PBL should therefore focus on both the process and the product of learning. Effective evaluation strategies can provide comprehensive insights into students' competency development and learning achievements

METHODOLOGY

Research Design

This study employed a qualitative approach using a case study research design. This approach was chosen because it enables an in-depth exploration of the processes, contexts, and phenomena related to teachers' strategies in developing Problem-Based Learning (PBL) in marketing vocational subjects. A case study is a research approach conducted intensively, comprehensively, and systematically toward a particular event, activity, or program within a specific unit in order to obtain a comprehensive understanding of the phenomenon under investigation (Assyakurrohim et al., 2022; Sugiyono, 2013).

The study was conducted at SMK Negeri 1 Manado, North Sulawesi Province, Indonesia. The research site was selected purposively based on the consideration that the school is one of the vocational high schools offering a marketing specialization program and has implemented innovative learning approaches, including Problem-Based Learning. This setting enabled the researcher to obtain relevant and contextual data regarding teachers' strategies in developing instructional practices.

The research participants were determined purposively to meet the need for rich and in-depth data. The participants consisted of marketing vocational subject teachers as the primary actors responsible for designing and implementing instruction, as well as students who were directly involved in the problem-based learning process. In addition, supporting informants such as the principal or vice principal for curriculum affairs were involved to provide information regarding school policies and the implementation of instructional practices at the institutional level.

The selection of research participants referred to the concepts of setting, actors, events, and process. The research setting was the vocational school environment implementing Problem-Based Learning. The actors included teachers and students as the primary participants in the instructional activities. The events referred to marketing learning activities integrating the principles of Problem-Based Learning. Meanwhile, the process involved the interaction between the researcher and participants through observation, interviews, and documentation to obtain in-depth information regarding teachers' strategies in designing, implementing, and evaluating problem-based learning.

Data collection techniques in this study employed three primary methods: observation, interviews, and documentation. Observation was conducted directly during classroom learning activities to examine the implementation of PBL, particularly how teachers designed and implemented problem-based instruction. In-depth interviews were conducted with teachers, students, and school management personnel to gather information regarding instructional strategies, learning experiences, and challenges encountered during the learning process. Documentation was used to complement the research data, including instructional documents such as teaching modules, lesson plans or instructional tools based on the Merdeka Curriculum, teaching materials, and students' learning evaluation results.

The data analysis technique used in this study followed the interactive analysis model consisting of three stages: data reduction, data display, and conclusion drawing. Data reduction was conducted by selecting, focusing, and simplifying the data according to the research focus, namely teachers' strategies in developing Problem-Based Learning.

Subsequently, the data were presented in descriptive narrative form to facilitate understanding of patterns and relationships among the data. The final stage involved drawing conclusions continuously throughout the research process in order to obtain valid and in-depth findings regarding teachers' strategies in developing Problem-Based Learning in marketing vocational subjects at vocational high schools.

RESEARCH RESULT

I. Teachers' Strategies in Developing Problem-Based Learning

Based on the results of observations and interviews conducted at SMK Negeri 1 Manado, it was found that teachers' strategies in developing Problem-Based Learning (PBL) in marketing vocational subjects were implemented through various structured steps. Teachers not only acted as providers of instructional content but also as facilitators who guided students to actively participate in the learning process. This was reflected in teachers' efforts to design learning activities that directly involved students through group discussions, question-and-answer sessions, and the provision of contextual problems related to the field of marketing.

In practice, teachers began the learning process by reviewing previous materials to reinforce students' prior understanding, followed by presenting problems relevant to real conditions in business and industry, such as product promotion strategies and consumer needs analysis. Subsequently, students were divided into groups to discuss solutions to the given problems. This discussion process encouraged students to exchange ideas, express opinions, and develop critical thinking and problem-solving skills. In addition, the question-and-answer activities conducted by teachers played an important role in exploring students' understanding and stimulating their analytical abilities toward the problems presented.

These findings indicate that the instructional strategies implemented by teachers have reflected active, collaborative, and experiential learning practices. This is consistent with the view that effective instructional strategies for developing critical thinking skills should be participatory, contextual, and provide opportunities for students to become actively engaged in the learning process. The strategies designed by teachers also demonstrate systematic efforts to achieve instructional objectives, as strategy is defined as a comprehensive and integrated set of actions designed to utilize various resources in order to achieve optimal outcomes (Hitt et al., as cited in Ramli & Kartini, 2022).

Based on the research findings obtained through observations and interviews, teachers' strategies in developing Problem-Based Learning in marketing vocational subjects demonstrated systematic and well-planned patterns. These strategies were evident not only during instructional implementation but also in the planning and evaluation stages of learning. To provide a clearer and more structured description, teachers' strategies in developing PBL can be elaborated into several interrelated aspects, as presented in the following sections.

A. Preliminary Stage in the Development of Problem-Based Learning

Based on the results of observations and interviews conducted at SMK Negeri 1 Manado, teachers' strategies at the preliminary stage in developing Problem-Based Learning in marketing vocational subjects demonstrated systematic efforts to build students' readiness for learning. At the beginning of the lesson, teachers conducted apperception activities by connecting the instructional material with students' daily experiences, particularly those related to marketing activities such as product promotion, buying and selling

transactions, and the use of social media as a marketing platform. This activity aimed to activate students' prior knowledge and create connections between the learning material and real-life contexts.

Furthermore, teachers clearly communicated the learning objectives so that students understood the competencies expected to be achieved during the instructional process. Based on interview findings, teachers stated that communicating learning objectives was important to provide students with direction and motivation in participating in learning activities. Afterward, teachers began implementing the main characteristics of PBL by presenting contextual problems relevant to business and industry settings, such as cases involving product marketing strategies or consumer behavior analysis. The problems provided were intentionally designed to challenge students' thinking abilities and encourage them to seek solutions independently as well as collaboratively.

In addition, teachers provided trigger questions aimed at stimulating students' curiosity and critical thinking skills regarding the problems presented. On several occasions, teachers divided students into learning groups as an initial step in building cooperation and collaboration. The groups were formed heterogeneously so that students could complement one another during the discussion process. These findings indicate that teachers' strategies at the preliminary stage reflected the fundamental principles of PBL, namely presenting problems as the starting point of learning and encouraging students' active engagement from the beginning of the instructional process.

B. Implementation Stage of Learning in the Development of Problem-Based Learning

Based on the results of observations and interviews conducted at SMK Negeri 1 Manado, teachers' strategies during the implementation stage of Problem-Based Learning (PBL) in marketing vocational subjects demonstrated active, collaborative, and student-centered learning practices. Following the presentation of problems during the preliminary stage, teachers guided students to understand and identify the issues presented. Students were encouraged to analyze cases related to the marketing field, such as product promotion strategies and methods of attracting consumer interest, enabling them to formulate problems more specifically.

Furthermore, teachers divided students into small groups to discuss solutions to the assigned problems. During these activities, students actively exchanged ideas, expressed opinions, and collaborated in formulating alternative solutions. Teachers acted as facilitators who guided the discussion process, provided direction, and assisted students experiencing difficulties without directly providing answers. Based on interview findings, teachers stated that this facilitative role was important for encouraging students' learning independence as well as developing their critical thinking and problem-solving skills.

In addition, students were directed to search for and collect information from various sources, such as textbooks, the internet, and real-life experiences relevant to the marketing field. This process aimed to broaden students' perspectives and strengthen the basis for decision-making. After the discussion process was completed, each group presented the results of their problem-solving activities.

These presentations were followed by question-and-answer sessions and responses from other groups, creating active interaction and the exchange of ideas among students.

Teachers then provided reinforcement regarding the discussion outcomes and clarified misconceptions or inaccurate concepts. These findings indicate that the strategies implemented by teachers during the instructional stage reflected the primary characteristics of PBL, namely problem-centered learning, active student engagement, and an emphasis on collaborative inquiry and problem-solving processes. Thus, learning activities were oriented not only toward mastery of instructional content but also toward the development of critical thinking, communication, and collaboration skills, which are highly relevant to the needs of business and industry in the marketing sector.

C. Evaluation Stage in the Development of Problem-Based Learning

Based on the results of observations and interviews conducted at SMK Negeri 1 Manado, teachers' strategies during the evaluation stage of Problem-Based Learning (PBL) focused not only on final learning outcomes but also on the learning processes experienced by students. Teachers conducted comprehensive assessments by considering students' cognitive, affective, and skill-based competencies throughout the instructional activities. These assessments included group work outcomes, students' abilities to solve problems, as well as their participation and activeness during discussions.

In practice, teachers assessed group presentation results, which reflected students' abilities to analyze marketing-related problems and formulate relevant solutions. In addition, teachers observed the discussion process to evaluate students' critical thinking, collaboration, and communication skills. Based on interview findings, teachers stated that process-oriented assessment was important because it provided a more comprehensive understanding of students' competency development, rather than focusing solely on final outcomes.

Furthermore, teachers provided feedback on students' work, both individually and in groups. This feedback aimed to improve students' understanding and reinforce the concepts learned during the instructional process. Teachers also encouraged students to reflect on the learning activities that had been conducted, such as identifying difficulties encountered, strategies used in solving problems, and learning experiences gained throughout the process. These reflection activities helped students better understand their own learning processes and increased their awareness of their abilities.

In addition, teachers utilized various forms of assessment, including performance assessment, project assessment, and portfolios, which were considered more appropriate for the characteristics of problem-based learning. These findings indicate that the evaluation strategies implemented by teachers were aligned with the principles of PBL, particularly in assessing both learning processes and outcomes authentically while encouraging the development of critical thinking and problem-solving skills. Therefore, evaluation functioned not only as a tool for measuring learning achievement but also as a means of continuously improving the quality of instruction.

II. Challenges in the Implementation of Teachers' Strategies in Developing Problem-Based Learning

Based on the results of observations and interviews conducted at SMK Negeri 1 Manado, several challenges were identified in the implementation of Problem-Based Learning (PBL) in marketing vocational subjects. Although teachers had attempted to develop active and student-centered learning, the implementation of PBL did not always run optimally as planned.

One of the primary challenges was students' low readiness to participate in problem-based learning. Many students were still accustomed to conventional teacher-centered instruction, making it difficult for them to think critically, express opinions, and collaborate effectively in group discussions. Differences in students' abilities also became a challenge, as some students tended to be passive and dependent on more active group members.

Another challenge concerned limited instructional time. Based on interview findings, teachers stated that PBL required more time compared to conventional lecture methods, particularly during discussion, information exploration, and presentation activities. As a result, teachers often had to adjust the depth of the material to fit the available time allocation.

In addition, limited learning resources and supporting facilities became obstacles in implementing PBL. Not all students had adequate access to digital devices or internet connectivity, even though these resources were important for information searching activities in problem-based learning, especially within the marketing field, which is closely related to digital technology development.

Teachers also faced challenges related to their readiness in designing and managing problem-based instruction. Teachers were required to create contextual and engaging problems appropriate to students' ability levels while simultaneously managing more complex classroom dynamics compared to conventional learning. This required creativity, experience, and adequate mastery of instructional strategies.

These findings indicate that the challenges in implementing PBL originated not only from student-related factors but also from limitations in time, facilities, and teacher preparedness. Therefore, various efforts are needed to overcome these challenges, including improving students' readiness through active learning habituation, providing adequate supporting facilities, and enhancing teachers' competencies in designing and implementing PBL effectively.

A. Low Student Discipline and Learning Concentration

One of the most common obstacles identified was students' lack of discipline during the learning process. Some students were observed chatting, joking, or disturbing their peers during classroom activities, which disrupted both the instructional process and other students' concentration. In the context of PBL, this condition became a significant challenge because the learning model requires active participation and focused engagement in problem-solving activities.

Based on interview findings, teachers explained that some students had difficulty maintaining concentration, particularly during group discussions. Teachers stated that several students discussed topics unrelated to the learning material and needed repeated reminders to stay focused.

This condition generally occurred among students who were not yet familiar with active learning models such as PBL, causing them to perceive discussions as opportunities for casual conversation rather than collaborative learning activities.

B. Low Student Participation and Engagement

Another challenge identified was students' low participation during the learning process. Some students were reluctant to express opinions, hesitant to ask questions, and passive during group discussions. In Problem-Based Learning, active participation is essential for developing critical thinking and problem-solving skills. The low level of engagement indicated that some students were still unfamiliar with learning patterns requiring active participation and independent learning.

Based on interviews, teachers explained that not all students had the confidence to actively participate in discussions. Some students appeared hesitant or lacked self-confidence when asked to express their opinions. Several students also admitted that they were afraid of giving incorrect answers, leading them to remain silent during discussions. These findings suggest that, in addition to learning habits, self-confidence was another factor contributing to low student participation. Therefore, teachers needed to create a supportive and comfortable learning environment to encourage students to participate more actively.

C. Difficult Student Behavior Management

Teachers also encountered challenges related to managing student behavior during PBL implementation. Some students paid limited attention to explanations, did not follow teachers' instructions, and demonstrated low responsibility toward assigned tasks. Such conditions became obstacles because PBL requires discipline, cooperation, and responsibility in solving problems collaboratively.

According to interview findings, teachers reported that some students displayed less cooperative behavior during learning activities and often needed repeated reminders to stay focused and complete group assignments. Teachers also noted that such behavior affected group dynamics and hindered discussion processes and learning objectives. Consequently, teachers needed to apply firmer yet educational classroom management strategies, such as providing clear instructions, establishing classroom rules, and actively involving students in learning activities.

D. Classroom Order Disruptions

Another challenge identified in the implementation of PBL was classroom order disruption, such as students frequently leaving and re-entering the classroom without clear reasons. This behavior disrupted the continuity of learning activities and reduced the effectiveness of group discussions and problem-solving processes. In the context of PBL, continuous participation is essential for students to fully understand problems and develop systematic solutions.

Based on interview findings, teachers stated that some students frequently left the classroom during lessons and failed to return on time, causing them to miss important discussion activities and contribute less effectively to their groups. Therefore, teachers needed to provide clear guidance regarding discipline and raise students' awareness of the importance of full participation and attendance during learning activities, particularly in problem-based learning environments

III. Strategies for Overcoming Challenges in the Implementation of Problem-Based Learning

Based on the various challenges identified in the implementation of Problem-Based Learning (PBL), strategic efforts are required to ensure that the learning process can be conducted effectively. These efforts focus not only on addressing student behavior but also on classroom management, increasing student engagement, and creating a conducive learning environment. Based on the results of observations and interviews, teachers implemented several adaptive strategies to overcome the challenges encountered during classroom instruction.

A. Overcoming Low Student Discipline and Learning Concentration

To address students' low discipline and concentration, teachers implemented preventive and educational strategies. Teachers provided persuasive advice and attempted to become role models in demonstrating disciplined behavior during the learning process. In addition, teachers gave constructive reprimands without using harsh approaches, allowing students to feel respected. Teachers also applied appreciation strategies by rewarding students who demonstrated orderly and active behavior, with the aim of motivating other students to imitate positive attitudes. During group discussions, teachers reorganized group members by separating students who tended to be disruptive, thereby creating a more conducive learning atmosphere.

B. Overcoming Low Student Participation and Engagement

To improve student participation, teachers attempted to create more interactive learning environments that encouraged students to express their opinions confidently. Teachers actively established positive communication with students and provided equal opportunities for participation. In addition, teachers used trigger questions ranging from simple to complex levels to stimulate students' confidence in expressing ideas. This approach is consistent with cognitive learning theory, which emphasizes that students should be encouraged to actively construct their own knowledge. As a result, students gradually became more confident and accustomed to participating in discussions.

C. Overcoming Difficult Student Behavior

To manage difficult student behavior, teachers implemented firmer yet educational classroom management strategies. Teachers established clear classroom rules at the beginning of the learning process and explained the consequences of rule violations. Furthermore, teachers avoided physical punishment and instead emphasized guidance-oriented approaches, such as providing direction, reinforcement, and opportunities for students to improve their behavior.

Teachers also actively involved students in learning activities by assigning specific roles during discussions or encouraging them to share opinions, thereby increasing students' sense of responsibility toward the learning process.

D. Overcoming Classroom Order Disruptions

To address classroom order disruptions, such as students frequently leaving and re-entering the classroom, teachers provided wise and constructive reprimands while raising students' awareness of the importance of maintaining discipline during learning activities. Teachers explained that such behavior could disturb classmates' concentration and hinder understanding of the material. In addition, teachers attempted to create engaging and interactive learning activities to reduce students' desire to leave the classroom. Patient and communicative approaches became key strategies in addressing these issues without creating conflict with students.

Overall, the findings of this study indicate that challenges in implementing PBL should not be viewed as major obstacles, but rather as part of the learning process that must be managed strategically. Teachers' success in overcoming these challenges largely depended on their ability to adapt instructional strategies, understand students' characteristics, and create conducive and participatory learning environments. Therefore, the implementation of PBL can be carried out effectively and contribute to the development of students' critical thinking, problem-solving, and social skills that are relevant to the needs of business and industry

CONCLUSIONS

Based on the results and discussion of the study, it can be concluded that teachers' strategies in developing Problem-Based Learning (PBL) in marketing vocational subjects at SMK Negeri 1 Manado were implemented through three main stages: the preliminary stage, the implementation stage, and the evaluation stage. During the preliminary stage, teachers prepared students' learning readiness by conducting apperception activities, providing motivation, and presenting contextual problems relevant to the marketing field. In the implementation stage, teachers applied student-centered learning through group discussions, problem-solving activities, presentations, and question-and-answer sessions that encouraged active participation and the development of students' critical thinking skills. Meanwhile, in the evaluation stage, teachers assessed not only students' learning outcomes but also their learning processes, attitudes, and skills throughout the instructional activities.

However, several challenges were identified during the implementation of PBL, including low student discipline and concentration, limited participation, difficult student behavior, and disruptions to classroom order. To overcome these challenges, teachers implemented various strategies such as providing positive reinforcement, establishing effective communication, setting clear classroom rules, and creating active and conducive learning environments. Overall, the strategies implemented by teachers in developing PBL were proven to enhance students' engagement in learning and support the development of critical thinking skills.

Therefore, the implementation of PBL should continue to be strengthened through the improvement of teachers' classroom management competencies and continuous instructional innovation.

RECOMMENDATIONS

Based on the findings of this study, several recommendations can be proposed. First, teachers are encouraged to continuously improve their competencies in designing and implementing Problem-Based Learning through professional development programs, workshops, and training related to innovative instructional strategies. Second, schools should provide adequate learning facilities and technological support to optimize the implementation of PBL, particularly in vocational education contexts that require access to digital information and learning resources.

Third, students should be gradually accustomed to active and collaborative learning environments in order to improve their participation, discipline, and confidence during the learning process. Finally, future researchers are recommended to conduct broader studies involving different vocational fields or educational settings to provide more comprehensive insights into the implementation of Problem-Based Learning and its impact on students' competencies and learning outcomes.

ADVANCED RESEARCH

This study focused on analyzing teachers' strategies in developing Problem-Based Learning (PBL) in marketing vocational subjects at SMK Negeri 1 Manado. Therefore, several limitations remain and provide opportunities for further investigation. Future research is recommended to explore the implementation of PBL in different vocational fields and educational contexts in order to obtain broader and more comprehensive findings regarding the effectiveness of PBL in vocational education.

In addition, further studies may examine the influence of Problem-Based Learning on specific student competencies, such as critical thinking skills, creativity, communication skills, collaboration abilities, and learning motivation. Quantitative or mixed-method approaches may also be employed to measure the impact of PBL more objectively and comprehensively. Future researchers are also encouraged to investigate the integration of digital technology in Problem-Based Learning, particularly in vocational marketing education, considering the rapid development of digital marketing, e-commerce, and social media-based business practices. Such studies may provide deeper insights into how technology-supported PBL can enhance students' readiness to face the demands of the modern workforce.

Moreover, future studies could focus on developing instructional models, assessment systems, or classroom management strategies that support more effective implementation of PBL in vocational schools. Research involving collaboration between schools and industry partners is also recommended to strengthen the relevance of vocational learning with real workplace demands. Consequently, future research is expected to contribute to the continuous

improvement of innovative, contextual, and competency-based learning practices in vocational education

ACKNOWLEDGMENT

The authors would like to express their sincere gratitude to all parties who contributed to the completion of this research. Special appreciation is addressed to the principal, teachers, and students of SMK Negeri 1 Manado for their support, cooperation, and willingness to participate in this study. Their valuable contributions and openness during the research process greatly assisted in obtaining comprehensive data and insights. The authors also extend their gratitude to colleagues, academic supervisors, and all individuals who provided guidance, encouragement, and constructive feedback throughout the research and writing process. Finally, the authors acknowledge the support of their respective institutions in facilitating the completion of this study.

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