

Teachers' Perceptions of Deep Learning as a New Paradigm in Innovative Learning

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Abstract

In the 21st century, human life has undergone transformations in various sectors, which is one of the signs of the era of globalization and openness. Therefore, an educator needs to implement technology during the teaching and learning process to produce human resources with the knowledge and skills necessary to compete in the era of globalization. However, the reality is that some teachers have a low understanding of implementing innovative learning models. This study aims to investigate the aspects that influence teachers' perceptions, namely acceptance, understanding, and assessment, which are linked to the effectiveness of implementing deep learning in elementary schools. This research uses a qualitative approach with a case study method involving two classroom teachers at SDN Serang 17. Research data was collected thru structured interviews using snowball sampling techniques, non-participant observation, and documentation. The research results indicate that teachers demonstrate positive acceptance, understanding, and assesment of deep learning implementation. This enables the creation of active and meaningful learning through student involvement, the use of concrete and digital media, and the teacher's role as a facilitator.. The teacher also demonstrated a good understanding of the principles of mindful, meaningful, and joyful learning, which was reflected in their teaching practices.

Keywords: Teacher perception, Deep learning, Innovative learning.

INTRODUCTION

In the 21st century, human life is undergoing transformation in various sectors, which is one of the signs of the era of globalization and openness. This change is developing rapidly in all sectors, including the education sector. From that statement, it's clear that life in this century faces many challenges that require all activities to remain connected to digital technology (Somantri, 2021). Therefore, an educator needs to implement technology during the teaching and learning process to produce human resources with the knowledge and skills necessary to compete in the era of globalization. Education must adapt to new lifestyles and learning methods. Instead of the traditional teaching methods that emphasize the role of the teacher, education today should be student-centered. Teachers are expected to support students' desire to create products and their curiosity, as well as actively guide students with various solution suggestions when needed. If a teacher wants to succeed in leading students' learning process, they must start by deeply understanding the students and then design teaching plans that are tailored to each student's unique characteristics (Soylemez, 2023). Kemendikbudristek (2022) emphasizes that 21st-century learning requires students to be able to seek information from various sources, think analytically, and collaborate in solving problems, thus learning must be designed to be more active, creative, and contextual. This condition makes learning

innovation an urgent need for education to remain relevant and produce students who can compete in the global era.

Teachers play a central role in primary education because they not only act as deliverers of learning materials, but also as character builders, mentors, and motivators for students. Basic education is an important foundation for building essential competencies and values that will shape students' academic journeys and future lives (Paridah et al., 2025). Teachers are no longer sufficient as mere information providers, but must be able to create active, creative, meaningful learning experiences that are in line with technological developments (Izmala et al., 2025). Additionally, teachers are the primary element determining the success of the learning innovation process, as they interact directly with students and play a significant role in creating an engaging, enjoyable, and challenging learning environment (Hamda et al., 2021). Therefore, teachers' competence in innovating, developing creative learning strategies, and utilizing technology becomes key for learning to meet the demands of the 21st century. Therefore, teachers' competence in innovating, developing creative learning strategies, and utilizing technology becomes key for learning to meet the demands of the 21st century.

Various policies and research confirm that teachers are the key to the success of innovative learning because they play the biggest role in determining the quality of students' learning outcomes. National policy thru the independent curriculum (Kemendikbudristek., 2022) positioning teachers as the main drivers of learning change by giving them the flexibility to design creative, differentiated, and 21st-century competency-oriented learning.

In this regard, according to Sadriani et al. (2023) in the digital age, the role of teachers is not only that of educators but also of facilitators who help students utilize various learning resources, including technology as a learning medium. Therefore, teachers must be more proficient in using technology than students in the digital age. Teachers not only help students, but they also motivate and inspire. This is emphasized by Nandini & Indrasari that teachers also contribute to bringing innovation to the learning stage by choosing the appropriate learning model, as this affects students' learning outcomes (Hidupi et al., 2024).

The reality is that some teachers have a low understanding of implementing innovative learning models in teaching practice. The causes are a lack of understanding, insufficient training, and minimal facilities to support the application of innovative learning models (Lestrai & Riastini, 2024). Research showing that the learning process seems less than optimal because the learning is designed without providing diverse and stimulating experiences for students (Safitri et al., 2021). Regarding this, research has shown that teachers experience difficulties in developing learning materials and in managing their time when using innovative learning models (Wijayanti et al., 2018).

Indonesian education is currently in a significant phase of transformation, marked by curriculum policy changes that demand fundamental adaptation to teaching methods and goals in the digital age. In this context, an important discourse emerges regarding the implementation of deep learning as a curriculum philosophy aimed at shifting the focus from rote memorization to a more holistic and in-depth conceptual understanding. Conceptually, deep learning is very important for several key reasons, primarily because of the ever-changing world and the need to prepare future generations (Muvid, 2024). Abdul Mu'ti stated that deep learning is an effort to shift the learning approach from focusing on material delivery to a learning method that emphasizes conceptual understanding and its application in daily life (Kementerian Pendidikan dan Kebudayaan Republik Indonesia, 2025). Therefore, the learning process no longer focuses solely on memorization, but also encourages students to actively participate in building their understanding and provides them with opportunities to find easy ways to learn (Hendrawan et al., 2025). This transition toward an innovative learning model places teachers in a highly strategic role, as they must be able to design new program and learning practice innovations.

The novelty of this research is demonstrated thru three main aspects: differences in methods, indicators, and research findings. According to Agustina et al. (2025) the study they researched used a quantitative method, while this study uses a qualitative method. This research emphasizes three aspects: (1) differentiated learning; (2) encouraging students to think critically; and (3) enjoyable

learning (Hidayat & Haryati, 2025). The research indicators that will be discussed are mindful, meaningful, and joyful learning. The novelty of this research lies in its different focus compared to previous studies, such as Raup et al. (2022), who reviewed deep learning from a technical application perspective. This research actually examines teachers' perceptions, including their understanding, readiness, and ability to design in-depth learning strategies, as determining factors for the successful implementation of deep learning in schools. This perspective is important because the implementation of the independent curriculum requires teachers to be able to develop learning activities that encourage higher-order thinking, while not all teachers adequately understand the concepts and assessments of in-depth learning. Thus, this research makes a new contribution by showing that the quality of deep learning implementation is highly influenced by how teachers interpret and master the concept.

The urgency of this research stems from the 21st-century educational need to present innovative learning that requires teachers to understand current pedagogical approaches, including deep learning, which is now one of the directions of the Merdeka Curriculum transformation. Although policy has made teachers the main drivers of change, various studies show that many teachers still lack an adequate understanding of the concept of deep learning. Conversely, the application of deep learning in elementary schools is more frequently studied from a technical perspective and its effects on students, without considering how teachers' views influence its successful implementation. This situation creates a discrepancy between curriculum demands, 21st-century skills needs, and teacher readiness as the core implementers. Therefore, this study is crucial to assess teachers' perspectives on deep learning as an innovative learning paradigm.

Based on the background above, the purpose of this study is to investigate the aspects that influence teachers' perceptions, namely acceptance, understanding, and assessment, in relation to the effectiveness of implementing deep learning in elementary schools. Therefore, this study is expected to provide an empirical basis for strategies to improve teachers' competence in supporting the optimal implementation of deep learning.

METHODOLOGY

This research was conducted to explore teachers' perceptions of deep learning, using a qualitative approach. Menurut Lim (2025) qualitative research, which highlights context, existence, experience, perspective, meaning, and subjectivity, provides a different angle for examining and understanding the complexities of social phenomena. Qualitative research, which highlights context, existence, experience, perspective, meaning, and subjectivity, provides a different angle for examining and understanding the intricacies of social phenomena. The type of qualitative research used in this study is a case study. A case study is an elaboration of a real-life situation that generally involves decisions, challenges, opportunities, problems, or issues faced by an individual or an organization (Estaiteyeh & DeCoito, 2024). Case studies were chosen because they can deeply and contextually reveal teachers' perceptions of deep learning thru a comprehensive understanding of real-world experiences and practices in the field.

This research involved two classroom teachers at SDN Serang 17. The interviews and observations for this study were conducted on October 2nd, October 16th, October 30th, and November 1st. The sampling technique used is snowball sampling. Snowball sampling requires asking initial participants to recommend others who meet the research criteria, allowing researchers to expand their sample thru social networks (Ting et al., 2025).

Data for this study were collected thru structured interviews, non-participant observation, and documentation. The second-grade teacher at SDN Serang 17 who uses a deep learning approach in their teaching is the subject of a structured interview. The interview questions were prepared in advance and adapted to the indicators of teacher perception according to Walgito (2010), namely teacher acceptance, understanding, and assessment of deep learning. The purpose of this interview is to obtain clear and focused information about teachers' perceptions of the implementation of deep learning in the classroom. Additionally, the non-participant observation method was used to observe the teacher implementing deep learning in the classroom during two meetings, without the researcher being directly involved in the learning activities. This method is used to observe naturally occurring

situations without altering the subject's behavior. Documentation was collected from school records, teaching modules, and photos of teacher and student activities during the in-depth learning process. By combining these three techniques, it is hoped that the data obtained will have high validity.

This research uses data analysis methods according to Miles and Huberman, which include data reduction, data presentation, and conclusion drawing/verification. Data reduction refers to the process of selecting, focusing, simplifying, abstracting, and transforming the data found in recorded field notes or transcripts (Kinanthi et al., 2024). Field notes were taken by observing or observing deep learning. Data presentation, which means that the data obtained has been categorized and then presented in the form of a story, was done with the aim of interpreting the data systematically. Furthermore, field data collected from the reduction stage was used to draw conclusions.

The validity of the data in this study is ensured thru four methods: credibility, transferability, dependability, and confirmability. The logic behind the researcher's choices must be understandable to the reader and capable of providing a sense of credibility to the researcher. According to Jensen, the credibility of research is evident when readers and participants can understand the research design and assess that the design is reasonable. Researchers typically select study participants with the assumption that they are capable of representing the entire population. Confirmability is the degree to which research findings are truly based on the research objectives. As for dependability, it emphasizes that research is dynamic and cannot be fully understood from the outset because research does not occur in a single moment (Stanley & Robertson, 2024).

RESULTS AND DISCUSSION

Reception

Teachers' Acceptance of Deep Learning

Based on the interview results, teacher 2 accepted the concept of deep learning. She stated:

"Deep learning is an in-depth study of learning. Children need to not only understand the theoretical concepts but also practice them, so there needs to be learning media, including digital ones, and the teacher is just a facilitator while the students are the active participants. Deep learning is actually good, but the learning media needs to be innovated and developed, and digital technology needs to be introduced continuously".

This finding is supported by observation; it is evident that classroom learning already reflects the application of deep learning concepts. The teacher acts as a facilitator, guiding the learning process, while the students appear actively engaged in constructing their own understanding thru discussion and question-and-answer activities. Students not only passively received explanations but also showed enthusiasm in responding to questions and tried to connect the material to their real-life experiences.



Figure 1. The Teacher as a Facilitator

Based on the data obtained, it is evident that teachers understand the concept of deep learning and show a positive response to the acceptance of the deep learning concept in the learning process. Teacher 2 understands deep learning as a process of deepening learning that emphasizes the active involvement of students. This view aligns with Agyeman (2024) research, which states that deep learning can be seen as a more in-depth learning approach; students not only master knowledge but are also encouraged to engage actively and participate thru activities such as discussions,

presentations, and projects. Guru 2 also believes that the role of teachers in deep learning is not just to transfer knowledge but to be facilitators. This aligns with the findings of Hamda et al. (2021), which indicate that teachers who effectively act as facilitators are able to provide more interactive and student-centered learning approaches. Teachers are able to recognize students' potential, emotional needs, and learning styles, and use effective teaching strategies to create meaningful learning experiences. Additionally, research by Sulistriani et al. (2021) indicates that teachers, as facilitators, are able to provide pedagogical, psychological, and cognitive development resources for students.

Acceptance of Mindful, Meaningful, and Joyful Learning Aspects

Acceptance of the mindful learning aspect, based on the results of the interviews conducted, teacher 2 believes that:

"Oh... I know about mindful learning from the training I attended yesterday. Basically, it's about letting children learn consciously, not just sitting and listening. So, before starting the lesson, I usually ask the children to calm down first. They tend to have fluctuating moods, so I calm them down, then we pray together, and then we do a little reflection to help them focus. I like the concept because it makes the classroom atmosphere more conducive to learning".

This finding is supported by observation results showing that when learning was about to begin, teacher 2 was seen inviting students to pray first. The atmosphere was calm, and the children sat neatly. After that, teacher 2 asked the students, "What do you think we're going to learn today?" The children immediately started guessing excitedly. This shows that Teacher 2 is indeed accustomed to having the children focus before starting the learning activity. The classes are also more and not too crowded.



Figure 2. The teacher when Leading Students in Prayer Together

Based on the research findings, teachers have a positive reception toward the aspect of mindful learning. Teachers understand mindful learning as an aspect that can help students learn with full awareness, focus, and emotional readiness before starting learning activities. The teacher's statement that they encourage students to be calm, pray, and reflect briefly before learning indicates that the teacher has applied the basic principle of mindfulness, which is to condition the mind and emotions so that students are fully present in the learning process. This finding is supported by Winarti et al., (2025) research, which shows that mindful learning is a strategy for students in the learning process that focuses on transforming concepts into new forms by integrating existing ideas or thoughts. Mindfulness plays a role in social-emotional development because during the learning process, students consciously manage and accept the diverse feelings they experience. According to Ausubel (Ramadhan, 2025), students receive new knowledge by connecting it to what they already know, rather than memorizing new knowledge separately. In implementing learning, mindful learning requires designing activities that promote reflection and self-awareness. Teachers can incorporate practices such as reflective journaling to enable students to record their experiences and thoughts regarding the learning process, metacognitive discussions, and positive feedback sessions that help students identify their strengths and areas for improvement in their learning process (Dewi et al., 2025).

Acceptance of the meaningful learning aspect, based on the interview results, teacher 2 stated:

"Meaningful learning is, in my opinion, very important. Children understand things faster when the lessons connect to their lives. For example, when learning about the environment, I asked them to bring plants to plant together. So the lessons feel real, not just understanding the material deeply and meaningfully from a book".

This finding is reinforced by the observation results during mathematics learning with flat shapes as the material. The second teacher invited the students to look at objects around the classroom and relate them to objects in their surroundings. He asked, "What shape is this whiteboard?" "What shape is that wall clock?" The children immediately answered together, some saying it was rectangular, others saying it was round. Children were also asked to find other objects that had a similar shape. In this way, students become more understanding of their lessons because the lessons are connected to objects they see every day.



Figure 3. The Teacher Connects Learning with Concrete Objects

Based on the findings, it shows that teachers encourage students not only to learn theory but also to practice it directly thru concrete media and relevant activities. This is supported by research by Rahman et al., (2024), which states that meaningful learning is a concept that emphasizes the connection between newly acquired knowledge and students' existing experiences and knowledge. Meaningful learning combines new information with existing cognitive frameworks, allowing students to develop a deeper and more relevant understanding. This aligns with the perspective that meaningful learning occurs when new information is connected to concepts students have already understood. Meaningful learning is a crucial foundation in the deep learning approach, enabling students to understand the material more deeply and comprehensi (Hafidzhoh et al., 2023). This process involves integrating new information with the students' existing knowledge framework. Implementing meaningful learning in the teaching process involves a variety of pedagogical strategies that encourage students to develop their own understanding. Teachers design learning activities that allow students to explore the connections between new concepts and their everyday experiences (Yetti, 2025).

Acceptance of the Joyful Learning Aspect, based on the interview results, Teacher 2 believes that "if it's enjoyable, then it's a must." Elementary school children get bored quickly, so I usually include small games, songs, or clapping to keep them engaged. The observation results were evident when teacher 2 explained the material, showed an interactive attitude toward the students, and made the atmosphere comfortable. There were also some small games; the children were invited to play a game of guessing flat-shaped objects around them. Although the atmosphere was lively, it seemed conducive. The children look happy and are still focused on their learning.



Figure 4. The Child was very Enthusiastic while Playing Game



Figure 5. Media used during Mathematics Learning



Figure 6. Digital Media used during Mathematics Learning

A fun learning atmosphere, such as the one implemented by the teacher thru simple games, can make students more focused, enthusiastic, and actively involved in understanding the material. Students are able to enjoy the learning process, remain conducive even in a lively atmosphere, and maintain focus on learning activities. This result aligns with research (Donasari, 2023) confirming that a fun learning process supports critical thinking skills and deeper understanding by providing students with opportunities to experience enjoyment and creative expression in the learning process. A learning approach called joyful learning emphasizes the importance of creating a fun learning environment so that students feel comfortable and motivated to participate actively. A pleasant learning environment can make it easier for students to grasp the material, understand what they are learning, and be more confident in expressing new ideas (Ramadhan, 2025). Additionally, this method has a positive social impact as it strengthens relationships between students and teachers. According to Ayala & Acuna, (2024) emphasize that engaging experiences enhance focus and cognitive recall.

Understanding

Understanding the Aspect of Mindful Learning, based on the interview results, teacher 2 explained that mindful learning is understood as a process of learning with full awareness, where children know what they are learning and their learning goals. She also mentioned that he often asks the children what they learned that day so they can think and become more aware of their learning goals. Based on the results during the lesson, the second teacher invited the students to look at the shapes of flat figures. She said, "Now look carefully, what shapes are in this book?". The children began to name them one by one in soft voices, while looking at the pictures in the book. He occasionally approached the tables, and the students looked focused and were truly paying attention to the shapes they were learning. The class felt calm, but still active. The teaching method of this teacher shows that they train students to learn consciously and attentively.



Figure 7. The Teacher Shows The Picture in The Book

Based on the data obtained, it is evident that Teacher 2 consistently applied the principles of mindful learning thru activities that guided students to learn with full awareness. The teacher familiarizes students with what they are learning and the learning objectives thru reflective questions, and also directs their attention to the activities. The calm yet active classroom atmosphere indicates that the students are truly mentally present, focused, and engaged in the learning process. This is supported by the research findings of Piscayanti, which state that mindfulness-based learning can improve students' focus and attention, which is crucial for helping them master complex and in-depth learning materials (Feriyanto & Anjariyah, 2024). Teacher 2 not only demonstrated an understanding of mindful learning but also strengthened the evidence that this aspect is effective in fostering more meaningful and in-depth learning. Students were taught not only to pay attention to the material being studied but also to learning methods, strategies applied, and how they could improve the effectiveness of their learning process (Dewi et al., 2025). Other research shows that implementing mindful learning is effective in improving students' learning outcomes and self-control (Permana et al., 2022).

Understanding the Aspect of Meaningful Learning, based on the interview, teacher 2 stated, "If it's meaningful learning, then it's learning that is truly understood, not just memorized". For example, when we were learning about flat shapes, I had them use real objects, like a ruler to measure the sides or folded paper to see the shapes. So they can see and hold it directly, not just hear my explanation. Children understand, not just memorize numbers. The observation results show that after finishing explaining the material, teacher 2 gave paper to the children. They were asked to draw various flat shapes and then count their angles one by one. After that, the children colored their drawings to make them more interesting. Teacher 2 looked at their work one by one, occasionally helping students who were still having difficulty calculating angles. Based on observation, students appear enthusiastic and more understanding because they are practicing directly themselves, not just listening to explanations.

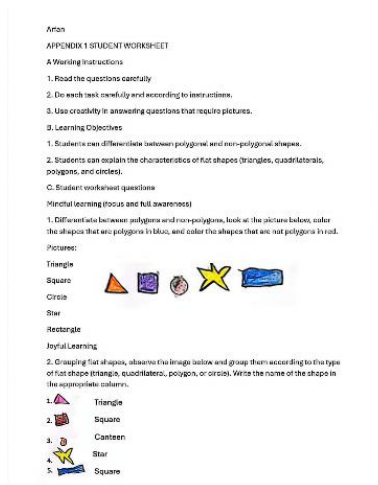


Figure 8. The Teacher Gives the LKPD to the Students

The learning conducted by teacher 2 demonstrates the application of meaningful learning, as students are encouraged to understand concepts thru direct experience rather than just memorization. Using concrete objects like rulers or things around them can help students connect concepts with real-life experiences, leading to a deeper understanding. Drawing, angle calculation, and coloring activities also encourage active engagement and provide opportunities for students to discover the meaning of the material they are learning on their own. This finding aligns with research stating that meaningful learning can enhance critical thinking and problem-solving abilities thru relevant learning experiences. By providing students with the opportunity to practice, observe, and complete tasks independently, Teacher 2 not only reinforces conceptual understanding but also cultivates higher-order thinking skills essential for learning. Meaningful learning emphasizes the connection between new knowledge and students' prior experiences or knowledge (Nuriana et al., 2023). According to Ausubel, if new information can be significantly integrated into existing cognitive structures, learning will be more effective (Dewi et al., 2025).

Understanding the Aspect of Joyful Learning, based on the interview results, teacher 2 stated :
"I think fun learning is really important. Children like things that have movement and games. After math class. I invite them to play games, for example, guessing the shapes in the classroom, so they don't get bored but learn. If the children are happy, they will also understand the lessons more easily".

The observation results show that teacher 2 gave origami paper to the students and then asked them to match it with square, triangle, rectangle, and circle shapes in front of the class. The children looked very enthusiastic; some stood up immediately, while others eagerly raised their hands wanting to come forward. The atmosphere is lively but enjoyable. Teacher 2 smiled and said, "Wow, that's amazing!" "Clap for those who are brave enough to come forward!" This is evident in the fact that Teacher 2 always appreciates students with verbal or nonverbal expressions, making the students appear happy.



Figure 9. Students Match the Shapes of the Images

Teacher 2 implements fun learning thru game activities, movement, and interactions that keep students active and enthusiastic. Strategies like guessing shapes and matching origami paper to flat figures successfully created a lively learning atmosphere, with students appearing enthusiastic, rushing forward, and fully engaged in the activity. Additionally, Teacher 2 consistently provides both verbal and nonverbal appreciation, such as praise or applause, which creates a positive atmosphere and boosts student motivation. This finding is supported by the research results of Adeyinka-Ojo et al., (2025) which explain that joyful learning-based instruction is an approach that refers to a pleasant learning experience. This type of learning engages teachers and students in various enjoyable activities aimed at achieving sustainable learning outcomes. As for similar research Kasner (2023), it explains that joyful learning fosters an energetic and enthusiastic learning atmosphere, which is believed to reduce emotional barriers to learning and increase intrinsic motivation. Therefore, teacher 2 practice shows that enjoyable learning not only creates a positive learning experience but also supports

students' emotional engagement, allowing the material to be understood more effectively. In this regard, teachers must be innovative and creative in creating enjoyable learning experiences in the classroom. Fun learning is learning that adapts to students' psychological and cognitive development and is conducted in a pleasant environment. Learning should take place calmly and enjoyably, and students should be motivated to learn (Permana et al., 2022).

Assessment

Assessment of the Mindful Learning Aspect, based on interviews, teacher 2 explained that assessment is usually done thru assessments, and this is very influential in learning because it must align with the material being taught and the learning media used. Therefore, there is a connection between the learning process and its assessment. Observation results during the lesson show that the students appear calmer and more focused. They listened while teacher 2 spoke, although some students were still chatting. It is evident that the teaching method he uses makes students more aware of their learning process.



Figure 10. Students Enthusiastically Asked Questions

Teacher 2 demonstrates the understanding that assessment needs to align with the learning process, the materials used, and the media, so that assessment becomes an element integrated with students' learning experiences. This practice was evident when students showed a calmer, more focused attitude and were aware of their learning process throughout the activity. This alignment indicates that assessment is not merely measuring outcomes, but also serves to support the learning process. Consistent with research Siregar & Fauzan (2025), the main focus of mindful learning is awareness and attention in learning. Meanwhile, the goal is for students to be active, critical, and open-minded in their thinking. This principle emphasizes the awareness that each individual has a different background, potential, and learning style. Teachers are expected to recognize the uniqueness of each student, so they can adjust their teaching approach to encourage active engagement and critical thinking. Thus, students are encouraged to think consciously and creatively during the learning process.

This finding is also consistent with the research by Nurul et al. (2025) which explains that mindful learning is able to encourage students to actively evaluate the effectiveness of their learning methods, thus creating more adaptive learning habits. Thus, mindful learning serves as a bridge between academic learning and the development of higher-order thinking skills. Students engaged in mindful learning tend to be more capable of analyzing information in depth, evaluating various perspectives, and generating innovative solutions to the problems they face (Dewi et al., 2025). In learning practice, implementing mindful learning requires designing activities that promote reflection and self-awareness.

Assessment of meaningful learning aspect, based on the interview results, teacher 2 stated that:

"I look it from the children's abilities; sometimes some children can do it, and some cannot. For example, some children grasp or respond quickly; sometimes I assess them based on that. Usually, lower-grade students ask a lot of questions, which means they respond quickly and finish their tasks fast, but sometimes there are children who still can't. Those who can't sometimes take a long time just to do or write the questions, so they have to be waited for".

The observation results were evident when, at the end of the math lesson, Teacher 2 asked the students, "Come on, who can give an example of a rectangular object at home?" The children immediately answered in unison, "The door, Ma'am!" "The window, Ma'am!" Teacher 2 looked pleased because the students were able to answer with real-life examples. This shows that they truly understood. Then, after that, teacher 2 asked the students again, "Does anyone have any questions?" At that moment, one of the children asked about the angles in a circle, and the teacher answered immediately. Teacher 2 gave praise, saying "That's a good question!" and showed appreciation by giving a thumbs up.



Figure 11. Students Enthusiastically Answered The Questions

Teacher 2 implements assessments that focus on students' individual abilities and their responses during the learning process. Teacher 2 assesses students' understanding not only thru task results, but also thru their speed of response, ability to ask questions, and how they complete tasks or activities. This approach shows that teachers view assessment flexibly and authentically, adapting to the characteristics of lower-grade students who are still very diverse in their abilities and learning styles. This aligns with research explaining that meaningful learning is focused on connecting with prior experiences. The goal is for students to understand and be able to apply the knowledge they have gained in their daily lives. Meaningful learning occurs when students are able to connect new knowledge with existing experiences or knowledge (Siregar & Fauzan, 2025). Meaningful learning achieved thru theoretical and practical aspects can be done simultaneously. Meaningful learning provides skills to be creative and innovative. Students have access to the knowledge, skills, and attitudes to solve problems (Hernández & González, 2022). This creates meaningful learning for students, allowing them to better understand and internalize information.

Assessment of joyful learning aspect, based on the interview results, teacher 2 said, "So the children are focused on the task, and to keep them focused on learning, it must be complete with media and teaching aids, especially if there are games; they get a little curious, want to move forward, and it makes learning more enjoyable. There must be media so the children keep thinking they want to keep moving forward." Based on the observation results, it was shown that at the end of the activity, teacher 2 gave the worksheets to their students, who were then asked to answer questions and draw flat shapes. Before collecting their work, they looked at each other's drawings with a small laugh. Some said, "Mine is purple, Ma'am!" Teacher 2 accepted their work with a smile and said, "Wow, they're all very good!" The children sat back down quietly while tidying up their drawing tools. The class felt lively and enjoyable, but still focused because he maintained a positive learning atmosphere until the end of the activity.



Figure 12. The Students Worked on the Worksheet

The findings indicate that Teacher 2 uses media, visual aids, and game-based activities to maintain focus while creating a fun learning environment. The use of LKPD (Student Worksheet) that involves drawing activities makes students actively and creatively engaged, while the interaction between students showing each other their drawing results proves that they enjoy the learning process. The teacher also provides verbal appreciation that strengthens students' self-confidence and motivation, keeping the classroom atmosphere lively yet focused. This finding aligns with research revealing that Assessment as Learning (AaL) plays a crucial role in supporting joyful learning, which is a positive, inclusive, and motivating learning process that fosters comfort, safety, and enthusiasm for learning (Swastika, 2025).

Similar research also explains that teachers can invite students to play interactive quizzes or create small, engaging games. Students become active, laugh, and are enthusiastic about learning because the learning atmosphere feels like play. Teachers can also provide time for reflection and discussion, as deep learning requires time for students to reflect on their understanding. Group discussions, learning journals, and formative assessments are used to help students become aware of their thinking processes (Siregar & Fauzan, 2025). It use of varied and innovative teaching methods also serves as a supporting factor in the implementation of joyful learning. Fun methods, such as games, group discussions, and collaborative projects, can increase student participation in the learning process (Purwanti et al., 2025). This indicates that using engaging media, providing positive feedback, and actively involving students can foster enjoyable and meaningful learning.

CONCLUSION

This research has explained teachers' perceptions of deep learning. Based on the research findings, teachers at SDN Serang 17 showed acceptance of the deep learning concept, as evidenced by their openness to implementing learning that emphasizes active student involvement, the use of concrete and digital learning media, and the teacher's role as a facilitator. The teacher also demonstrated a good understanding of the principles of mindful, meaningful, and joyful learning, which was reflected in teaching practices that emphasized full awareness before learning, connecting the material to students' real-life experiences, and creating a fun and interactive learning environment. In terms of assessment, the teacher implemented authentic and contextual evaluations that assessed students' focus, responses, creativity, and active engagement, which aligns with the principles of deep learning.

The effectiveness of applying deep learning in the classroom is supported by the integration of teachers' acceptance, understanding, and assessment, which is capable of creating a participatory, meaningful, and enjoyable learning experience. Supporting factors such as the school environment and teacher training also strengthen implementation. However, limitations in facilities and resources, including learning media, visual aids, and digital media, pose obstacles that hinder the optimal implementation of deep learning.

Therefore, to consider these findings, this study implies that to improve the effectiveness of deep learning implementation in elementary schools, there is a need to enhance supporting facilities

and infrastructure, including digital learning media and adequate learning resources. Additionally, developing teacher skills thru continuous training is crucial for strengthening acceptance, understanding, and assessment abilities that align with the principles of mindful, meaningful, and joyful learning. The practical implication is that schools need to continuously integrate innovative and participatory learning strategies, making students' learning experiences deeper, more meaningful, and more enjoyable, while also promoting the development of teachers' pedagogical competence and the optimal use of available learning resources.

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