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Development of Future Planning Skills through Problem-Based Learning at Pusat Kegiatan Belajar Masyarakat/PKBM (Community Learning Activity Center) Alam Jingga, Indonesia

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Abstract

This qualitative descriptive study explored the impact of Problem-Based Learning (PBL) on the development of future planning, self-directed learning, and essential life skills among eight grade X students at PKBM Alam Jingga, Indonesia. Over a two-week intervention, participants engaged in collaborative PBL sessions addressing real-life scenarios, including career decision-making, financial planning, and community development. Data from observations, journals, presentations, and interviews were analyzed thematically to identify patterns in goal-setting, problem-solving, and coping strategies. Findings reveal that PBL enhanced students' critical thinking, self-confidence, adaptability, teamwork, and communication, while fostering holistic development by integrating cognitive, social, and emotional learning. Despite limitations, the study highlights PBL as a transformative pedagogical approach that prepares learners for academic, professional, and lifelong challenges.

INTRODUCTION

In many community-based education settings, learners often face the challenge of envisioning and preparing for their future in a practical and realistic manner. This challenge is particularly evident among young learners in non-formal education programs, who may lack access to structured career guidance or exposure to real-world problem-solving experiences. At the same time, the ability to plan for one's future is a crucial life skill—one that influences career readiness, personal development, and overall resilience in facing socio-economic challenges. Studies on future-oriented learning approaches highlight the importance of moving beyond linear predictions toward participatory and vision-driven planning, enabling learners to actively explore diverse scenarios and

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collaboratively shape their desired futures. Approaches such as creative envisioning exercises, structured future-thinking activities, and participatory tools that combine visual, narrative, and interactive methods have been shown to strengthen learners' agency, expand their aspirations, and foster a sense of ownership over their personal and communal development (Krawczyk & Ratcliffe, 2005; Dallas, 2009; Chubb, 2025).

The *Pusat Kegiatan Belajar Masyarakat* (PKBM) Alam Jingga provides an alternative learning environment for learners outside the formal school system. In this setting, diverse learner backgrounds and life circumstances present both a challenge and an opportunity for designing learning activities that address future readiness. Similar initiatives in other PKBM contexts have shown that strategic planning in learning systems can significantly enhance learner engagement and skill acquisition, especially when supported by technology-based tools and relevant curriculum design (Hidayah et al., 2025). Effective program management, which includes clear organization, monitoring, and responsiveness to learner needs, has also been identified as a critical factor in ensuring that learning processes meet their intended goals (Setiyowati et al., 2022). Furthermore, community-based programs have demonstrated success in empowering learners—particularly youth—by developing their social skills and confidence through participatory activities (Azzahra, 2024). Optimizing learning processes through tutor capacity building, resource utilization, and external collaboration has been found to directly contribute to graduates' readiness for work and life challenges (Urfi et al., 2025).

Problem-Based Learning (PBL) offers a promising approach in this regard, as it encourages learners to identify, analyse, and solve problems that reflect real-life contexts. Studies have shown that PBL fosters curriculum integration, increases learner motivation, and develops self-directed learning by engaging students in problem-centred tasks that mirror authentic situations. Such approaches have also been found effective in enhancing critical analysis and problem-solving abilities, particularly when combined with collaborative learning environments (Azer, 2001; Karantzas et al., 2013). Through this process, learners are expected to develop critical thinking, decision-making, and future planning skills that are directly applicable to their lives. This study aimed to investigate how PBL can be effectively implemented at PKBM Alam Jingga to foster the development of future planning skills among its learners. It focused on examining the process, identifying the learning outcomes, and reflecting on the practical implications for community learning centres.

METHODOLOGY

Research Design

This study employed a qualitative descriptive approach to capture the dynamics of the learning process and the development of learners' skills. This design enabled close observation of participant behaviour, collection of narrative data, and analysis of learner reflections to understand how PBL influenced their capacity to plan for the future. The qualitative descriptive (QD) approach emphasizes providing an accurate, detailed description of a phenomenon without imposing deep theoretical interpretation, focusing instead on participants' own words to ensure practical understanding of the studied issue (Seixas, Smith, & Mitton, 2018). This method was considered suitable because it allows flexibility and presents findings in a straightforward manner, making it effective for exploring real-life educational contexts.

Research Setting and Participants

The research was conducted at PKBM Alam Jingga in Indonesia, involving eight students from grade X, aged between 15 and 16 years. The participants represented diverse socio-economic backgrounds, with some managing their studies alongside project work or household responsibilities.

They were selected based on their enrollment in the life skills programme and their willingness to actively participate in Problem-Based Learning (PBL) activities. This approach reflects common practices in life skills education programs, where participant selection prioritizes voluntary involvement and active engagement to ensure meaningful learning experiences rather than random allocation (Gautham et al., 2023).

Procedure

The intervention was carried out over a two-week period through a series of Problem-Based Learning (PBL) sessions that began with contextual problem scenarios related to real-life issues such as career decision-making, financial planning, and community development. Participants worked in small groups to analyze the problem, generate alternative solutions, gather relevant information, and develop actionable plans.

The researcher acted as a facilitator, guiding the discussions without intervening in the decision-making process while monitoring learner engagement. Data were collected from multiple sources, including learner journals, group presentations, and semi-structured interviews, and ethical approval was obtained alongside informed consent from all participants. The findings indicate that this approach effectively enhanced self-directed learning and problem-solving skills through collaborative work in an online learning environment (Wong & Kan, 2022).

Data Analysis

A thematic analysis approach was employed to identify recurring patterns and themes related to learners' capacity to formulate goals, outline steps toward achieving those goals, and anticipate potential obstacles. This method involves processes such as familiarization with data, initial coding, theme generation, and reviewing and defining themes to ensure clarity and accuracy. The approach is considered flexible but requires transparency and systematic documentation to maintain the validity and reliability of findings (Vaismoradi, Turunen, & Bondas, 2013). To enhance trustworthiness, data triangulation was implemented by cross-referencing observation notes, learner-produced artifacts, and interview transcripts. This process ensured both credibility and depth in the interpretation of findings.

RESULTS

1. Observation of Learners' Participation during PBL Sessions

Teacher observation data were analyzed to determine the level of student engagement and collaboration during PBL sessions. Five key indicators were assessed across eight participants. Scores ranged from 1 (low) to 3 (high). The percentage of students achieving the highest score (3) on each indicator is presented in Table 1. Collaborative interaction in these sessions did not occur randomly; rather, it developed through iterative phases involving orientation, negotiation, integration, and implementation, where students clarified ideas, negotiated meaning, and co-constructed solutions together (Tan & Tee, 2021).

Table 1. Percentage of Students Scoring High (3) in Each Observation Indicator

No	Observation Aspect	Indicator	% High Score (n=8)
1	Participation in group discussions	Actively contributes ideas and responses	75%
2	Problem identification	Clearly articulates the problem	75%

3	Contribution to solution planning	Provides input for action plan development	75%
4	Collaboration and communication	Listens and respects different opinions	75%
5	Group decision-making	Involved in determining group decisions	75%

Interpretation:

The majority of students (75%) demonstrated active participation, problem identification skills, and collaborative attitudes during PBL activities. However, a small proportion (25%) remained passive, as indicated by consistently low scores across indicators.

2. Learners' Future Action Plans

Analysis of students' future plans revealed common themes across short-term and long-term goals, action steps, and anticipated challenges. Most students articulated aspirations related to creative industries, entrepreneurship, and professional careers, which aligns with findings from prior research indicating that students often seek not only to develop artistic competencies but also entrepreneurial skills to sustain their careers in creative fields (Blackshire, 2020).

Table 2. Common Themes in Future Plans (n=8)

Category	% of Students	Illustrative Quotes (English Translation)
Career Aspirations in Creative Industry	37.50%	"I want to become a film director who inspires many people."
Entrepreneurship Goals	37.50%	"I want to be an independent entrepreneur and video editor who can motivate others."
Professional Careers (Design, Marketing, etc.)	25%	"I want to be a graphic designer with my own business."

Challenges and Solutions Identified:

- **Time management issues** (reported by 50%): *"The biggest challenge is time management; I will improve it by making daily schedules."*
- **Financial constraints** (37.5%): *"The cost for courses and college is high, so I plan to start saving early."*
- **Competition in the field** (25%): *"There are many competitors; I will overcome this by focusing on creativity and consistency."*

3. Learners' Reflections on PBL Experience

Problem-Based Learning (PBL) fosters planning skills by positioning learners as active agents in managing their own learning processes. Within PBL, students are presented with complex, ill-structured problems that require them to devise systematic steps for identifying relevant information, formulating hypotheses, and generating solutions. Key planning skills developed include setting learning objectives based on problem analysis, organizing resources to solve problems, managing time and priorities effectively, and establishing evaluation strategies for proposed solutions. PBL emphasizes self-directed learning (SDL), which is closely linked to self-regulated learning (SRL). In this context, planning skills form a critical component of self-regulation, enabling learners to maintain control over their learning processes and outcomes. This ultimately enhances critical thinking and problem-solving capabilities (Loyens et al., 2008).

This finding aligns with recent thematic analysis of written reflections and interviews, which revealed that students perceived project-based learning as highly beneficial for personal and

academic growth. Notably, 87.5% of participants reported significant improvements in their ability to plan for the future, emphasizing that PBL helped them clarify goals and structure their steps systematically. Students expressed that these experiences enabled them to create organized plans and anticipate potential challenges, indicating that PBL not only supports immediate learning but also cultivates long-term planning skills essential for academic and career success.

In addition to future planning, students reported positive changes in their self-confidence and adaptability, with 62.5% acknowledging these improvements. The process of engaging with real-world problems and dynamic project tasks allowed students to build resilience and flexibility in handling uncertainty. This adaptability was particularly evident in how they approached challenges within their projects, helping them become more self-assured in their decision-making. Through reflective practices, students also developed greater self-awareness, recognizing their strengths and areas for growth. These findings are consistent with prior research showing that Problem-Based Learning (PBL) effectively enhances student engagement with authentic contexts while fostering critical thinking and problem-solving skills, even in large classroom settings (Klegeris & Hurren, 2011).

Furthermore, enhanced teamwork and communication skills were highlighted by 75% of participants as a key benefit of PBL. Working collaboratively with diverse personalities initially posed challenges, but students ultimately viewed these experiences as opportunities for growth. One student remarked, "Working with different characters in the group was difficult at first, but it taught me patience and communication." This illustrates how PBL serves as a practical platform for developing interpersonal competencies, which are crucial for success in both academic and professional contexts. Overall, the findings suggest that PBL not only enriches academic learning but also equips students with essential life skills.

4. Overall Perceived Impact of PBL

Overall, 87.5% of students reported that the PBL process significantly contributed to their ability to visualize future goals and formulate clear, actionable steps toward achieving them. Many students emphasized that through PBL, they were exposed to real-world challenges that required critical thinking and problem-solving, allowing them to apply theoretical knowledge in practical situations. Furthermore, the experience nurtured their capacity for self-directed learning and goal-setting, which they considered essential skills for personal growth and long-term success beyond the classroom. These outcomes are consistent with previous findings indicating that higher levels of self-efficacy in PBL enhance students' ability to manage their learning, set goals, monitor progress, and overcome academic challenges, highlighting the role of self-regulated learning in effective PBL participation (Demirören, Turan, & Öztuna, 2016).

Qualitative feedback from students further highlighted the transformative nature of the PBL experience. Several students mentioned that working on authentic problems gave them a sense of ownership and responsibility over their learning, which increased their motivation and engagement. Others noted that collaboration with peers in PBL projects enhanced their interpersonal and communication skills, making them more confident in expressing ideas and negotiating solutions in group settings. This collaborative aspect was frequently mentioned as one of the most valuable outcomes, as it mirrored real workplace dynamics. Sejalan dengan temuan ini, penelitian Skinner et al. (2016) menegaskan bahwa pembelajaran berbasis kelompok kecil yang bersifat eksperiensial, seperti PBL, secara signifikan berkontribusi terhadap pengembangan keterampilan interpersonal, termasuk komunikasi efektif, empati, dan kerja sama tim, yang sangat relevan untuk keberhasilan profesional.

From a pedagogical perspective, these findings imply that PBL is not merely an instructional method but a powerful tool for developing future-ready competencies. The ability to integrate knowledge across disciplines, manage time effectively, and adapt to unexpected challenges were cited

as outcomes that extended beyond academic performance. For educators, this suggests the importance of continuing to implement and refine PBL strategies to foster higher-order thinking and lifelong learning habits in students. This is consistent with research showing that students perceive PBL positively because it enhances analytical skills, conceptual understanding, teamwork, and communication, making the learning process more engaging and relevant to professional practice (Dube et al., 2014).

DISCUSSION

The findings of this study demonstrate that Problem-Based Learning (PBL) has a significant positive impact on students' ability to plan for the future and develop essential life skills. The observation data revealed that most participants actively engaged in collaborative discussions, problem identification, and decision-making during PBL sessions. This suggests that PBL provides an interactive and student-centered environment that encourages participation and critical thinking. However, the presence of a small proportion of passive learners indicates the need for differentiated facilitation strategies to ensure equitable engagement.

The analysis of learners' future plans highlights how PBL fosters goal-setting and strategic thinking. Students not only identified long-term career aspirations—such as roles in creative industries, entrepreneurship, and professional fields—but also demonstrated the ability to anticipate challenges and propose practical solutions. This aligns with existing literature emphasizing that PBL promotes higher-order cognitive skills by situating learning within authentic contexts. Additionally, previous research notes that coping strategies such as planning, active coping, and positive reframing play a critical role in supporting resilience and managing academic stress in PBL settings (Bamuhair et al., 2015).

Reflections and interviews further underscored the transformative role of PBL in building self-confidence, adaptability, teamwork, and communication skills. The majority of students reported improvements in their capacity to manage uncertainty and collaborate effectively with peers. These outcomes are particularly relevant for 21st-century competencies, as adaptability and interpersonal communication are crucial for success in both academic and professional environments. The positive responses also point to the motivational benefits of PBL, as authentic problem-solving appears to enhance student ownership of learning. Collectively, these findings support the notion that PBL serves not only as an instructional strategy but also as a developmental framework that equips learners for real-world challenges, even though its implementation faces structural and cultural barriers such as standardized testing pressures, resource limitations, and the need for authentic problem design (Massa, 2008).

CONCLUSION

This study concludes that Problem-Based Learning is an effective pedagogical approach for enhancing future planning skills, critical thinking, and personal growth among students. The results demonstrate that PBL fosters the ability to set goals, develop actionable plans, and anticipate obstacles—skills essential for navigating academic and professional pathways. Additionally, students experienced significant improvements in self-confidence, adaptability, and collaboration, indicating that PBL contributes to the holistic development of learners by integrating cognitive, social, and emotional aspects of learning (Miner-Romanoff, Rae, & Zakrzewski, 2019).

From an educational perspective, these findings have practical implications for curriculum design and instructional practice. Integrating PBL into life skills and other subject areas can provide meaningful opportunities for students to apply theoretical knowledge in authentic contexts, thereby bridging the gap between classroom learning and real-life problem-solving. Educators should also

consider scaffolding strategies to support passive learners and ensure that all students benefit from the collaborative nature of PBL.

Although the study yielded promising outcomes, its limitations—such as the small sample size and specific research setting—restrict the generalizability of findings. Future research should explore longitudinal impacts of PBL on goal-setting and self-regulation, as well as comparative studies involving larger and more diverse populations. Nonetheless, the evidence presented here strongly advocates for the continued use of PBL as a transformative educational practice that prepares students for lifelong learning and success in a dynamic, complex world, particularly when integrated with learning technologies that enhance critical thinking, reflection, and self-directed learning (Donnelly, 2009).

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