

Understanding the concept of the deep learning approach in using storytelling methods in elementary schools

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Abstract

Deep learning in the educational context emphasizes not only theoretical mastery of learning materials but also meaningful learning that involves experiences and real-life situations. This approach encourages students to think critically and creatively and to solve problems through exploratory and interactive activities, such as storytelling. The storytelling method was chosen because it creates an enjoyable learning atmosphere, increases student participation, and fosters students' intrinsic motivation. Therefore, teachers need to comprehensively understand the concept of the deep learning approach before implementing it through storytelling. This study aims to explore teachers' understanding of the deep learning approach in the use of storytelling in elementary schools, as well as the challenges they face in integrating storytelling with deep learning. This study employed a qualitative approach with a case study design, with data collected through interviews and questionnaires. The participants were 10 elementary school teachers in West Java who had at least four years of teaching experience and were civil servants. The results showed that some teachers had a positive understanding of the importance of the deep learning approach. However, several teachers still encountered challenges in implementing this approach effectively, including limited in-depth understanding, difficulty generating story ideas, and challenges in managing students with diverse learning styles. This study suggests the need for continuous teacher training and the development of appropriate story ideas based on students' learning styles at each grade level.



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INTRODUCTION

The quality of learning in elementary schools in Indonesia increasingly demands an approach that goes beyond the mastery of information. Learning should also encourage students to construct meaning, reflect on their understanding, and apply knowledge to real-world situations. These skills are highly relevant in the 21st century. However, the learning process in many elementary schools in Indonesia still tends to rely on conventional approaches that emphasize memorization, assignments, and final assessments rather than deep thinking (Wibowo et al., 2022). The OECD emphasizes that reading in today's era is no longer merely about extracting information but also about constructing knowledge, thinking critically, and making informed judgments. PISA 2022 data show that only around 25% of Indonesian students reached at least Level 2 in reading. This situation indicates that efforts to strengthen the quality of learning must be directed toward learning experiences that encourage conceptual understanding, reflection, and transfer. The foundations for these abilities need to be developed from elementary school (Dini et al., 2024).

One learning approach that may provide a solution to this problem is deep learning. Deep learning is understood not as an umbrella term that loosely encompasses critical thinking, creativity, collaboration, and problem-solving, but rather as a quality of learning characterized by an orientation toward understanding and linking new knowledge to existing knowledge structures (Fullan et al., 2018). Deep learning not only encourages students to understand learning materials at the surface level but also enables them to explore content more deeply, connect knowledge with personal experiences, and apply it in real-life contexts. This approach invites students to think critically, produce innovative solutions, and develop more focused and comprehensive understanding (Hoiris Zuhro et al., 2024). In practice, deep learning is positioned as an approach that can foster critical thinking, creativity, and problem-solving skills, rather than merely serving as a general definition that supports the learning process (Ak, 2008).

Based on this explanation, one method that can support deep learning is storytelling. Storytelling has strong potential as a medium for deep learning because it helps students organize experiences, understand cause-and-effect relationships, and connect new concepts with contexts that are closer to their lives. Storytelling is also an effective pedagogical method because it can encourage essential verbal skills. Through this method, students can engage in deeper learning by participating in dialogue, creating narratives, gaining experience, and increasing self-confidence (Azmi, 2019). However, storytelling does not automatically produce deep learning. It becomes a deep learning activity when it is designed to connect prior knowledge, encourage students to make predictions, provide space for dialogue, and guide students to interpret and apply what they learn (Maureen et al., 2018).

Empirical findings support this potential. Research on elementary school students shows that storytelling methods can improve reading comprehension (Rhamadhani & Solihati, 2024). In addition, in early childhood education in Indonesia, storytelling is not

only implemented traditionally but can also be supported by digital media. This is evidenced by the findings of Hidayat et al. (2024), which suggest that digital storytelling can significantly improve literacy skills compared to regular learning activities. These findings indicate that storytelling has the potential to develop students' abilities not merely as a technique for entertainment or oral language delivery, but as a means of connecting representation, meaning, and conceptual understanding (Al-Mansour & Al-Shorman, 2011).

According to data from the Ministry of Education, Culture, Research, and Technology in 2022, 68% of teachers still use conventional methods such as lectures. Meanwhile, creative methods such as storytelling have not been optimally utilized to build students' deep understanding. The main problem lies in the limited understanding of teachers regarding how to integrate deep learning approaches into storytelling. Most teachers still view storytelling merely as entertainment or as a way to introduce material, rather than as a tool for developing higher-order thinking skills. Based on the principles of deep learning, stories can be an effective method for encouraging students to analyze, evaluate, and reflect on the values and messages conveyed.

However, several studies have shown that the relationship between storytelling and deep learning has not been fully explored. A systematic review showed that many studies on storytelling are still limited to implementation reports and focus on relatively narrow contexts, such as literacy, humanities, or learning outcomes. Even when storytelling is specifically directed toward active participation and higher-order thinking among elementary school students, researchers still consider this approach relatively novel. In the learning design process, they also encounter difficulties in integrating student participation, critical thinking, and social content into a single storytelling activity. This indicates that the integration mechanism between storytelling and deep learning still requires more specific theoretical and pedagogical explanation (Wu & Chen, 2020).

On the other hand, research on teachers' understanding and readiness for deep learning in Indonesia has begun to develop. Several studies in elementary schools indicate that teachers tend to view deep learning positively, but their conceptual understanding remains limited. Its implementation has not yet reached the expected targets, and the process of translating policy into classroom practice is hindered by inadequate training, limited resources, administrative burdens, and uneven institutional support. Other studies on the use of storytelling also indicate that teachers generally have positive perceptions of stories as learning media or teaching materials. However, these studies have been dominated by discussions of literacy, teaching material development, or needs analysis. Therefore, previous research has not explicitly brought these two fields together to answer a more urgent question: how elementary school teachers understand deep learning in the context of storytelling, and how this understanding is translated into concrete pedagogical practices in the classroom (Idris Jafar, 2025).

Based on this explanation, this study aims to explore teachers' understanding of the deep learning approach in using storytelling methods in elementary schools, as well as the challenges they face in integrating storytelling with deep learning. This study is not merely directed at confirming that storytelling is useful for teachers in addressing implementation challenges. Rather, it seeks to analyze more specifically how elementary school teachers understand the concept of deep learning when using storytelling methods and which aspects of deep learning can be integrated into storytelling activities.

METHOD

This research employed a qualitative approach with a case study design. The study aimed to explore elementary school teachers' understanding of the deep learning approach in the use of storytelling methods, as well as the challenges they encountered in integrating storytelling into classroom learning. A case study design was considered appropriate because the research focused on examining teachers' perceptions, experiences, and pedagogical practices within a specific educational context.

The participants consisted of 10 elementary school teachers, including nine female teachers and one male teacher, from several elementary schools in West Java, Indonesia. The participants came from four public schools and one private school in Bandung City, three public schools in Cimahi City, one public school in Indramayu, and one public school in Purwakarta. The participants were selected using purposive sampling based on several criteria: they were elementary school teachers, had at least four years of teaching experience, were civil servants, and were willing to participate in the study. These criteria were established to ensure that the participants had sufficient teaching experience and relevant knowledge regarding classroom learning practices.

Data were collected through questionnaires and semi-structured interviews. The questionnaire was used to obtain an initial overview of teachers' understanding of the deep learning approach and their experiences in using storytelling methods. Meanwhile, semi-structured interviews were conducted to obtain more in-depth information about teachers' perceptions, implementation strategies, and challenges in integrating deep learning with storytelling. The interview topics covered five main components: teachers' understanding of the deep learning approach, the implementation of deep learning through storytelling methods, strategies for teaching storytelling to students, the measurement and assessment of students' storytelling abilities, and challenges in implementing the deep learning approach.

The research instruments were developed based on indicators of deep learning and storytelling methods. The questionnaire and interview guidelines were designed to explore how teachers understood deep learning, how they applied storytelling in learning activities, and how they identified students' engagement, reflection, creativity, communication, and problem-solving during storytelling activities. During the data collection process, all participating teachers completed the questionnaire, and selected responses were further explored through interviews.

The data obtained from questionnaires and interviews were analyzed qualitatively. Questionnaire data were organized in tabular form to identify general patterns based on the measured components. Interview data were analyzed using the Miles and Huberman model, which consists of data collection, data reduction, data display, and conclusion drawing or verification (Miles et al., 2014). Data reduction was conducted by selecting and categorizing information relevant to teachers' understanding of deep learning and storytelling. The reduced data were then presented in narrative descriptions and tables to facilitate interpretation. Finally, conclusions were drawn by identifying recurring themes, similarities, and differences in teachers' responses. To strengthen the credibility of the findings, the data from questionnaires and interviews were compared through source and technique triangulation.

RESULT AND DISCUSSION

Result

The results present data related to teachers' understanding of deep learning through the storytelling method. Teachers' understanding was classified into three main aspects: elementary school teachers' understanding of deep learning, the implementation of deep learning through the storytelling method, and the challenges encountered in implementing the deep learning approach.

Elementary School Teachers' Understanding of Deep Learning

The results of data analysis and reduction related to teachers' understanding of deep learning indicate that teachers' knowledge of critical thinking still needs to be improved. This can be seen from the explanations provided by the teachers, which remained general and had not yet reflected a comprehensive understanding of deep learning. The data show that teachers were not yet able to explain the concept of deep learning clearly or describe how it should be implemented in classroom instruction, as presented in Table 1. The interview data also reveal that teachers were able to answer questions in general terms; however, they were still unable to describe the approach and stages of deep learning in depth. This condition occurred because most teachers had not yet received sufficient information about deep learning through professional development activities, such as training, workshops, or seminars.

Table 1. Teachers' Understanding of the Deep Learning Approach

Definition of Deep Learning	Verification Mark
Understanding the eight dimensions of the graduate profile.	Not all teachers have a thorough understanding of deep
Understand the main principles of conscious, meaningful, and joyful learning.	
Providing learning experiences by understanding, applying and reflecting.	

Creating an educational ecosystem that supports learning that includes four components: pedagogical practices, learning environments, utilization of digital technology, and learning partnerships.
 learning.
 Deep and meaningful learning process.
 Ability to understand deep learning approaches with other approaches.

Other responses indicate that teachers' understanding of the deep learning approach remains partial and incomplete. Although teachers expressed positive perceptions of deep learning as a deep and meaningful learning process, there was a significant gap between their conceptual understanding and their practical skills in implementing it in the classroom. Several responses also indicated that teachers recognized the importance of deep learning in supporting students' learning processes. Therefore, learning should begin to develop a mindset that deep learning encompasses holistic conceptual understanding, reflection, and problem-solving. It should also integrate awareness into the learning process and contribute to the creation of a supportive educational ecosystem.

Implementation of Deep Learning Through the Storytelling Method

For the second topic, teachers were asked to explain the implementation of deep learning through storytelling. They were expected to describe the appropriate application of storytelling and its implementation process in their classrooms. The results are presented in Table 2.

Table 2. Implementation of Deep Learning Through the Storytelling Method

Implementation of Deep Learning through Storytelling Method	Verification Mark
Choosing stories that are appropriate to the age and development of students	Teachers know that deep learning approaches can be integrated into storytelling methods.
Inviting students to listen to stories with good classroom conditioning.	
Deliver story content in different styles to suit students' learning styles.	
Integrating elements of deep learning with storytelling methods. Provide an evaluation after the storytelling method.	

The data show that the implementation of deep learning through storytelling methods has a positive impact. Teachers believed that storytelling could be integrated into the deep learning approach. The findings indicated that teachers understood that deep learning could be achieved through various methods. However, some teachers stated that several initial obstacles in implementing storytelling included selecting interesting story ideas, choosing stories appropriate to students' developmental stages, and allocating sufficient time to determine stories to be delivered to students.

Teaching Storytelling Methods to Elementary School Students

For the third issue, teachers were asked to explain their strategies for teaching storytelling. They were expected to describe appropriate learning methods for improving students' storytelling skills in their classrooms. The results are presented in Table 3.

Table 3. Teachers' Knowledge of the Application of Storytelling Methods in Elementary Schools

How to measure storytelling ability?	Verification Mark
Provide an evaluation that meets the standards of storytelling ability. Supplement it with strong literature. By improving the quality of reading materials I use a fun teaching method I teach using methods that involve students to be active in learning activities. I invite students to convey their ideas and data through discussion activities. I use role playing, show and tell, group discussion, and chain story methods. Provide an evaluation that refers to Bloom's theory	Conceptually and operationally, some teachers are not yet able to implement deep learning in learning activities.

The data show that teachers' understanding of storytelling methods has a positive impact. Teachers believed that teaching students to tell stories could be achieved through various learning models. The findings revealed that teachers already understood that storytelling methods could be taught through enjoyable learning activities involving gradual speaking practices. The teachers' explanations demonstrated their understanding of how learning activities could be implemented to improve students' storytelling skills through role-playing, show-and-tell, and chain storytelling methods.

Table 4. Teachers' Understanding of Storytelling Methods for Students

How to Improve Storytelling Skills	Verification Mark
Encourage students with lots of discussion learning activities and collaboration between groups. Using the story based pedagogy learning method Carry out process-based learning activities and periodic observations Providing quality reading materials and learning materials Ask students to dare to express their opinions during the learning process. Provide periodic evaluations to find out Practice speaking skills and evaluate each achievement Train students in storytelling in stages Create books, media, and games that can hone speaking skills.	Conceptually and operationally, most teachers are still unable to explain the right strategies to improve storytelling skills through learning.

The data regarding teachers' understanding of how to improve students' storytelling skills are presented in Table 4. At this stage, teachers were expected to determine appropriate learning activities to improve students' storytelling skills. The data indicate that teachers still need to develop a clearer understanding of how to improve students' storytelling skills both conceptually and operationally.

Measuring Storytelling Ability

The results of data analysis and reduction are summarized in Table 5. Teachers' responses showed that some teachers were able to measure and assess students' storytelling abilities by describing performance indicators, confirming students' progress based on observations and presentations, and assigning scores.

Table 5. Teachers' knowledge about the application of storytelling methods

How to measure storytelling ability?	Verification Mark
Provide an evaluation that meets the standards of storytelling ability.	Conceptually and operationally,
Conduct direct observations of linguistic and non-linguistic aspects in real-time.	some teachers are not yet able to
Conduct verbal ability assessments using various methods.	implement deep learning in
Conduct process-based assessments.	learning activities.
Tests and assessment observations during the learning process.	
Changing the learning paradigm.	
Conduct tests in written form and open questions	
Provide tests in oral form and appropriate instruments	

The results were considered relevant because teachers were able to identify various appropriate instruments for measuring storytelling ability, such as direct observation and assessment of the accuracy of word choice in relation to the context of the story being told. Another response explained that one way to assess storytelling ability is by conducting process-based assessment during learning activities, so that teachers' evaluations do not focus solely on final outcomes. These responses indicate that teachers conceptually understand several instruments for assessing storytelling ability. However, their explanations were still limited to the assessment process at the speaking performance stage and did not yet explain how storytelling ability could be measured using Bloom's taxonomy.

Table 6. Challenges in Implementing Deep Learning Approaches

Deep Learning Implementation Challenges	Verification Mark
I am ready to implement deep learning.	Conceptually and operationally, some teachers are not yet able to implement deep learning in learning activities.

The results indicate that teachers do not yet have a comprehensive understanding of deep learning; therefore, they still face various challenges in implementing the deep learning approach. Several responses showed that teachers experienced difficulties in adapting to the new learning paradigm. In this process, teachers are required to identify students' individual interests and characteristics and adjust learning activities to remain meaningful and enjoyable for each student. This requires a deeper understanding of pedagogy and technology. In addition, teachers also need to understand various instruments that are appropriate for measuring critical thinking skills, such as essay questions based on contextual problems.

The challenges faced by teachers were identified from the results of a questionnaire distributed to 10 teachers in West Java, consisting of 12 statements. The following section presents the recapitulation of the teacher questionnaire results.

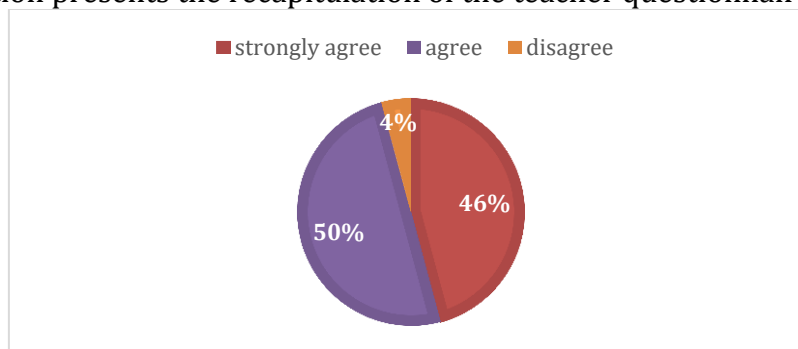


Figure 1. Recapitulation Results

The results of the questionnaire in the graph above show that 55 students answered "Strongly Agree", 60 answered "Agree", and 5 answered "Disagree." Of the total number of questionnaire statements given to 10 teachers, 12 were given to 55 teachers.

Discussion

The demands of learning approaches in the current era in elementary schools include the integration of digital technology, student-centered learning, personalization, collaboration, project-based learning, inclusivity, strengthening digital literacy, and adaptation of curriculum and learning approaches. All of this aims to prepare students to face future challenges with critical, creative, and adaptive thinking skills (Kasmad et al., 2023). The deep learning approach is crucial for teachers in elementary schools to overcome complex challenges in the modern era. In 21st-century education, the focus of learning shifts from simply memorizing information to the ability to understand, analyze, and produce solutions based on knowledge (Fitri et al., 2025). The deep learning approach can be integrated with the storytelling learning method in elementary schools by connecting the stories told with the context of students' real lives so that learning becomes more contextual, meaningful, and enjoyable (mindful, meaningful, joyful).

However, the results of this study indicate that teachers still need to understand the concept of the deep learning approach. The results of the study show that teachers need a more appropriate approach to train them to implement the deep learning

approach in storytelling method learning. Referring to these problems, socialization is still needed to deepen the understanding of the deep learning approach. In addition, training on the deep learning approach is also needed to introduce new approaches to the storytelling method learning process to elementary school teachers. These socialization and training activities are important for teachers in strengthening their understanding of the deep learning approach. Some stated that this was the biggest challenge in implementing the approach, resulting in the limited ability of teachers in implementing the learning that must be taught to students, including determining story ideas that are appropriate to the learning style and developmental age of students.

The deep learning approach is an important thing to use to obtain learning activities that require inclusivity and contextual relevance. In its implementation, teachers can adjust the material to the cultural, social, and environmental backgrounds of students, so that learning becomes more meaningful and respects diversity (Yuliani et al., 2021). Therefore, the deep learning approach is very suitable to be taught in the learning process so that students can experience meaningful learning and can increase learning motivation because students can see the relationship between lessons and their real experiences, so they are more interested and enthusiastic in learning.

Recognizing the importance of the deep learning approach in the use of storytelling, teachers must equip themselves with maximum understanding. Learning activities must begin with determining an interesting story to be conveyed to students. Several research results show the need to change the understanding of traditional learning approaches to be innovative in teaching learning through real learning and real experiences. This innovative learning approach is learning that involves the active role of students. (Nur Akmal & Maelasari, 2025, uses constructivism and provides opportunities for students to explore their problem-solving abilities (Gafar Hidayat et al., 2025).

The research also showed that most teachers understood that storytelling methods can be integrated into deep learning approaches by adapting classroom conditions, especially for lower grades. Teachers must be able to select unique stories that suit the students' environmental conditions. This will significantly impact students' listening skills. Most teachers also stated that they understood that teaching storytelling skills to students could utilize learning methods such as role-playing, show and tell, and chain storytelling. Another opinion stated that the difficulty of implementing storytelling methods with students was because some students were not interested in the storytelling style when teachers delivered the material. In general, teachers had received information related to the deep learning approach.

However, their knowledge of the elements, approaches, and steps in implementing deep learning was insufficient, resulting in inadequate implementation. In general, teachers had received training on implementing deep learning. They could also obtain information about learning models from teacher textbooks or other references. However, teachers' knowledge of various learning methods alone cannot be used to measure their success in teaching storytelling skills. Teachers also need to understand

the activities within each learning method to improve their storytelling skills. Teachers need to pay attention to these activities.

CONCLUSION

The results of this study indicate that not all elementary school teachers adequately understand the deep learning approach using storytelling. Teachers still need to fully understand the deep learning approach to integrate it into storytelling-based learning by providing gradual, process-based assessments and conducting direct observations of both linguistic and non-linguistic aspects, as well as verbal assessments. Teachers already understand the importance of storytelling skills for students. However, their knowledge of the importance of storytelling still needs to be improved, and this is not accompanied by in-depth knowledge of learning methods that can hone storytelling skills. Although teachers understand that students can be taught storytelling skills through learning models (for example), they still need clarification on how to implement them. While teachers are the primary actors in implementing the learning process that can hone storytelling skills, all educational institutions share the same responsibility to improve education in this country. The government and education experts must find solutions to address this issue. One solution is to provide teacher training on learning methods that can integrate storytelling into the deep learning approach, especially at the elementary school level. Furthermore, the availability of learning resources, such as textbooks and other resources, requires further attention from the government, schools, and education experts.

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