

Enhancing Elementary School Teachers' Understanding and Practical Skills in Implementing a Deep Learning Approach

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Abstract

Since early 2025, the Indonesian government, c.q. The Ministry of Primary and Secondary Education has introduced a deep-learning approach to primary and secondary education. This new approach aims to improve education quality by relying on three pillars: mindful, meaningful, and joyful learning. Many elementary school teachers, however, have not fully understood the approach due to limited access to training and professional development programs. Considering this, the community service team from the English Education Study Program at Sultan Agung Islamic University held a one-day workshop to help enhance elementary school teachers' understanding and ability to apply the approach in their classrooms. The workshop was a collaboration between the community service team and the Ahmad Yani Teacher Working Group (KKG), and was held on November 27, 2025, at the SDN Bergas Lor 01, Bergas subdistrict, Semarang Regency. Fifty-five teachers from various elementary schools in the KKG area participated in the workshop. They were presented with the deep learning approach and related topics, such as growth mindset, assessment in deep learning, the SOLO taxonomy, teaching strategies, and more. They worked in groups, discussed, and demonstrated learning strategies. After the workshop, participants were given assignments to deepen the material. Feedback from the survey suggests that the teachers participated well and enjoyed the workshop, finding it beneficial for developing their skills. However, due to time constraints, the workshop was unable to fully explore the deep learning approach. Therefore, more training and workshops are still needed.

Keywords: deep learning; elementary school teachers; teacher-working group; workshop

Abstrak

Sejak awal tahun 2025, pemerintah, dalam hal ini Kementerian Pendidikan Dasar dan Menengah, telah memperkenalkan pendekatan pembelajaran mendalam (deep learning approach) untuk pendidikan tingkat dasar dan menengah. Pendekatan baru ini dimaksudkan untuk meningkatkan mutu pendidikan dengan bertumpu pada 3 pilar, yaitu pembelajaran yang berkesadaran (mindful), bermakna (meaningful), dan menyenangkan (joyful). Banyak guru-guru sekolah dasar belum sepenuhnya memahami pendekatan karena terbatasnya akses terhadap pelatihan dan program pengembangan profesi. Mempertimbangkan itu, tim pengabdian masyarakat Program Studi Pendidikan Bahasa Inggris Universitas Islam Sultan Agung melaksanakan lokakarya sehari guna membantu meningkatkan pemahaman dan kemampuan guru sekolah dasar dalam menerapkan pendekatan tersebut di dalam kelas. Lokakarya tersebut merupakan kolaborasi antara tim pengabdian dan Kelompok Kerja Guru (KKG) Gugus Ahmad Yani, dan dilaksanakan pada 27 November 2025 bertempat di aula

SDN Bergas Lor 01, Kecamatan Bergas, Kabupaten Semarang. Lima puluh lima guru dari berbagai sekolah dasar di wilayah KKG berpartisipasi dalam lokakarya tersebut. Kepada mereka dipaparkan pendekatan pembelajaran mendalam dan hal-hal terkait seperti pola pikir bertumbuh, asesmen pada pembelajaran mendalam, taksonomi SOLO, dan lain-lain. Peserta bekerja kelompok, berdiskusi, dan memperagakan strategi pembelajaran yang sesuai dengan pembelajaran mendalam. Pasca lokakarya. Hasil survei umpan balik menunjukkan bahwa peserta bisa mengikuti dan menikmati kegiatan tersebut dan merasakan manfaatnya untuk mengembangkan kemampuan mereka. Walau demikian, karena keterbatasan waktu, lokakarya tersebut belum bisa sepenuhnya mengeksplorasi pendekatan pembelajaran mendalam. Pelatihan dan lokakarya lainnya masih perlu diselenggarakan untuk mereka.

Kata kunci: guru sekolah dasar; kelompok kerja guru; lokarkarya; pembelajaran mendalam

INTRODUCTION

Since early 2025, the government of Indonesia, specifically the Ministry of Primary and Secondary Education (*Kementerian Pendidikan Dasar dan Menengah*), has introduced deep learning as an educational approach (Feriyanto & Anjariyah, 2024; Nafi'ah & Faruq, 2025). Rather than a method, deep learning is more often considered a pedagogical approach (Cahyanto, 2025) or a pedagogical framework designed to foster meaningful and mindful learning beyond what the traditional approach relies on, namely, memorization. While a method provides teachers and educators with systematic procedures, techniques, or strategies for presenting learning content, an approach provides them with a principled, holistic framework that integrates learning theories and pedagogies with classroom practice (Brown, 2001). One of the advocates of deep learning is Fullan et al. (2017), who proposed the term. According to them, education is a process of acquiring the six global competencies, popularly known as 6C, namely citizenship, character, collaboration, communication, creativity, and critical thinking (Fauziati, 2025). In a deep learning approach, students are expected to acquire knowledge and understanding of global and intercultural issues, learn through real-life experiences with people from different cultures and backgrounds, and develop mutual respect among themselves.

In the Indonesian educational context, a deep learning approach is implemented in classrooms, emphasizing mindful, meaningful, and joyful learning (Nafi'ah & Faruq, 2025; Warnia WR et al., 2026). Mindful learning is an active, conscious approach to knowledge acquisition that emphasizes presence, awareness, and context, rather than memorization alone. In mindful learning, students are expected to notice the presence of new information, see it from multiple perspectives, so that deeper understanding and resilience can be fostered (Nadia et al., 2025). Meaningful learning, as the second characteristic, is the learning in which new knowledge is actively integrated with learners' existing knowledge, involving learners' active engagement, contextualization, relevance, and cognitive association. Meaningful learning requires students to actively participate in the learning process. The students must not be in a passive role. Instead, they actively analyze information, discuss it with friends and teachers, and if it is possible, directly apply it (Mubarok et al., 2022). Joyful learning, as the third characteristic, is learning activities that can trigger a positive emotional atmosphere. It is an anxiety-free classroom in which students feel pleased and comfortable and actively involve themselves in the learning process (Bhakti et al., 2018; Cahyanto, 2025). Through mindful, meaningful, and joyful learning, students can develop their intellect, ethics, aesthetics, and kinesthetic abilities in a holistic, integrated manner.

In addition, a deep learning approach offers holistic learning by actively stimulating and developing the four main dimensions of human being, namely thinking (cognitive and intellectual), heart processing (ethical and moral), feeling (aesthetic and emotional), and sports (kinesthetic and physical). With deep learning, a balance among the four dimensions can be

achieved (Alim et al., 2025). Given its characteristics, together with its mindful, meaningful, and joyful learning practice, many scholars believe that a deep learning approach can significantly improve the quality of our education and provide solutions to the challenges of 21st-century education (Luthfiyah et al., 2025; Sulasmi, 2025).

However, studies show that the number of teachers effectively implementing a deep learning approach in their classrooms remains very small, and they face many challenges. For example, a study by Sari et al. (2025) found that elementary school teachers who implement a deep learning approach are still limited. Even if some of them do, the level of innovation and creativity in implementing the approach is still very low. In the case of teaching strategies, for example, many teachers are found to follow only the directions and models provided in books or by trainers. They are not yet confident enough to design their own innovations. Sulasmi (2025) also found that, despite its potential to improve educational quality, teachers' readiness to implement the approach remains low. More teacher training is still very necessary. Similarly, Iriawan et al. (2025) found that the level of implementation of this approach has not been optimal and suggest that further development of teachers' conceptual understanding and emotional and social readiness remains necessary. Juarminson (2025), based on his study, also found that more training for teachers, resource allocation, and school supports are very necessary. However, studies have consistently found that, in general, school support for teacher professional development is very low (Nugroho et al., 2024). Therefore, support from outside schools, such as universities and non-governmental organizations (NGOs), is important.

Considering the teachers' condition as mentioned above, the English education study program at Universitas Islam Sultan Agung formed a community service team and tasked it with preparing a program to help teachers develop a better understanding and skills in a deep learning approach. The team consisted of lecturers who are experts in deep learning and have strong presentation skills. In organizing the community service program, the team was assisted by a support team of administrative staff and senior students. After communicating with potential target groups, the team finally decided to collaborate with a Teacher-Working Group (*Kelompok Kerja Guru (KKG)*) of elementary school teachers from the Bergas subdistrict of Semarang District. It was the KKG of Ahmad Yani Group. In addition to knowing that many of the KKG members' understandings of a deep learning approach needed improvement, the team had an advantage: one of its members had collaborated with the KKG. This would ensure the implementation of this community service program. The group office is approximately 30 kilometers from the campus and can be reached in a 45-minute drive. This also gave the team an advantage.

After conducting a needs analysis of the target group, the team set three objectives for the community service program it planned to implement. They were:

1. Enhancing the elementary school teachers' knowledge about a deep learning approach.
2. Enhancing the elementary school teachers' knowledge about assessment in a deep learning approach
3. Enhancing the elementary school teachers' skills in designing assessments in a deep learning approach.

The program was conducted as a workshop to help participants improve their performance. Through the workshop, the team expected to provide participants with a structured, hands-on environment that would allow them to immediately apply the knowledge and skills. Unlike traditional training, which can be theoretical, workshops enable participants to "learn by doing," boosting confidence and making knowledge stick.

METHOD

To achieve the objectives of this community service, with the support and partnership of the Teacher-Working Group (*Kelompok Kerja Guru/KKG*) Gugus Ahmad Yani, and following previous models such as those of Hartono et al. (2022) and Hartono et al. (2024), the team organized the program into six steps outlined in Diagram 1.

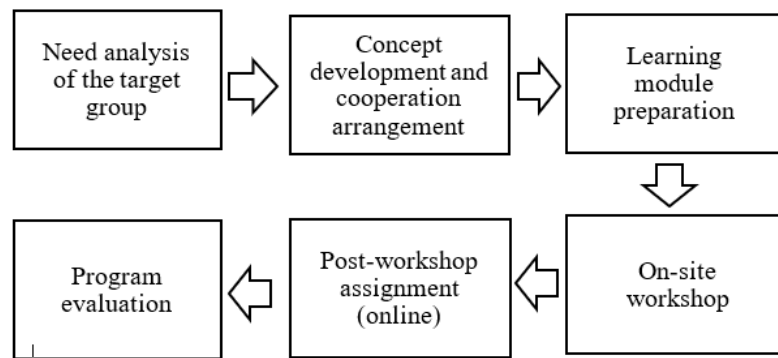


Diagram 1. The steps of program implementation

The first step is a needs analysis of the targeted group. It was a study of perceived needs of the targeted population, in this case, the elementary school teachers of the KKG members. The team contacted and interviewed some teachers and school principals, asking about the problems they were facing and the teaching issues related to implementing the deep learning approach. This analysis led the team to conclude that, among other issues, unpacking the assessment issues was crucial. In the second step, the team, assisted by the school principals, developed a concept for how the team could help teachers enhance their knowledge and skills in conducting assessments using a deep learning approach. The team brainstormed possible methods and strategies and consulted the school principals about their feasibility. Because of the teachers' teaching schedules and other duties, deciding on the program format, duration, and schedule was difficult. However, the team and the school finally reached an agreement.

The third step was the on-site training. It was conducted on Thursday, November 27, 2025, in the hall of Bergas Lor 01 elementary school in Bergas Lor village, Bergas subdistrict of Semarang regency. The workshop ran for one day, starting from 8 o'clock in the morning. Here, the team met and presented materials to the participants. After the on-site training, the team assigned participants an exercise to help them learn more about the topic and skills. To conclude the program, an evaluation was conducted to assess the achievement of the program objectives.

The Participants

Fifty-five teachers from public elementary schools in the working area of KKG of Ahmad Yani Group in Bergas subdistrict of Semarang Regency, such as SDN Bergas Lor 01 and 02, SDN Ngempon 01 and 02, private elementary schools, such as SD Islam Cendekia, SD Kanisius Girisonta, and Islamic elementary schools popularly known as *Madrasah Diniyah* (MI), such as MI Arrosyad, participated in the workshop program. Seventy-eight percent of the participants were female. Based on age, the majority were above 40 years old with more than 15 years of teaching experience. Some of them were young teachers with less than 5 years of teaching experience. More than 65% of participants admitted to having attended workshops on deep learning, either in person or online. However, they also said that they still did not know much about the approach. The workshop they received has not significantly changed their teaching practice. More workshops and training were deemed necessary.

Task Distribution

To achieve cooperation and success, the team and the KKG coordinators shared the tasks. Following the model of Hartono et al. (2025), the team and the partner, in this case, KKG Gugus Ahmad Yani, worked together to complete the assigned tasks. The details are presented in Table 1.

Table 1. Task Distribution

No	Tasks	Team	Partner
1	Program planning	V	V
2	Coordination & socialization with schools and teachers	V	V
3	Workshop materials preparation	V	
4	Workshop venue and equipment		V
5	Participant registrations and administration		V
6	Refreshment during the training		V
7	Workshop and mentoring	V	
8	Workshop evaluation	V	V
9	Follow-up activities	V	V

Notes:

Team: Community service team from the university

Partner: The teacher-working group (*Kelompok Kerja Guru/KKG*) of Ahmad Yani Group

The table shows that the team and the KKG, as the subject of the community service, collaborated to achieve the program's objective. The KKG was not a passive group receiving the training; instead, it was actively involved in implementing the workshop program, among other things, by sharing resources with the community service team.

RESULTS AND DISCUSSION

Results

To achieve the objectives of this community program, namely, enhancing elementary school teachers' knowledge about the deep learning approach and its assessment, and enhancing their skills in assessment design, particularly under a deep learning approach, a one-day on-site workshop and an online post-workshop assignment were conducted. The one-day onsite workshop was conducted on Thursday, November 27, 2026, from 08.00 pm until the afternoon. It took place in the hall of UPTD SPF SD Negeri Bergaslor 01. The trainers of the community service team were senior lecturers, assisted by a support team comprising some college members and senior students. Fifty-five teachers from elementary schools and *madrasah diniyah* (Islamic elementary school level education with the curriculum of the Islamic religion and the national curriculum) participated in the training.

The workshop was officially opened with an address by an officer from the Education and Culture Office of the Bergas subdistrict, who emphasized the need for teachers to implement a deep learning approach and strategies to achieve education objectives (See Picture 1). According to him, teachers, including elementary school teachers, must possess a growth mindset so that they can influence students' learning resilience, motivation, and achievement. Teachers should be able to serve as models of a growing mindset for students and continually develop their pedagogical practice so they can refine their teaching through reflection, feedback, and the adoption of new strategies to address learning issues in classrooms.

After the opening session, the participants had the workshop session. It was divided into two sections. Section 1 was designed to enhance the participants' knowledge about the deep learning approach. The participants were introduced to deep learning as an educational approach. This approach has been officially adopted by the Ministry of Primary and Secondary Education (Ambarita et al., 2025; Nafi'ah & Faruq, 2025) to foster students' cognitive mastery of the subject matter, including the development of critical thinking, problem-solving, creativity, and self-

reflection. With the deep learning approach, students are expected not only to memorize information but also to absorb it in a meaningful, mindful, and joyful way.



Picture 1. Participants following an address during the opening session

The participants were deeply exposed to the deep learning approach and to how it differs from other approaches. The concepts and implementations\ strategies were broken down so that the participants could really perceive what the approach was like. The core principles of deep learning (mindful, meaningful, and joyful learning) were detailed, the targeted competencies (character, citizenship, collaboration, communication, creativity, and critical thinking) were elaborated, the shifting roles of teachers were outlined, and some classroom instructional strategies were exemplified (See Picture 2). In addition, developing a growth mindset was explored. The participants learned what a growth mindset was, its importance in education, and how teachers could help students develop it. Elaborate explanations and examples were provided to help participants fully understand the topic and strategies. After the presentation, a question-and-answer session and a discussion helped the participants enhance and clarify the information and knowledge they had gained.



Picture 2. Topic presentation by the trainer of the community service team

Section 2 of the workshop session focused on assessment. It covered the assessment in general and, in particular, assessment in the deep learning approach. At first, this topic seemed very easy, but it was found that many teachers were not very knowledgeable about important assessment issues and principles. It was found that many teachers just conducted assessments in accordance with their routine and common practices, such as writing test items, administering tests, and assigning scores, with a focus on formative and summative tests in written test formats. Only a few of them ever questioned or made reflections on whether the principles of achievement,

such as validity, reliability, authenticity, and washback, had been considered during the test design. They mostly focused on practicality, namely, how a test is easy to administer and score. In response to this matter, the trainer presented the principles of assessment. The detailed topics of this subsection were: 1) What is assessment; 2) Principles of assessment; 3) Assessment in deep learning approach; 4) Taxonomy for assessment reference; and 5) Taxonomy SOLO (structure of observed learning outcomes) for deep learning.

The materials were systematically presented, and participants were free to interrupt to ask questions or offer comments on the topics or issues being discussed. As in Section 1, at the end of Section 2, there was a question-and-answer session and discussion so that participants could ask for clarification, offer comments, or provide feedback relevant to the topics. The questions and comments at the end of both Sections 1 and 2 suggest that the participants learned the topics well. Although the workshop had consumed a lot of energy from both the participants and the community service team, at the end of the program, everyone was relieved and smiling, suggesting they were happy with the workshop (See Picture 3).



Picture 3. Photographs at the end of the workshop

Upon completing the workshop, participants were assigned to design an assessment for their respective classrooms. It was an online assignment designed to encourage participants to apply what they had learned in the workshop. The assignment was expected to be collected by email to the team and was due within two weeks. Unfortunately, only a few participants completed them. Common reasons, such as overwhelming teaching and administrative tasks at schools, had hampered their ability to complete the tasks.

On the other hand, 50 participants (90.90% of the total) completed a feedback survey via a Google form. This feedback survey was designed to assess participants' acceptance of and perceptions of the program. The survey was designed in the form of a Likert-type questionnaire. The participants were requested to rate 10 statements on their disagreement/agreement on a four-point scale from "strongly disagree" (Scale 1) to "strongly agree" (Scale 4). Scales 1 and 2 suggest that the participants were against the statements, while Scales 3 and 4 suggest that they were in favor of the statements. The mean score for each statement was computed to indicate participants' perceptions of the statements. The survey results are presented in Table 2.

Table 2. The summary of the survey results

No	Statement	N	Total Score	Mean Score
1	The workshop materials were the ones I needed.	50	186	3.72
2	The workshop materials were useful for job improvement.	50	185	3.70
3	The workshop materials were applicable in the classroom.	50	182	3.64
4	The workshop materials have been presented clearly.	50	178	3.56
5	The workshop materials could improve teachers' teaching skills.	50	182	3.64
6	The presenters were very knowledgeable about the topics.	50	184	3.68

7	The presenters gave the participants the opportunity to respond to the presentations.	50	178	3.56
8	The presenters could create a meaningful, mindful, and joyful workshop.	50	160	3.20
9	The workshop venue was comfortable.		160	3.20
9	Overall, I was satisfied with the workshop.	50	170	3.40

In addition to the questionnaire, some participants wrote comments about the workshop. Here are some of them. The comments were written in Indonesian but, for the purpose of this paper, were translated into English. Four themes are identified. (Pn refers to participant and the number.)

1. The participants' knowledge enhancement
P12: This workshop really helped me personally in understanding the concept of deep learning.
P13: This program was very useful for me in enhancing my knowledge.
2. The quality of the presentations
P14: The presentation of the materials was very good.
P15: The materials were presented clearly and easily understood.
3. The need for ice-breaking
P23: Having an ice-breaking activity was necessary.
P27: Ice-breaking activities could be added during the presentations to avoid participants' boredom.
4. Gratitude and wishes
P33: Thank you for the knowledge given to me. It is very useful to me in enhancing my ability to teach my students.
P43: Thank you for sharing your knowledge today. It is very useful. Hopefully, I can apply and share it with my students.

The feedback from both the questionnaire and the comments clearly suggests that the community service program, in the form of a workshop to enhance elementary school teachers' understanding and skills in implementing deep learning and assessment, was positive. The participants got benefits in the form of knowledge, information, and skills. Overall, they enjoyed the workshop and expected that they would be able to apply what they had learned. The workshop has a meaningful impact on their day-to-day teaching practice.

Discussion

This community service program, delivered as a workshop, aimed to enhance elementary school teachers' understanding of the deep learning approach. With mutual cooperation between the English education study program and the Teacher-Working Group of the Ahmad Yani Group in the Bergas subdistrict of Semarang regency, the workshop was successfully conducted. This shows that collaboration between university teachers and elementary school teachers can benefit both parties. For university lecturers joining the team of this community service program, they earn credits for one of the three pillars of higher education (*Tridarma perguruan tinggi*), which stipulates that university teachers are required to conduct public or community service to help the government empower communities. For elementary school teachers participating in the program, enhanced understanding and skills can be gained. As the government requests that schools implement a deep learning approach (Cahyanto, 2025; Feriyanto & Anjariyah, 2024; Nafi'ah & Faruq, 2025), teachers must, at all costs, be ready to apply it. However, adopting a new approach or strategy is not easy. Preparation, empowerment, and guidance are very necessary. Teachers are required to develop their capacity through various professional development programs (Nugroho et al., 2024). Without qualified teachers in classrooms, a new approach in teaching and learning

introduced by the government will mean nothing, as it is not implemented correctly under the spirit of the approach.

This community service program has proven to be beneficial for the target group. The feedback survey collected at the end of the program clearly shows that most respondents are positive about the program. However, this should not be the last one. Elementary school teachers face a significant challenge in implementing the deep learning approach. Only a small number of them are prepared to implement the approach in their classrooms (Sari et al., 2025). The government, in fact, has offered and conducted training, but due to financial constraints, this training covered only a small number of teachers. While teacher professional development programs, such as training and workshops, are urgent, many teachers are left helpless because of severe constraints. Many teachers are severely burdened by heavy teaching and administrative duties, leaving them with very limited time to attend workshops or training. Another issue is financial ability. Not all teachers in our country are well-paid. Many of them have to struggle financially. Assessing training and workshops conducted outside their school will be costly. It is an advantage for them when a group of university teachers visits their schools to share knowledge and improve their skills. It is expected that more and more university lecturers, with their broad knowledge and skills, will come to schools to share their expertise with elementary school teachers and empower them.

Despite the benefits of the community service program for both sides and positive responses elementary school teachers exhibited, the program is not without limitations. First, it was only a one-day workshop. It could not cover a lot of things. Many issues related to the deep learning approach were left unaddressed. As an approach to teaching, deep learning requires extensive study and scrutiny so that teachers can truly find and implement its core. Teachers are encouraged to find more resources by attending other offline/online workshops and training, reading books, guidelines, and research journals, tutorials, and other possible sources available on the Internet. We must acknowledge that professionalism is a sustained process that will only end when we stop being professional. Secondly, due to time constraints, the workshop has not given teachers sufficient opportunity to practice. Usually, there is a gap between what people know and what they can really do. Mentoring can be an effective way to improve teachers' teaching skills, as more competent teachers work alongside less competent ones in the same classroom. Future trainings or workshops are expected to provide teachers with practical strategies that they can demonstrate in real teaching practice.

CONCLUSION

This paper reports on a community service program conducted by lecturers from the English Education Department of Universitas Islam Sultan Agung Semarang. In an effort to enhance elementary school teachers' understanding and skills in a deep learning approach, the community service team, collaborating with the Teacher-Working Group (*Kelompok Kerja Guru*) of Ahmad Yani Group, organized a one-day workshop for the teachers. The workshop took place in the hall of Bergalor 01 elementary school. Fifty-five teachers from different elementary schools in the Bergas subdistrict participated in the workshop. Led by lecturers who were experts in education, particularly learning approaches and methods, the deep learning approach was explored, discussed, and demonstrated. The workshop ran well, and the participants found it interesting, meaningful, and enjoyable.

Despite the hard work of the community service team on this program, and given the complexities and challenges that elementary school teachers face in implementing a deep learning approach, more workshops and training are still necessary. Therefore, the team invites lecturers from other universities to set up similar programs. The success of a teaching approach or method

depends very much on teachers' abilities; therefore, enhancing teachers' understanding and skills in deep learning is crucial.

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