



Training on Managing Problem-Based Learning (PBL) in Primary Schools in Pesawaran Regency

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Abstract

Based on research findings, primary school teachers in Pesawaran Regency have begun designing and implementing learning activities using the Problem-Based Learning (PBL) model. However, the management of PBL in classroom practice has not yet been grounded in appropriate theoretical understanding. Therefore, teachers require training in effectively managing PBL. This community service program aims to address the issue of low professional and pedagogical competence among primary school teachers, particularly in managing learning using the PBL model. The objectives of this training activity are to ensure that primary school teachers: (1) acquire knowledge about managing PBL; (2) develop the skills to implement PBL effectively; and (3) foster a positive attitude toward PBL-based instruction. The specific target of the training is for teachers to master the necessary competencies to manage PBL in the classroom. The method used in this program involved a combination of training techniques, including discussions, Q&A sessions, simulations, group assignments, and individual tasks. The target participants were primary school teachers in Pesawaran Regency. The training was conducted in three cycles: The first cycle took place in the first week of the first month and included a pre-test to assess

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teachers' prior knowledge and skills in managing PBL, followed by delivery of training materials. The second cycle, conducted in the first week of the second month, focused on collecting assignments and group presentations of the completed tasks. The third cycle, held in the first week of the third month, included content enrichment, final presentations, and a **post-test**. The pre-test and post-test consisted of five open-ended questions assessing knowledge and a performance-based assessment for PBL teaching skills. The results showed a significant improvement in teachers' knowledge, from 19.23% in the pre-test to 80.77% in the post-test, indicating a 61.54% increase, categorized as very good. Similarly, teachers' skills improved from 16% to 84%, showing a 68% increase, also categorized as very good.

1. INTRODUCTION

Curriculum changes in formal education always have an impact on learning services. Learning in schools is required to be oriented towards Outcomes Based Education (OBE), so the learning model must also be adjusted accordingly (Biggs, J., & Tang, 2022). Teachers in schools, from kindergarten to senior high school, are required to choose several learning models, including Problem-Based Learning (PBL) (Warr, M., Dicochea, L., Alvarez Flores, S. M., Holmes, T., O'Connor, B. H., Garcia, D., & Orozco, 2025). Learning in schools in Pesawaran Regency is also required to follow the Outcomes Based Education (OBE) approach, as mandated by national

education policies (Biggs, J., & Tang, 2022). However, a survey conducted by the Pesawaran Regency Education Office shows that most teachers, especially at the elementary and junior high school levels, still face difficulties in implementing learning models such as Problem-Based Learning (PBL), which is one of the recommended models in OBE. The data also indicates a need for special training for teachers to improve their understanding and skills in effectively applying PBL, so that the learning process can better focus on achieving students' competencies optimally. Therefore, training on learning models based on OBE and PBL is very necessary to support the improvement of education quality in Pesawaran Regency.

The demands of being a professional teacher require carrying out duties in accordance with the law, and theoretically, teachers will be able to teach students effectively, efficiently, and engagingly if they can integrate the nature of the subject matter, the students' conditions and characteristics, with another important variable learning management. This can be achieved by teachers if they are not unaware of the essential aspects of learning management. A teacher's task is to manage the learning process so that it runs effectively, efficiently, and engagingly (Bana, K. F. M., Shamim, M. S., & Shahid, 2022).

Learning management is the teacher's effort to organize the learning environment in order to foster and develop students' learning motivation so that learning objectives can be achieved effectively and efficiently (Yu, 2023)(Sanjaya, 2023). According to Djamarah, learning management is the activity carried out by teachers in designing, implementing, and evaluating the teaching and learning process systematically (Syaiful Bahri Djamarah, 2011)

Based on the explanation above, training is highly necessary for elementary school teachers in Lampung Province

regarding the management of PBL learning, which in this proposal will be prioritized in the city of Bandar Lampung.

Based on the explanation above, training is urgently needed for elementary school teachers in Lampung Province regarding the management of PBL learning, which in this proposal will be prioritized in Bandar Lampung City.

This service activity will help address the problem of low professional and pedagogical competencies of elementary school teachers, particularly in managing the PBL learning model. The activity aims for elementary school teachers to have: (1) knowledge about managing PBL learning, (2) skills in managing PBL learning, and (3) a positive attitude towards managing PBL learning. The specific training target is for teachers to master the skills in managing PBL learning (Hmelo-Silver, 2022) .

Teachers in elementary schools, especially in Pesawaran Regency, based on research conducted in 46 elementary schools, showed results regarding teachers' knowledge of managing PBL learning. The sample consisted of 2% of 248 elementary school teachers, which is 37 people. The average teacher knowledge about managing PBL learning mostly falls

into the low category (49.55%). Teachers' knowledge in the high category will certainly make it easier for them to understand the management of PBL learning and will support the effectiveness of its implementation (Hmelo-Silver, 2004). Based on the research findings mentioned above, training on PBL learning management is needed in elementary schools in Pesawaran Regency.

2. METHOD

The target of this activity is elementary school teachers from 3 schools in Pesawaran Regency, totaling 26 teachers. UPTD SDN 40 Negeri Katon has 9 participants, UPTD SDN 15 Negeri Katon has 8 participants, and UPTD SDN 17 Negeri Katon also has 9 participants. Research has been conducted for four years (2020-2024), producing studies related to the PBL learning model. The training to be carried out aims to bring these research results by connecting them with the abilities of elementary school teachers, with the hope that they will be able to manage PBL learning effectively. This training builds upon four years of prior research (2020-2024) conducted by our team, which focused on the implementation and challenges of the

Problem-Based Learning (PBL) model in elementary schools. These studies identified specific areas where teachers need additional support to effectively manage PBL. The training aims to translate these research findings into practical skills by aligning them with the abilities of elementary school teachers, thereby enhancing their capacity to implement PBL learning effectively.

The chosen method for this training is **andragogy-based training**, which is particularly suitable for adult learners and emphasizes a constructivist approach to knowledge building (Yuliani et al., 2024)

The method used in this activity is 'andragogy-based training.' This intervention was chosen because the target subjects are adults who need to be treated in a constructivist manner (Yuliani, L., Hufad, A., Komar, O., Karwati, L., & Hamdan, 2024). The alternatives that will be used to solve the problems formulated above are:

- a. Providing insights into the importance of managing PBL learning
- b. Providing training on PBL learning management
- c. Assigning tasks to manage PBL learning (Zulaikah, H., Herpratiwi & Nurwahidin, 2023)

These three activities are carried out using methods such as discussion, question and answer, group work, and practice.

3. RESULTS AND DISCUSSION

Results

The training activity on PBL learning management for elementary school teachers was attended by 26 participants. To determine the effectiveness of the activity, both process assessment and final test assessment were conducted. The assessment results provided the following information:

1. Participants showed good attention, as indicated by their enthusiasm during the training and their active participation in discussions and practice sessions.
2. Based on observations of participants during the training, the following information was obtained:
 - a. Participants showed fairly good attention in receiving the material.
 - b. Participants experienced an increase in knowledge and skills regarding the management of PBL learning.

Tables 1 and 2 show an improvement in knowledge and skills related to PBL learning management.

Table 1. Pre-Test and Post-Test of Elementary School Teachers' Knowledge on PBL Learning Management

No	Indicator	Pre-Test Score		Post-Test Score	
		Correct Answers	%	Correct Answers	%
1	PBL Learning Planning	7	26.92%	19	73.08%
2	PBL Learning Implementation	4	15.38%	22	84.62%
3	PBL Learning Evaluation	4	15.38%	22	84.62%
Average %		19.23%		80.77%	

Berdasarkan tabel 1 tampak bahwa terjadi peningkatan pengetahuan guru SD tentang pengelolaan pembelajaran PBL. Hasil pre tes yang dilakukan sebelum pelatihan masuk dalam kategori cukup baik (19,23%), dan sesudah pelatihan masuk dalam kategori baik sekali (80,77%).

Table 2. Pre-Test and Post-Test of Elementary School Teachers' Skills in Managing PBL Learning

No	Indicator	Pre-Test Score		Post-Test Score	
		Correct Answers	%	Correct Answers	%
1	Accuracy in identifying indicators	5	19.23%	21	80.77%
2	Accuracy in formulating learning objectives	5	19.23%	21	80.77%

3	Accuracy in organizing learning syntax	4	14.38%	22	84.62%	teachers can access various training programs more easily due to the availability of technology and information at any time. In addition to attending offline training, teachers can also participate in online training that involves technological and digital tools (Nugroho, R. A., 2022). According to Malcolm Knowles (1973), teacher training should apply the principles of andragogy (adult learning), as teachers are capable of continuing the training outcomes through self-directed learning and adjusting them to their individual needs. They can also use their experiences as a primary source of learning to complete training tasks, which can ultimately be directly applied in the classroom (Knowles, M. S., Holton III, E. F., & Robinson, P. A., & Caraccioli, 2025). Previous studies and pilot training sessions in similar contexts have shown that structured training on PBL can significantly improve teachers' ability to design student-centered learning experiences and facilitate inquiry-based activities. For instance, a study by Herpratiwi et al. (2022) reported that elementary school teachers who received PBL-focused training showed increased confidence in classroom facilitation and
4	Accuracy in selecting learning materials	3	11.54%	23	88.46%	
5	Accuracy in selecting learning media	5	19.23%	21	80.77%	
6	Accuracy in selecting student worksheets (LKPD)	5	19.23%	21	80.77%	
7	Accuracy in developing assessment instruments	4	14.38%	22	84.62%	
8	Accuracy in selecting subject matter	4	14.38%	22	84.62%	

Based on Table 2, it is evident that there was an improvement in teachers' skills in managing PBL learning. The pre-test results conducted before the training fell into the 'fair' category (16%). After the training, the score increased to 84%, which is categorized as 'very good'.

Discussion

Training is a process that a teacher must undergo to enhance their professionalism and fulfill their role as an educator (Abdullah, 2024). This enables teachers to carry out learning activities in accordance with their students' needs and the demands of the times. In today's era,

were more successful in promoting critical thinking and collaboration among students. Likewise, research by Nurwahidin & Zulaikah (2023) found a measurable improvement in students' problem-solving skills and learning motivation following the implementation of PBL by trained teachers.



Figure 1. Pre-Test and Post-Test of Elementary School Teachers' Knowledge on PBL Learning Management

Training is a process that leads to a change in behavior. This behavioral change is evident in the form of improved quality and competence of the training and education participants (Siregar, 2023). Education and training are essentially forms of activities within human resource development (personal development) programs. Human resource development is one of the key links in the personnel management cycle, defined as a process of staff improvement through various approaches that emphasize self-realization (awareness), personal growth,

and self-development (Noe, 2020). Development includes activities aimed at improving and enhancing the abilities, attitudes, skills, and knowledge of members of the organization (Wahyudi, 2020).

Training is a series of activities designed to improve a person's skills, knowledge, experience, or attitude. Training programs are highly beneficial for teachers, especially to improve performance, update skills in line with technological advancements, enhance competencies, prepare teachers, and align them with the school's vision (Gusnedi, A., & Handayani, 2024).



Figure 2. Pre-Test and Post-Test of Elementary School Teachers' Skills in Managing PBL Learning

4. CONCLUSION

1. Improvement of Elementary School Teachers' Knowledge

a. Pretest Result: 19.23%

This indicates that before the training, the average level of teachers' understanding or knowledge about PBL was still very low only about one-fifth of the total expected competency.

b. Posttest Result: 80.77%

After attending the training, the average teacher knowledge increased significantly, reaching more than four-fifths of the total expected competency.

c. Improvement 61.54%. This improvement reflects the success of the training in enriching teachers' insights into the concepts, principles, and implementation of Problem-Based Learning (PBL). This increase is considered very high and demonstrates the effectiveness of both the training materials and the delivery methods.

2. Improvement of Elementary School Teachers' Skills

a. Pretest Result: 16%

This indicates that before the training, teachers' skills in designing or managing PBL (Problem-Based Learning) were very limited.

b. Posttest Result: 84%

After the training, teachers' skills increased significantly, reaching a high level of mastery.

c. Improvement: 68% This means that teachers not only understand the theory of PBL but are also able to apply it practically in classroom learning activities. Such a significant improvement shows that the training was not only theoretical but also focused on hands-on practice and strengthening teachers' professional competencies.

The data shows that the training significantly improved elementary school teachers' knowledge and skills in managing PBL (Problem-Based Learning). This indicates that the intervention through this training was relevant, well-targeted, and should be further developed or replicated in other schools to continuously enhance the quality of learning.

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