

## Analysis of the Challenges Faced by Teachers at SMPN 3 Bangkalan in Implementing Deep Learning Instruction

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**Abstract:** This study aims to analyze the challenges faced by teachers at SMPN 3 Bangkalan in implementing deep learning-based teaching. The method used is qualitative research with data collected through in-depth interviews with several teachers at SMPN 3 Bangkalan. The interview process revealed various information about the challenges teachers encounter during the application of this teaching method in the classroom. The results indicate that the main obstacles include the diverse abilities and backgrounds of students, which complicate providing balanced and effective learning for all. Additionally, some teachers' limited understanding of deep learning methods presents a barrier, especially since this approach is relatively new to many educators. Furthermore, inadequate school facilities also affect the smooth implementation of deep learning, impacting the quality of the teaching and learning process. Solutions implemented by teachers include differentiating learning based on student ability, varying learning media according to needs, and utilizing gadgets to make learning more interactive. Student responses to deep learning vary from enthusiasm and interest to confusion adapting to the method. These findings provide important insights into the challenges of implementing deep learning at SMPN 3 Bangkalan and offer recommendations to improve its effectiveness to better meet student needs.

**Keywords:** *deep learning; teacher obstacles; differentiated learning; learning media; SMPN 3 Bangkalan.*

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### INTRODUCTION

The approach deep learning has become one of the rapidly developing innovations in education in Indonesia. This emerged as a response to the demands of 21st-century education, which emphasizes the importance of deep conceptual understanding, critical and creative thinking skills, and problem-solving abilities (Ministry of Education and Culture, 2025). According to Fatmawati (2025), pembelajaran berbasis deep learning can transform the learning process by integrating digital technology in line with the characteristics of Generation Z students, who are digital natives. Hayati and Almuslim (2025) assert that the role of deep learning is crucial in improving learning quality because it effectively develops students' reflective and creative thinking skills.

In the context of education in Indonesia, especially at the junior high school level such as SMPN 3 Bangkalan, implementing deep learning presents specific challenges for educators. One common obstacle is the diversity of students' abilities and backgrounds, making it difficult for teachers to equalize comprehension levels within a single class. This situation requires teachers to apply differentiated learning, which means adjusting methods, media, and material difficulty levels to

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align with students' needs and characteristics. This principle becomes a vital foundation to ensure the learning process is effective and meaningful for all students. As stated by Pebriana et al. (2025), the success of based deep learning highly depends on teachers' readiness, especially in digital literacy and mastery of educational technology. This aligns with the survey result from Sulthan Thaha Saifuddin (2024), which reveals that teachers' readiness and competence in using technology are key determinants in the effective implementation of innovative learning approaches such as deep learning. Therefore, applying deep learning is not only about the method but also requires support in training and improving educators' competence to optimize teaching and learning processes and produce meaningful impacts for students.

Through this approach, learning is not merely focused on knowledge delivery but also on deepening meaning so students can relate lesson material to real-life situations. The implementation of differentiation allows learners to study according to their individual styles and abilities, using varied tasks, teaching strategies, and learning media. In deep learning contexts, differentiation becomes even more critical because the approach demands active participation, reflective thinking, and deep understanding from students abilities that vary widely among learners. Hence, teachers must be creative and flexible in choosing media and strategies that accommodate this diversity. The use of varied learning media also plays an important role in supporting deep learning success. Media such as videos, interactive quizzes, projectors, or smart TVs have proven to increase students' enthusiasm and engagement in the learning process. Attractive and interactive media not only strengthens comprehension through visual and auditory elements but also creates enjoyable and meaningful learning experiences. This aligns with the deep learning principles emphasizing meaningful learning, mindful learning, and joyful learning as core pillars for effective and high-quality instruction (Ministry of Education for Primary and Secondary Education, 2025).

Nonetheless, implementing deep learning at SMPN 3 Bangkalan still faces several obstacles. Apart from marked differences in student capabilities, limitations in facilities and supporting infrastructure also hinder teachers from conducting optimal learning activities. Many teachers report difficulty in providing adequate learning media, causing the learning activities to run sub-optimally (Interview with Teachers at SMPN 3 Bangkalan, 2025). These limitations are fundamental problems needing urgent solutions to enable a more effective deep learning implementation. Another challenge is the readiness and competence of teachers to apply deep learning methods. Some educators still require improved skills in designing and implementing learning consistent with deep learning principles, especially in differentiation and appropriate media utilization. A lack of deep understanding of the concept often results in suboptimal application, where students do not fully engage actively in the learning process.

The Ministry of Education and Culture emphasizes that teachers play a crucial role in the success of deep learning implementation. Hence, educators need adequate knowledge and skills to maximize this approach (Ministry of Education and Culture, 2025). Additionally, teachers' ability to manage technology and develop creative learning media is key to addressing varied student learning needs. Various research findings in Indonesia show the success of deep learning depends on the synergy between teachers' conceptual understanding, differentiation application, and sufficient media and infrastructure support. Thus, the obstacles teachers face come not only from student diversity but also from limited facilities and their own professional readiness.

At SMPN 3 Bangkalan, mapping these challenges is an important step to formulate more effective improvement strategies. The goal is to make learning more active, creative, and meaningful so students not only understand material deeply but apply it in daily life. Improving teacher competence through differentiation training, learning media development, and provision of adequate facilities becomes the main strategy to be implemented. This study focuses on analyzing the constraints teachers face in implementing the deep learning method at SMPN 3 Bangkalan as evaluation and future development material.

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## METHODOLOGY

This research uses a qualitative research method. The qualitative research method employed in this study aligns with Sugiyono's (2024) view that qualitative methods are effective in exploring the deep experiences and perspectives of research subjects, making it suitable to analyze the challenges and solutions in implementing learning deep learning. The qualitative method is used to analyze the obstacles faced by teachers at SMPN 3 Bangkalan in implementing learning deep learning. Data were collected through interviews with several teachers at SMPN 3 Bangkalan who use the deep learning method. The interviews aimed to explore experiences, challenges, solutions, and students' responses during the learning process. Additionally, observation was used as a supporting data source to obtain a more comprehensive picture of deep learning implementation in the classroom. Data analysis was conducted thematically through data reduction, data presentation, and verification to ensure information accuracy using source triangulation techniques.

The research results indicate several main obstacles, including variations in student abilities requiring different learning strategies, limitations in facilities and infrastructure, and teachers' understanding, which still needs to be improved regarding the deep learning method. Teachers use various learning media such as videos, quizzes, and technologies like projectors and smart TVs to address these issues. Additionally, students' use of gadgets becomes a solution in limited facility conditions. Students' responses also vary, ranging from active and creative to confused when facing this new method. With a qualitative approach, this study provides deep insights into the dynamics of deep learning and recommendations to improve teaching quality at SMPN 3 Bangkalan.

## RESULT AND DISCUSSION

This study reveals various challenges faced by teachers at SMPN 3 Bangkalan in implementing pembelajaran deep learning as well as the solutions undertaken to optimize the teaching and learning process.

### 1. Challenges Faced

Based on interviews with several teachers at SMPN 3 Bangkalan, it was identified that student ability differences are the main challenge. As stated by Mrs. Henny,

*“Every child is different; their abilities are different, so there must be solutions on how to teach so that they all understand.”*

This quote highlights the reality of diverse student abilities in the classroom that require teachers to apply varied and personalized learning approaches. Uneven abilities affect the speed and ways students understand, so teachers must carefully design strategies so all students can follow the material without feeling left behind.

The second challenge is the limitation of facilities and infrastructure supporting pembelajaran deep learning. Mrs. Fat emphasized,

*“Implementing deep learning requires facilities and infrastructure that heavily influence the process, whereas at SMPN 3 Bangkalan, these facilities are still minimal.”*

This statement underlines the importance of proper infrastructure to effectively carry out deep learning. This method usually requires digital technology and interactive media that support deep exploration and reflection. Technology limitations potentially hinder the implementation of an ideal learning method since deep learning relies on deep interaction and advanced learning media.

Mrs. Fat also revealed that some students feel confused by the deep learning method applied.

*“Students feel confused with deep learning,” she said.*

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This confusion may arise because deep learning differs from traditional, often more passive, methods. This approach demands active involvement and critical thinking that students may not be accustomed to. Therefore, intensive guidance is important so students can adapt to this new way of learning.

Regarding teachers' understanding of the deep learning method, Mrs. Nanik said,

*"The method is new; teachers also need to study more deeply what deep learning really is."*

This statement shows the challenge of improving teachers' capacity to master deep learning concepts and techniques. Teachers who do not fully understand will struggle to teach this method optimally. Competence development is key to ensure the learning implementation runs effectively and produces positive impact.

Despite this, students' responses to deep learning tend to be positive. Mrs. Nanik conveyed,

*"Most responses are positive; the children are more active and creative during learning."*

This positive response indicates that deep learning can increase student motivation and participation when adapted to their needs. Activities stimulating creativity and active participation create an enjoyable and meaningful learning atmosphere, resulting in optimal learning outcomes.

## 2. Solutions Implemented

Various solutions applied by teachers at SMPN 3 Bangkalan focus on using diverse and flexible learning media. Media such as videos, quizzes, and technologies like projectors and smart TVs are often used to capture students' attention and encourage participation. Mrs. Henny shared a strategy involving differentiated learning models and providing Student Worksheets (LKPD) tailored to students' abilities and interests to make them feel comfortable and interested in the material. Mrs. Henny also said,

*"Videos, quizzes, lectures, basically various methods can be used."*

This approach, combining various media and methods, helps accommodate different learning styles and maintain student interest. The use of LKPD adjusted to students' ability and interests assists them in understanding the material in the most effective way for their needs.

Periodic media replacement is also done to avoid student boredom, as Mrs. Nanik explained,

*"If the children get bored with one media, I switch to another so they stay more active and creative."*

This strategy shows teachers' awareness to keep students' learning dynamics and enthusiasm high. Varied media provide different stimulation, reducing boredom and boosting creativity in the learning process.

Teachers also adapt by utilizing students' gadgets as learning media. According to Mrs. Fat,

*"Children are allowed to use gadgets during learning."*

Using gadgets as learning media is an adaptation to current technologies, which have become an essential part of students' lives. Nevertheless, gadget use must be accompanied by strict supervision to keep students focused and prevent distractions from irrelevant content during learning. This is a practical solution to optimize available resources.

Discussion from this research confirms that the success of deep learning implementation is strongly influenced by teacher readiness, student responses, and availability of learning facilities. Differentiated approaches are key to addressing varied student abilities, so teachers need high creativity in designing learning that matches students' characteristics. Moreover,

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facility limitations must be overcome with creative solutions such as utilizing existing technology ranging from simple smartphones to other digital devices. This research also shows that technology-based learning can improve student motivation and creativity if used appropriately and purposefully. Additionally, teacher readiness is the main factor that requires ongoing attention. Teachers must continue to learn and develop their competencies, especially in understanding and applying new learning methods such as deep learning. The success of this method depends not only on tools and media but also on how teachers manage the learning process deeply so that students grasp concepts holistically and critically.

Positive student responses that are active and creative indicate that the deep learning method yields positive impacts when adapted to their needs. Despite initial confusion, patient guidance and explanation from teachers help students adjust to this new learning approach. Overall, this research shows that existing challenges are not permanent barriers but challenges that can be overcome through flexible learning strategies, enhanced teacher competencies, and support from adequate facilities. Future recommendations include more intensive training for teachers on deep learning and improving technology infrastructure in schools, so the implementation of this learning method can be more optimal and provide maximum results for the development of students at SMPN 3 Bangkalan

## CONCLUSION

This article examines the challenges faced by teachers at SMPN 3 Bangkalan in implementing deep learning. Research findings indicate that primary obstacles include diversity in students' abilities and backgrounds, teachers' limited understanding of this learning method, and insufficient supporting school facilities. Teachers address these challenges through differentiated instruction, utilizing varied media such as videos, interactive quizzes, projector technology, and leveraging students' personal devices. Student responses to deep learning vary from enthusiastic and active participation to initial confusion in adopting the method. The article recommends enhancing teacher competencies through targeted training and upgrading school technology infrastructure to support more effective and meaningful deep learning for all learners.

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