



## The Deep Learning Approach to Pedagogical Knowledge in Pancasila Learning: A Study of Prospective Elementary School Teachers

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### ABSTRACT

**Objective:** This study investigates the application of deep learning in Pancasila education lessons for prospective elementary school teachers during microteaching. The deep learning approach in Pancasila learning emphasizes three main principles: mindfulness, joyfulness, and meaningfulness. **Method:** This qualitative research employed an exploratory design, using questionnaires and interviews for data collection. **Results:** The questionnaire responses from prospective elementary school teachers yielded an average score of 87.33%. Interview findings revealed that the deep learning approach in Pancasila learning significantly enhances the pedagogical knowledge of prospective elementary school teachers. **Novelty:** This approach introduces an innovative method for teaching Pancasila at the elementary level, emphasizing the teacher's role in fostering mindful, joyful, and meaningful learning experiences. **Future Studies:** The deep learning approach should be applied not only in Pancasila learning but also in other subjects, with adaptations to specific learning components to maximize educational outcomes.

## INTRODUCTION

Pancasila is one of the five compulsory subjects in elementary schools. As the foundation of Indonesia, Pancasila must be implemented within the educational context of elementary schools (Susanto, Yulhendri, & Rachbini, 2024). The purpose of Pancasila education at this level is to develop students' understanding and application of its noble values in their daily lives (Nursamsi & Jumardi, 2022). The content of Pancasila education includes (a) understanding the meaning and substance of each principle of Pancasila, (b) applying Pancasila values in daily life at home, school, and in the community, and (c) understanding the dimensions of the Pancasila student profile (Mihit, 2023). In practice, Pancasila learning focuses on shaping students to become responsible and law-abiding citizens, instilling love for the homeland, and fostering a spirit of nationalism (Dwinata, Siswanto, Kibtiyah, Raharja, & Nuruddin, 2025). This focus aligns with cultivating students who embody the Pancasila student profile (Budisutrisna, 2017).

The transformation of educational approaches in elementary schools has encouraged teachers to explore new strategies for teaching Pancasila. One increasingly popular method is the deep learning approach. Initiated by Indonesia's Minister of Elementary and Secondary Education, Abdul Mu'ti (Aryanto *et al.*, 2025), this approach reflects a strong commitment to fostering learning that goes beyond mastering content. Deep learning emphasizes understanding learning objectives, connecting them to students' future goals, and applying acquired knowledge in real-life contexts (Muvid, 2024).

The deep learning approach transforms the conventional learning paradigm often focused on memorization and rote repetition into a more constructive and reflective model. This shift helps students not only comprehend the learning material but also

develop critical thinking, creativity, and problem-solving skills (Mutmainnah, Adrias, & Zulkarnaini, 2025). Unlike traditional methods, deep learning emphasizes in-depth mastery of concepts, going beyond memorizing and quickly recalling facts (Nabila, Septiani, Fitriani, & Asrin, 2025). It actively engages students in exploring and applying essential concepts (Adnyana, 2024). The three core principles of this approach are mindful, joyful, and meaningful learning (Hidayat & Haryati, 2025). Its ultimate goal is to ensure that students achieve cognitive growth while connecting their learning to practical, real-life contexts (Kontesa & Fuadi, 2023).

Applying the deep learning approach to Pancasila learning for elementary school students has become increasingly essential. Its popularity provides a strong foundation for enabling students to grasp the material with detail and depth. This process requires integrating new information with their existing knowledge (Dwinata, Rachmadyanti, & Pratiwi, 2025). Through this integration, students not only acquire new insights about Pancasila but also build a comprehensive, interconnected framework of understanding (Dwinata, Pratiwi, & Nuruddin, 2023). When they actively connect new phenomena to prior knowledge, they develop a deep, enduring comprehension that is contextual and meaningful (Dwinata *et al.*, 2025).

For prospective elementary school teachers, applying a deep learning approach can significantly enhance pedagogical knowledge in practice. Pedagogical knowledge refers to a teacher's comprehensive understanding of the teaching and learning process, including approaches, strategies, models, and methods that facilitate students' learning effectively (Ogaga, Igori, & Egbodo, 2016). In the context of elementary education, pedagogical knowledge involves integrating this understanding with various representative learning models that support Pancasila instruction for young learners. For prospective elementary school teachers, mastering deep learning within the Pancasila learning process is essential. It enables them to adapt to contemporary educational approaches while ensuring that students engage in mindful, joyful, and meaningful learning. Therefore, this article serves as an academic and practical reference for strengthening the competence of prospective elementary school teachers in delivering Pancasila education through a deep learning approach.

## METHODS

This study employed a qualitative approach with an exploratory research design. An exploratory design aims to investigate new or under-researched phenomena, focusing primarily on interpretive understanding (Anggito & Setiawan, 2018). The purpose of this research was to examine pedagogical knowledge through the application of a deep learning approach in Pancasila instruction for elementary school students.

The participants consisted of 15 prospective elementary school teachers from a private university in Jombang Regency, Indonesia. They were selected based on the following criteria: having completed Pancasila and pedagogical knowledge courses related to Pancasila learning, and having prior experience in teaching through microteaching programs. The research instruments included (a) a questionnaire on microteaching practices in Pancasila learning, and (b) semi-structured interviews designed to gather detailed insights into how participants applied Pancasila principles when selecting learning materials using a deep learning approach. After the data were

collected comprehensively, they were identified, organized, and analyzed to ensure measurable validity.

## RESULTS AND DISCUSSION

### Results

This section presents the findings obtained through questionnaires and interviews, providing an overview of how the deep learning approach supports the pedagogical knowledge of prospective elementary school teachers in Jombang Regency. The results are presented in tabular form, followed by a detailed explanation of the implications of applying the deep learning approach in Pancasila learning.

#### A. Questionnaire

The questionnaire was administered to prospective elementary school teachers who had completed a microteaching course in Pancasila learning. Microteaching serves as a strategy to enhance pedagogical knowledge by allowing teachers-in-training to practice instructional skills in a structured environment. The responses from 15 participants yielded the following results.

**Table 1.** Learning Aspects with the Deep Learning Approach

| No.                             | Assessed Aspects                                                   | Mean Score |
|---------------------------------|--------------------------------------------------------------------|------------|
| 1.                              | Ability to Start Learning                                          | 89%        |
| 2.                              | Attitude in the Learning Process                                   | 90%        |
| 3.                              | Development of Deep Learning Teaching Modules                      | 85%        |
| 4.                              | Deep Learning Syntax (Mindfulness, Joyfulness, and Meaningfulness) | 87%        |
| 5.                              | Use of Assertive, IT-Based Media                                   | 86%        |
| 6.                              | Learning Assessment                                                | 87%        |
| Overall Mean Score ( $\Sigma$ ) |                                                                    | 87.33%     |

The overall mean score of 87.33% reflects a high level of achievement in applying the deep learning approach within Pancasila learning. These findings suggest that prospective elementary school teachers are effectively integrating deep learning principles into their instructional practices. The consistent performance across various assessed aspects indicates that this approach should be further implemented and expanded to other elementary school teaching programs.

The first aspect, the ability to start learning, refers to the teacher's skill in capturing students' attention, motivating them, outlining the material, and providing a learning perception. This aspect achieved an average score of 89%. The second aspect, attitude in the learning process, covers the ability to manage positioning, display enthusiasm and appropriate facial expressions, maintain voice clarity, and use effective body movements. This aspect received the highest average score of 90%. The third aspect, development of deep learning teaching modules, includes qualifications such as module identity, topic identification, learning design, learning experiences, and assessment components. This aspect scored an average of 85%. The fourth aspect, deep learning syntax, focuses on implementing mindful, joyful, and meaningful learning within a scientific framework. This aspect achieved an average score of 87%. The fifth aspect, use of assertive, IT-based media, involves integrating engaging digital media beyond conventional resources. This aspect obtained an average score of 86%. The sixth aspect, learning assessment, evaluates the use of objective tests (multiple-choice,

matching, true-false, etc.) and subjective tests (long essays, descriptive questions, etc.), as well as student attitude assessments during group activities and critical reasoning exercises. This aspect scored an average of 87%.

## B. Interviews

Interviews with 15 prospective elementary school teachers revealed several indicators demonstrating that the deep learning approach can enhance pedagogical knowledge in Pancasila learning. These indicators reflect the teachers' mastery of key components of the learning system, including learning objectives, teaching materials, learning models and methods, learning media, and learning assessments.

### 1. Learning objectives

Most participants recognized that developing deep learning-based teaching modules must follow the ABCD criteria Audience, Behavior, Condition, and Degree. *Audience* refers to the students or learners; *Behavior* refers to actions expressed through operational verbs; *Condition* describes the tools, materials, and learning environment; and *Degree* specifies the achievement level or success criteria. One teacher noted, "I understand the ABCD scientific concept quite well and found it helpful in developing teaching modules" (Prospective Teacher 2). Another explained, "Developing teaching modules with ABCD-based learning objectives produces concrete results in achieving the intended learning outcomes" (Prospective Teacher 4).

### 2. Learning materials

The materials selected for Pancasila learning included understanding the Pancasila principles, the 1945 Constitution, norms and regulations, human rights, and national insight. As one participant shared, "The selected materials are adapted to the students' level of understanding in upper and lower grades using a deep learning approach" (Prospective Teacher 1). Another added, "The deep learning approach enables students to gain a comprehensive understanding of the material through connections with their everyday experiences" (Prospective Teachers 3 and 10).

### 3. Learning models and methods

Learning models are a distinctive element of the instructional process. Within the deep learning approach, these models emphasize project-based activities that foster meaningful learning. Such an approach allows the process to be planned and interpretative, building students' awareness and engagement. Learning methods, in contrast, are the practical steps used to achieve learning objectives. One participant stated, "Teachers are given flexibility in selecting learning models and methods that align with relevant material concepts, enabling students to learn effectively" (Prospective Teacher 1).

### 4. Learning media

Learning media play a central role in delivering messages and information during the learning process. In deep learning, media are designed to support students' active participation and facilitate their understanding. The implementation often involves digital-based resources to enrich learning experiences. As noted by participants, "The media applied in deep learning incorporate digital technology, such as learning applications, online learning videos, and interactive simulations" (Prospective Teachers 6 and 7).

## 5. Learning assessment

Learning assessment is a systematic process of measuring, evaluating, and analyzing the effectiveness of a learning program in meeting predetermined objectives. In the deep learning approach, assessment includes formative and summative measures. One teacher explained, *"Formative assessments include quizzes, journals, essays, and portfolios, while summative assessments include final learning projects, portfolios, and graduation exams"* (Prospective Teachers 8 and 9).

## Discussion

Based on the results obtained through questionnaires and interviews, this study found that Pancasila learning using a deep learning approach has a positive impact on the pedagogical knowledge of prospective elementary school teachers. Further explanation will be discussed in the following presentation:

### A. The Deep Learning Approach in Pancasila Learning

The deep learning approach emphasizes the comprehensive understanding of meaning and the interrelationship between concepts (Hendrianty, Ibrahim, Iskandar, & Mulyasari, 2024). It focuses on fostering a deeper grasp of the subject matter through rich and holistic student learning experiences. This approach trains students to think critically (Pratiwi, Cahyanti, & Lamsani, 2021) by encouraging them to analyze problems and develop solutions based on facts and data (Chrismastianto, 2015).

In the context of Pancasila learning in elementary schools, deep learning highlights three key principles: mindfulness, joyfulness, and meaningfulness. Mindful learning occurs when students actively pay attention, process information, and critically question the phenomena they observe, rather than passively listening and memorizing. For instance, in teaching about rights and obligations, prospective teachers go beyond explaining theoretical concepts; they guide students to observe and reflect on their respective rights and obligations in daily life. This approach fosters awareness, active participation, and a sense of responsibility (Cahyani, Dwinata, Adlina, & Pujiono, 2024).

Joyful learning occurs when the learning process is enjoyable and fueled by curiosity. In the context of Pancasila learning, enjoyable experiences can create positive associations with the subject and enhance student engagement. A joyful learning process involves purposeful play, engaging challenges, exploration, and opportunities for creativity (Liu, Su, Tian, & Huebner, 2021). Activities such as direct field observations, examining cooperation activities carried out by the school community, and designing sustainable lifestyles for the community illustrate how enthusiasm for Pancasila learning can be fostered among elementary school students.

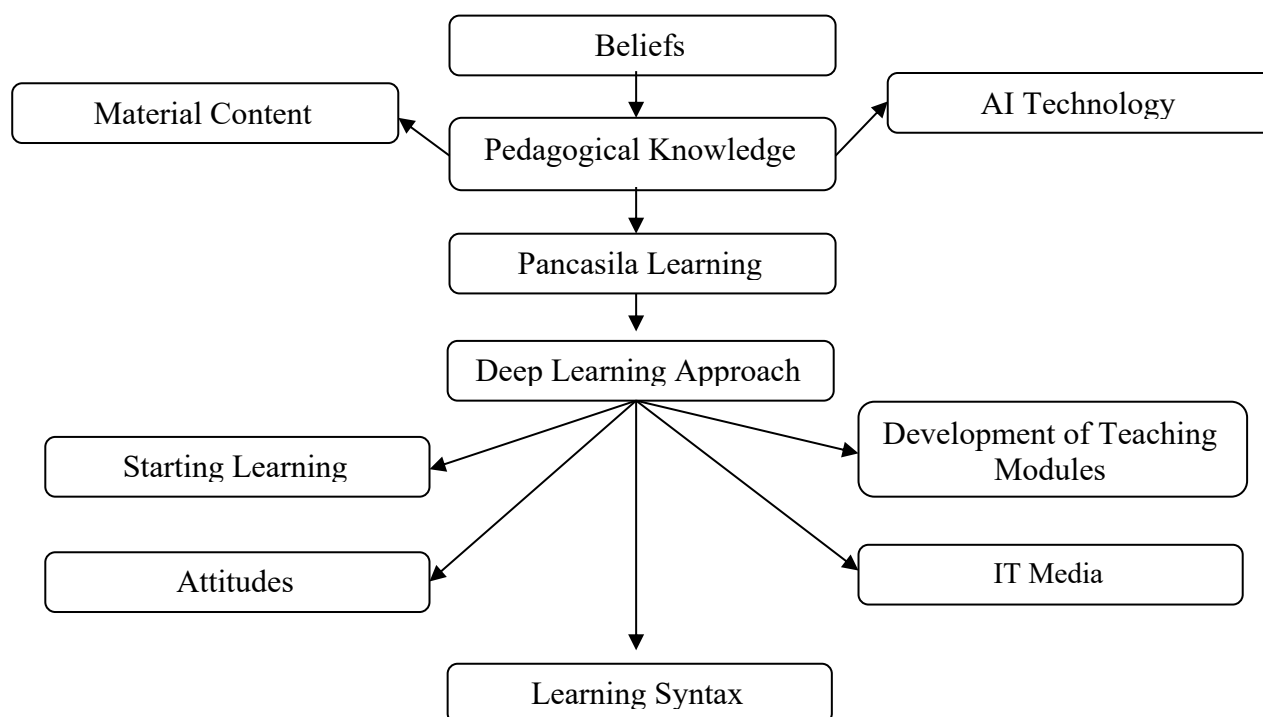
Meaningful learning refers to learning that is rooted in real-life experiences and directly connected to students' daily lives (Widodo, 2017). This approach aims to achieve learning outcomes that are relevant and long-lasting (Dörr & Perels, 2019). In Pancasila learning, meaningful learning is closely tied to real-world phenomena that serve as the starting point for instruction, such as understanding the principles of Pancasila and applying them in everyday life.

The findings from the research, answered through questionnaires and interviews, provide a clear picture that teachers, in implementing the Pancasila learning process for elementary school students (SD), must apply a deep learning approach in accordance with the syntax, which emphasizes the principles of awareness, fun, and meaning.

Teachers using the deep learning approach can flexibly choose learning models and methods that are appropriate to the material being taught in Pancasila. The assessments used must be project-based, portfolio-based, and summative tests.

## B. The Deep Learning Approach to Improving Prospective Teachers' Pedagogical Knowledge in Pancasila Learning

Pedagogical knowledge is an essential dimension of the art of teaching for prospective elementary school teachers. It is built on prospective educators' confidence in developing the ability to teach specific material concepts to students in alignment with the continuous growth of knowledge (Pratama & Lestari, 2020). In the context of Pancasila learning materials, pedagogical knowledge can be illustrated as follows.



**Figure 1.** The Flowchart of Pedagogical Knowledge through the Deep Learning Approach

This flowchart illustrates that the deep learning approach in Pancasila learning focuses on intensive and in-depth development of teaching modules, IT media, starting learning activities, attitudes, and learning syntax. The findings align with the results of the questionnaire, which showed that 87.33% of respondents agreed that the deep learning approach significantly supports student learning outcomes in Pancasila education.

Teachers, as the central figures in implementing the deep learning approach, play a strategic role in designing, delivering, and evaluating the Pancasila learning process. This approach, which requires more complex preparation—encompassing skills, perspectives, and systemic support—reflects a form of pedagogical literacy that strengthens teachers' confidence in using digital technology-based media to enhance Pancasila learning (Sarker, 2021). Failure to integrate digital tools such as interactive simulations, chatbots, educational platforms, and AI applications into Pancasila learning may reduce student engagement and limit the depth of learning (Nugraha, 2021).

Based on the findings from the questionnaire and interview sessions, it was explained that prospective elementary school teachers must apply a deep learning approach in providing understanding in Pancasila learning in line with the implications of the current curriculum. The material in Pancasila learning, which is not only cognitive but also affective, becomes relevant if teachers apply a deep learning approach in providing understanding of Pancasila learning materials by selecting appropriate learning models, methods, media, and assessments. This concept is important for prospective elementary school teachers to continuously improve their capabilities in Pancasila learning in elementary schools.

## CONCLUSIONS

Learning Pancasila through the application of an immersive learning approach is a contemporary method built on three main principles: awareness, enjoyment, and meaningfulness. Through this approach, teachers can optimize the learning process by initiating engaging learning activities, fostering attitudes that strengthen students' character, developing learning modules aligned with graduate competency dimensions, utilizing IT-based learning media, conducting authentic assessments, and implementing systematic learning strategies.

The implications of this research are expected to be applied to Pancasila learning on a large scale, ensuring a learning process that aligns with the development of Pancasila learning in the era of disruption. Further suggestions, hopefully this research can provide benefits for the Pancasila learning process in elementary schools inherently.

## REFERENCES

- Adnyana, I. K. S. (2024). Implementasi Pendekatan Deep Learning dalam Pembelajaran Bahasa Indonesia. *Jurnal Retorika*, 5(1), 1-9.
- Anggito, A., & Setiawan, J. (2018). *Metodologi Penelitian Kualitatif*. Sukabumi: CV Jejak.
- Aryanto, S., Meliyanti, Amelia, D., Maharbid, D. A., Gumala, Y., & Gildore, P. J. E. (2025). Pembelajaran Literasi Dan Numerasi Melalui Deep Learning: Pendekatan Transformasional di Sekolah Dasar. *Journal of Professional Elementary Education*, 4(1), 49-57. <https://doi.org/https://doi.org/10.46306/jpee.v4i1.101>
- Budisutrisna. (2017). Teori Kebenaran Pancasila sebagai Dasar Pengembangan Ilmu. *Jurnal Filsafat*, 16(1), 57-76. <https://doi.org/https://doi.org/10.22146/jf.23216>
- Cahyani, E. P. N., Dwinata, A., Adlina, N., & Pujiono, S. (2024). Esensi Pendidikan Karakter Berbasis Budaya Di Sekolah Dasar. *Discovery: Jurnal Ilmu Pengetahuan*, 9(1), 1-7. <https://doi.org/https://doi.org/10.33752/discovery.v9i1.5728>
- Christmastianto, I. A. W. (2015). Transformative Learning: Upaya Meningkatkan Kemampuan Berpikir Kreatif Siswa Melalui Pembelajaran Berbasis Masalah. *Jurnal Pendidikan Dompot Dhuafa*, 5(2), 1-12.
- Dörr, L., & Perels, F. (2019). Improving Metacognitive Abilities as an Important Prerequisite for Self-regulated Learning in Preschool Children. *International Electronic Journal of Elementary Education*, 11(5), 449-459.
- Dwinata, A., Pratiwi, E. Y. R., & Nuruddin, M. (2023). The Effectiveness Of Brainstorming Method And Audio-Visual Media On The Learning Outcomes Of Elementary School Ips Students. *Jurnal Cakrawala Pendas*, 9(1), 77-86. <https://doi.org/https://doi.org/10.31949/jcp.v9i1.3806>
- Dwinata, A., Rachmadyanti, P., & Pratiwi, E. Y. R. (2025). Pengaruh Model

- Pembelajaran Find Someone Who dan Aplikasi Interaktif Terhadap Hasil Belajar Bahasa Indonesia Siswa Kelas VI Sekolah Dasar. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, 10(2), 221–232. <https://doi.org/https://doi.org/10.23969/jp.v10i02.25096>
- Dwinata, A., Rachmadyanti, P., Siswanto, M. B. E., Raharja, H. F., Nuruddin, M., & Kibtiyah, A. (2025). Implementasi Program ASWAJA (Ahlusunnah Wal Jama'ah) dalam Meningkatkan Karakter Religius Siswa Sekolah Dasar. *Jurnal Simki Pedagogia*, 8(1), 9–19. <https://doi.org/https://doi.org/10.29407/jsp.v8i1.855>
- Dwinata, A., Siswanto, M. B. E., Kibtiyah, A., Raharja, H. F., & Nuruddin, M. (2025). *Pendidikan Karakter di Sekolah Dasar*. Jombang: LPPM UNHAS Y Tebuireng Jombang.
- Hendrianty, B. J., Ibrahim, A., Iskandar, S., & Mulyasari, E. (2024). Membangun Pola Pikir Deep Learning Guru Sekolah Dasar. *Kalam Cendekia: Jurnal Ilmiah Kependidikan*, 12(3), 1349–1358. <https://doi.org/https://doi.org/10.20961/jkc.v12i3.96699>
- Hidayat, A. G., & Haryati, T. (2025). Analysis Of Learning Effectiveness Using The Deep Learning Approach In Elementary Schools. *Kurikula: Jurnal Pendidikan*, 9(2), 126–139.
- Kontesa, D. A., & Fuadi, D. (2023). Penerapan Pendekatan Pembelajaran Active Deep Learner Experience Dalam Membangun Kemandirian Belajar Siswa Sekolah Dasar. *Jurnal Elementaria Edukasia*, 6(3), 1416–1427.
- Liu, W., Su, T., Tian, L., & Huebner, E. S. (2021). Prosocial behavior and subjective well-being in school among elementary school students: The mediating roles of the satisfaction of relatedness needs at school and self-esteem. *Applied Research in Quality of Life Journal*, 16(4), 1439–1459. <https://doi.org/https://doi.org/10.1007/s11482-020-09826-1>
- Mihit, Y. (2023). Dinamika dan tantangan dalam pendidikan Pancasila di era globalisasi: Tinjauan literatur. *Educationist: Journal of Educational and Cultural Studies*, 2(1), 357–366.
- Mutmainnah, N., Adrias, & Zulkarnaini, A. P. (2025). Implementasi pendekatan deep learning terhadap pembelajaran matematika di sekolah dasar. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, 10(01), 848–871.
- Muvid, M. B. (2024). Menelaah wacana kurikulum deep learning: urgensi dan peranannya dalam menyiapkan generasi emas Indonesia. *Jurnal Edu Aksara*, 3(2), 80–93.
- Nabila, S. M., Septiani, M., Fitriani, & Asrin. (2025). Pendekatan Deep Learning untuk Pembelajaran IPA yang Bermakna di Sekolah Dasar. *Primera Educatia Mandalika: Elementary Education Journal*, 2(1), 9–20.
- Nugraha, M. T. (2021). Membentuk karakter kepemimpinan pada peserta didik melalui pendekatan pembelajaran deep learning. *Al-Hikmah (Jurnal Pendidikan Dan Pendidikan Agama Islam)*, 3(1), 15–23.
- Nursamsi, D. J., & Jumardi. (2022). Peran guru dalam menanamkan sikap nasionalisme terhadap peserta didik sekolah dasar. *Jurnal Basicedu*, 6(5), 8341–8348.
- Ogaga, G. A., Igori, W., & Egbodo, B. A. (2016). Effects Of Instructional Materials On The Teaching And Learning Of Social Studies In Secondary Schools In Oju Local Government Area Of Benue State. *International Journal of Current Research*, 8(7), 33859–33863.
- Pratama, L. D., & Lestari, W. (2020). Pengaruh pelatihan terhadap kompetensi pedagogik guru matematika. *Jurnal Cendekia: Jurnal Pendidikan Matematika*, 4(1),



278-285.

- Pratiwi, H. A., Cahyanti, M., & Lamsani, M. (2021). Implementasi deep learning flower scanner menggunakan metode convolutional neural network. *Jurnal Sebatik*, 25(1), 124-130. <https://doi.org/https://doi.org/10.46984/sebatik.v25i1.1297>
- Sarker, I. H. (2021). Deep learning: a comprehensive overview on techniques, taxonomy, applications and research directions. *SN Computer Science*, 2(6), 1-20.
- Susanto, R., Yulhendri, & Rachbini, W. (2024). Sustainable Action and Transformation of Change in Teachers' Learning Leadership Model: Promoting Students' Independent Learning. *International Electronic Journal of Elementary Education*, 16(4), 521-534.
- Widodo, W. (2017). Wujud kenyamanan belajar siswa, pembelajaran menyenangkan, dan pembelajaran bermakna di sekolah dasar. *Ar-Risalah Media Keislaman Pendidikan Dan Hukum Islam*, 14(2), 22-37.

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