

Development of Guided Training Model Based on Problem Based Learning for State Junior High School Teachers 4 Minas Siak District Riau Province

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ABSTRACT

Objective: This study aims to address the challenges in developing a Problem-Based Learning (PBL)-based guided training model for teachers at SMP Negeri 4 Minas, Siak District. The challenges include teachers' limited understanding of PBL concepts and applications, resistance to changing teaching paradigms, and the lack of effective evaluation methods for optimizing PBL implementation. **Methods:** The research employed a qualitative approach with fieldwork as its methodology. Data were collected from both primary and secondary sources. Primary data were obtained directly from teachers and students, while secondary data were gathered from school documentation. **Results:** The research findings indicate that the guided training process positively impacted the teachers' competencies in implementing the PBL model. Teachers transitioned from predominantly lecture-based methods to becoming more interactive facilitators, enhancing student engagement. The application of PBL in classrooms improved students' critical thinking, collaboration, and problem-solving skills. These improvements contributed to better student learning outcomes and an overall increase in the quality of education. **Novelty:** This study highlights the effectiveness of guided training in transforming teaching practices and improving educational quality through the PBL approach. It provides a practical framework for developing teacher competencies, addressing paradigm shifts in teaching methodologies, and optimizing evaluation processes to enhance the application of innovative learning models in schools.

INTRODUCTION

The development of a guided training model based on Problem Based Learning (PBL) for teachers is a strategic step in improving pedagogical competence and teacher professionalism. PBL is a learning approach that focuses on solving real problems, which not only improves students' critical thinking skills but also encourages teachers to act as facilitators in the teaching and learning process [1]. In this context, training for teachers must be designed by considering their specific characteristics and needs, as well as the challenges they face in implementing PBL in the classroom.

An effective training model must follow systematic stages, as proposed by Thiagarajan in the Four-D (4-D) model, which includes definition, design, development, and dissemination [2]. Through these stages, training can be adapted to the local context and teacher needs, so that the results are more relevant and applicable. Research shows that well-designed training can improve teachers' professional competence, which in turn has a positive impact on the quality of classroom learning [3].

One of the main challenges in implementing PBL is the shift from a teacher-centered learning approach to a more student-centered approach. Many teachers are still trapped in traditional teaching methods that are theoretical and oriented towards completing the curriculum [4]. Therefore, effective training should include strategies to help teachers understand and implement more innovative and interactive learning methods, such as PBL. This is important because students tend to value teachers who are able to motivate and engage them in the learning process [4].

In the context of PBL-based training, it is important to integrate practical experiences that allow teachers to experience firsthand how PBL can be applied in classroom situations. For example, training can include teaching simulations in which teachers practice designing and implementing problem-based learning activities [5]. Additionally, feedback from peers and mentors is also invaluable in this professional development process, as it can help teachers reflect on their practice and identify areas for improvement [6].

The importance of developing training models that focus on PBL is also evident from research showing that teachers trained in PBL are better able to develop critical and creative thinking skills in their students [7]. By implementing PBL, teachers not only teach academic content, but also equip students with the skills needed to face real-world challenges. Therefore, training designed for teachers should emphasize the importance of these skills and provide them with the tools necessary to integrate them into their teaching.

In developing this training model, it is also necessary to pay attention to aspects of technology and learning media. In today's digital era, teachers' ability to utilize technology in learning is very important. Training should include the use of digital tools that can support PBL, such as collaborative platforms and relevant online resources [8]. Thus, teachers are not only trained in PBL methods, but also in how to utilize technology to improve learning effectiveness.

Furthermore, evaluation and feedback are an integral part of any training model. After the training, it is important to conduct an evaluation to measure the effectiveness of the training and its impact on teachers' teaching practices [9]. Feedback from training participants can provide valuable insights into which aspects of the training were successful and which need improvement. With this data-driven approach, training model development can be carried out continuously to ensure its relevance and effectiveness.

In order to achieve the goal of developing this PBL-based training model, collaboration between various stakeholders, including government, educational institutions, and communities, is very important. This collaboration can create a supportive environment for teachers to implement PBL effectively in their classrooms [3]. With the right support, teachers will be more confident in implementing this method and contribute to improving the overall quality of education.

Thus, developing a PBL-based guided training model for teachers is an important step in improving their pedagogical competence. By following a systematic and integrated approach, this training can help teachers to be more effective in teaching and equip students with the skills needed for future success. Through proper training, it is hoped that teachers can transform into learning facilitators who are able to create a dynamic and interactive learning environment.

The development of a guided training model based on Problem Based Learning (PBL) for teachers at SMP Negeri 4 Minas, Siak Regency, Riau Province faces various problems that need to be considered. One of the main challenges is the limited understanding of teachers about the concept and implementation of PBL in the learning process. Many teachers still do not fully understand how to apply this approach effectively in the classroom, which results in their unpreparedness in adopting this problem-based learning method.

In addition, SMP Negeri 4 Minas is also faced with limited resources to organize comprehensive training. Lack of adequate facilities, limited time, and limited access to in-depth materials and training on PBL are serious obstacles to developing teacher skills. This makes existing training tend to be less than optimal and unable to meet teachers' needs as a whole.

In addition, the paradigm shift in teaching methods is the next challenge. PBL requires teachers to shift from their traditional role as material deliverers to more active facilitators in helping students solve problems. This change requires high readiness and willingness from teachers, which is not always easy to achieve, especially for those who are used to conventional teaching methods. Uncertainty about the effectiveness of this method in existing environments, as well as the lack of experience in implementing PBL, further exacerbates the situation.

Teacher motivation and readiness also play an important role in the success of this training. Not all teachers have the same level of motivation to adapt to new methods, and some may feel comfortable with the teaching methods they have been using for a long time. This can cause resistance to change and affect the success rate of implementing PBL in the classroom.

Finally, the lack of an effective evaluation system is one of the obstacles in developing this training model. Without clear and regular feedback, it is difficult to assess the extent to which the training has improved teachers' skills and abilities in implementing PBL. Limited evaluation can hinder the continuous improvement and development process needed to ensure successful PBL implementation.

Considering these challenges, the development of a PBL-based guided training model at SMP Negeri 4 Minas needs to be carried out carefully by paying attention to supporting factors such as understanding, facilities, motivation, and continuous evaluation so that it can be implemented effectively and have a positive impact on the quality of learning.

RESEARCH METHOD

This research is a qualitative research with a field research approach. This approach allows researchers to observe, interview, and interact directly with research subjects, namely teachers and students, in the context of implementing PBL in the classroom. The main objective of this approach is to gain a deep understanding of the training process, the obstacles faced, and their impact on the quality of learning.

The data sources in this study consist of two types, namely primary data and secondary data. Primary Data Source: Primary data was obtained directly from teachers and students at SMP Negeri 4 Minas, Siak Regency. Teachers were used as the main data source because they were the direct implementers in implementing the PBL-based learning model. Students, as learners, became the data source to observe the results of the application of the PBL model to their learning process, as well as its impact on their involvement and understanding of the material being taught. Secondary Data Source: Secondary data was obtained from related documentation, such as training planning documents, training materials used, and notes or reports related to the implementation of the PBL model in the school. This data was used to enrich the information obtained from primary sources and provide a broader context regarding the background of the study.

Data collection techniques in this study involved several methods, including: 1). Interviews: In-depth interviews were conducted with teachers and students to explore their experiences during the PBL-based guided training process, as well as the challenges they faced in its implementation. This interview aims to obtain direct perspectives from the main actors. 2). Observations: Researchers conducted direct observations in class to observe how teachers implement the PBL model in learning. This observation allows researchers to see the interactions between teachers and students, as well as the class dynamics that are formed during the implementation of the PBL method. 3). Documentation: Researchers collected documents related to the training process, training materials, and learning evaluations that have been carried out. This documentation is useful for providing an overview of the training content and the implementation of the PBL model in schools.

Data analysis in this study was conducted qualitatively using thematic analysis. This process includes several steps, namely: 1). Data Reduction: Data obtained from interviews, observations, and documentation were filtered and summarized to highlight information relevant to the research objectives. 2). Data Categorization: The summarized data were then grouped into certain themes related to teacher competency development, implementation of the PBL model, challenges faced, and their impact on learning. 3). Data Interpretation: Researchers interpreted the themes that emerged to understand the deeper context related to the process and impact of PBL-based guided training. 4). Verification of Findings: After the themes were identified, researchers verified the

findings by comparing the results of interviews, observations, and documentation to ensure consistency and relevance of the data.

To ensure the validity of the data, this study uses several techniques, namely: 1). Source Triangulation: Using various data sources (interviews with teachers and students, observation, and documentation) to verify the same findings from various perspectives, thereby increasing the validity of the data. 2). Method Triangulation: Using a combination of data collection methods, such as interviews, observations, and documentation, to obtain a more comprehensive picture of the phenomenon being studied. 3). Member Checking: After the data is analyzed, the researcher re-checks with the informants (teachers and students) to ensure that the interpretation and findings of the study are in accordance with their experiences and views. 4). Audit Trail: The researcher records every step of the study and decisions taken during the research process, allowing others to verify the results of the study based on the trail that has been made.

RESULT AND DISCUSSION

A. The Process of Developing Teacher Competence at SMPN 4 Minas in Implementing the PBL Learning Model Through Guided Training

This The process of developing teacher competency at SMPN 4 Minas in implementing the Problem Based Learning (PBL) learning model through guided training begins with identifying training needs. In the initial stage, an analysis of teacher understanding and skills in implementing PBL is carried out. As a result, most teachers do not fully understand the basic concepts and mechanisms of PBL, so they need more structured and targeted training.

The guided training begins with the provision of basic material on PBL, which includes understanding the concept, objectives, and steps for implementing it in learning. After that, practical training is carried out involving simulations and problem-based learning, which allows teachers to be directly involved in planning and implementing the PBL model. Here, teachers are not only given theoretical knowledge but are also encouraged to develop their skills in designing problems that are relevant to the subject matter and managing the dynamics of the classroom that arise.

In addition, this training also involves joint reflection which provides an opportunity for teachers to share experiences and challenges they face during the implementation of PBL. This process helps teachers to learn from each other and improve the methods applied, as well as strengthen their understanding of their important role as facilitators in problem-based learning. With intensive mentoring from training facilitators, teachers can gradually develop competencies in designing, implementing, and evaluating PBL-based learning.

So, the process of developing teacher competency at SMPN 4 Minas through PBL-based guided training takes place in stages and in a directed manner. Through an

approach based on direct experience and shared reflection, teachers can improve their skills in implementing this learning model more effectively in the classroom.

Developing teacher competencies at SMPN 4 Minas in implementing problem-based learning models (PBL) through targeted training is an important process to improve the quality of education. In the context of the Independent Curriculum, teachers are expected to have adequate pedagogical competencies to be able to act as effective facilitators in learning. According to Parwantani, many teachers are still not ready to face the demands of this new curriculum, so developing their competencies is very important [10]. This is in line with Lestari's research which emphasizes that teachers' understanding of the required pedagogical competencies is crucial for optimal curriculum implementation [11].

The process of developing teacher competency can be done through structured and ongoing training. Sirozi identified that teacher needs analysis is an important initial step in planning teacher quality development [12]. Well-designed training not only improves teachers' knowledge of learning methods but also practical skills in implementing the PBL model. Nugraheni and Jailani emphasized the importance of continuing professional development (PKB) to improve teacher competency and learning practices [13]. Thus, effective training must include elements that support mastery of the PBL model, such as innovative teaching strategies and classroom management skills.

The PBL model itself has been proven effective in improving students' critical thinking skills. According to research by Azizah et al., PBL allows students to be actively involved in the learning process by solving real problems, which in turn improves their learning outcomes [14]. This shows that teacher training in implementing PBL is not only beneficial for the development of teacher competence, but also has a positive impact on student achievement. Therefore, it is important for SMPN 4 Minas to conduct training that focuses on the implementation of PBL, so that teachers can develop the skills needed to create an interactive and effective learning environment.

So, the training conducted must include ongoing evaluation to ensure that teachers can apply the competencies they have learned in daily practice. Dewi emphasized that teachers' pedagogical competence needs to be trained so that they can create active and enjoyable learning [15]. Thus, targeted and ongoing training will help teachers at SMPN 4 Minas in improving their competence, which will ultimately contribute to improving the quality of education at the school.

B. The Influence of Guided Training on Improving the Quality of Learning with the PBL Model at SMPN 4 Minas

Guided training based on Problem Based Learning (PBL) at SMPN 4 Minas has been proven to have a positive influence on improving the quality of learning. After attending the training, teachers at this school showed significant improvements in their ability to design and implement problem-based learning. This is reflected in the teachers' ability to design problems that are relevant to the subject matter and are able to manage discussions and collaborations between students that occur during the learning process.

One of the main impacts of this guided training was a change in the teachers' teaching approach. Previously, most teachers relied on more traditional lecture methods, but after training, they began to adopt the role of facilitators, encouraging students to be more active in finding solutions to given problems. This paradigm shift increases student interaction in learning, where students are more motivated to find out and develop their critical thinking.

In addition, positive effects are also seen from the increase in student learning outcomes. By implementing the PBL model, students do not only receive information passively, but are actively involved in the learning process by solving the problems given. This improves students' critical thinking skills, creativity, and problem-solving skills, which leads to an increase in their academic results.

Guided training also brings changes in the way teachers evaluate learning outcomes. Teachers begin to understand the importance of evaluation that does not only focus on written tests, but also on process assessments, such as students' ability to collaborate, think critically, and solve problems independently. This PBL-based evaluation provides a more comprehensive picture of the development of student competencies, and helps teachers improve the learning process in the future.

Thus, PBL-based guided training at SMPN 4 Minas not only improves teachers' competence in implementing the PBL model, but also has a positive impact on the quality of learning. By implementing this method, teachers have succeeded in creating a more interactive learning environment and students have shown improvements in critical thinking and problem-solving skills. This influence has a significant impact on student learning outcomes and the overall quality of learning at the school.

Guided training has a significant influence on improving the quality of learning, especially in the context of the Problem-Based Learning (PBL) model at SMPN 4 Minas. This learning model emphasizes the active involvement of students in the learning process, which can improve their understanding and skills. Research shows that the application of the guided inquiry learning model can significantly improve student learning outcomes. For example, Sulistianingrum et al. stated that guided inquiry learning can improve students' understanding of scientific concepts and their science process skills [16]. This is in line with research by Yuniarti et al., which found that the guided inquiry learning model showed better learning outcomes compared to the cooperative learning model [17].

Furthermore, Dewi et al. showed that the integration of peer instruction in a guided inquiry model can improve students' critical thinking skills, which are an important component in problem-based learning [18]. This study confirms that when students engage in discussion and collaboration, they not only understand the material better, but also develop the critical thinking skills necessary in a PBL context. In addition, research by Sukmayadi shows that the use of digital learning resources in teacher training can

improve the quality of physics learning, which is also relevant to the implementation of PBL at SMPN 4 Minas [19].

The importance of training for teachers in implementing effective learning models is also emphasized by Hasmawaty, who stated that learning reflection and classroom action research (CAR) can help teachers improve the quality of their teaching [20]. Training that focuses on developing teachers' skills in using technology and innovative learning methods, as explained by Rahmawati et al., can support more effective implementation of PBL in the classroom [21]. Thus, guided training not only improves the quality of student learning but also empowers teachers to create a more interactive and engaging learning environment.

Thus, the results of the study indicate that the implementation of guided training in the context of the PBL model at SMPN 4 Minas can contribute significantly to improving the quality of learning. By actively engaging students and providing support to teachers through appropriate training, schools can create more meaningful and effective learning experiences.

CONCLUSION

Fundamental Findings : The guided training process based on Problem-Based Learning (PBL) significantly enhanced teacher competency in designing and implementing PBL approaches. Structured training, combining theoretical insights, practical application, and reflective sessions, enabled SMP Negeri 4 Minas teachers to grasp and apply PBL effectively. Intensive mentoring helped address challenges in transitioning to more active and facilitative teaching roles. **Implications :** The success of the guided PBL training underscores its potential as an effective professional development model for educators. By fostering teacher readiness to implement active learning strategies, the approach contributes directly to improving learning quality. This model can be adopted in similar educational settings to empower teachers and promote interactive, student-centered learning environments. **Limitations :** While the training showed promising results, its application was limited to SMP Negeri 4 Minas and depended heavily on continuous mentoring. The scalability of this model to larger groups or schools with different contexts requires further adaptation and resources to ensure similar outcomes without intensive one-on-one guidance. **Future Research :** Future research could explore the long-term effects of guided PBL training on teacher performance and student outcomes across diverse educational settings. Investigating scalable frameworks for broader implementation and identifying factors influencing teacher adaptability could provide valuable insights for sustainable professional development programs.

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