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An Analysis of Teachers' Readiness to Implement the Deep Learning Approach at Madrasah Aliyah Swasta Tarbiyah Islamiah Batang Kabung

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Abstract

The Deep Learning approach in the Merdeka Curriculum calls for teachers to design mindful, meaningful, and joyful learning experiences. Preliminary findings at Tarbiyah Islamiah Private Islamic Senior High School (MAS TI) Batang Kabung indicated differences in how teachers understood and applied the approach. This descriptive qualitative study examined teachers' readiness to implement Deep Learning across four competency domains (pedagogical, professional, personal, and social). Five purposively selected teachers of chemistry, Indonesian, English, informatics, and history served as primary informants, with additional perspectives from the principal, the vice principal for curriculum affairs, and students. Data from semi-structured interviews, non-participant observations, and instructional modules were analyzed using the Miles and Huberman model, and findings were checked through triangulation across sources and methods. Pedagogical readiness was evident in teachers' attention to students' learning needs and instructional planning. Professional readiness was reflected in subject-matter mastery and an emerging understanding of Deep Learning. Personal readiness was evident in openness to change and a sense of responsibility, while social readiness was reflected in constructive communication with students and collaboration with colleagues. Teachers showed readiness across all four domains, with differences particularly evident in how they assessed prior knowledge, promoted equitable participation, developed context-specific materials, and incorporated reflection on learning. These differences give Islamic schools specific areas to assess and address through ongoing professional development, instructional mentoring, and collaboration among teachers.

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Keywords: Teacher Readiness; Deep Learning Approach; Teacher Competencies; Islamic Senior High Schools; Merdeka Curriculum

INTRODUCTION

Technological developments, social changes, and the demands of 21st-century competencies have encouraged education to move beyond a primary focus on knowledge acquisition towards the development of critical thinking, creativity, collaboration, communication, and problem-solving skills (Siskawati et al., 2026). This situation necessitates an educational system that is adaptive, flexible, and oriented towards the comprehensive development of students' competencies. In response to these demands, Indonesia has adopted the Merdeka Curriculum as an effort to reform educational practices. The implementation of this curriculum requires teachers not merely to deliver content through conventional methods but also to design learning experiences that foster conceptual understanding, encourage self-reflection, and promote students' active engagement throughout the learning process (Dwiyanti & Ismail, 2025).

In line with efforts to strengthen learning quality under the Merdeka Curriculum, its implementation has been further reinforced through the adoption of the *Deep Learning* approach, as stipulated in Minister of Primary and Secondary Education Regulation No. 13 of 2025. The *Deep Learning* approach is a pedagogical framework that encourages students to construct understanding actively through reflection, connections between knowledge and real-life experiences, and meaningful engagement in the learning process (Mohan et al., 2026). This approach is implemented through three core principles: *mindful learning*, *meaningful learning*, and *joyful learning*, which collectively aim to create deeper and more meaningful learning experiences.

The implementation of the *Deep Learning* approach in Indonesian education policy is conceptually related to the notion of deep learning that has been extensively discussed in educational research. Mystakidis, (2021) explains that *Deep Learning* is an approach that encourages students to construct understanding actively through critical reflection, connections between knowledge and experience, and meaningful engagement in the learning process. This perspective is further reinforced by Fullan et al., (2018) through the *New Pedagogies for Deep Learning* framework, which emphasizes that learning should not focus solely

on content mastery but also on developing the competencies students need to address the challenges of the 21st century. Therefore, the *Deep Learning* approach is not merely an educational policy but also has a strong conceptual foundation for supporting meaningful, student-centered learning.

This policy direction is reinforced by Decree of the Minister of Religious Affairs No. 1503 of 2025, which amends Decree No. 450 of 2024 concerning Curriculum Implementation Guidelines for madrasahs. The regulation provides a foundation for improving educational quality through the *Deep Learning* approach and integrating competency development with character and value formation through the Love-Based Curriculum (*Kurikulum Berbasis Cinta*). Thus, learning transformation in madrasahs emphasizes not only improving instructional quality but also fostering students' holistic development in knowledge, skills, character, and values. Accordingly, the implementation of *Deep Learning* must consider the regulatory framework and distinctive characteristics of the madrasah education system.

The successful implementation of the *Deep Learning* approach in madrasahs depends not only on educational policies but also on teachers' readiness as the primary agents of learning. Such readiness encompasses both understanding new policies and fulfilling professional responsibilities through the four competencies stipulated in Indonesian Law No. 14 of 2005 on Teachers and Lecturers: pedagogical, professional, personal, and social competencies. These competencies provide the foundation for effective implementation. However, previous research highlights challenges, including disparities in teachers' understanding, limited training opportunities, and difficulties integrating deep learning principles into classroom practices (Suwandi et al., 2024). Therefore, teacher readiness requires particular attention, especially during the initial stages of policy implementation.

An overview of these challenges was also identified through a preliminary study conducted at MAS TI Batang Kabung. The preliminary findings revealed variations in classroom practices regarding student engagement, the connection of learning materials to everyday life, and the implementation of learning reflection activities. Initial interviews also indicated that teachers had been introduced to the *Deep Learning* approach through a workshop held in the previous academic year. However, their understanding of its principles and implementation strategies remained varied. In practice, teachers also encountered different circumstances, particularly concerning student characteristics, limited learning

facilities, and established learning habits that remained predominantly teacher-centered. These conditions provide a basis for further examining teachers' readiness to understand, prepare for, and implement the *Deep Learning* approach in the learning process.

These conditions suggest that exposure to a new educational policy does not necessarily reflect teachers' actual readiness to implement it. Teacher readiness encompasses conceptual understanding, instructional planning and implementation skills, and professional attitudes towards educational change. In the context of *Deep Learning*, teachers must be able to translate the principles of *mindful learning*, *meaningful learning*, and *joyful learning* into learning experiences that address students' characteristics and needs. Therefore, differences in teachers' understanding and instructional practices at MAS TI Batang Kabung require further investigation to provide a comprehensive assessment of their readiness. This study is essential because successful implementation depends not only on policy dissemination but also on teachers' ability to integrate knowledge, skills, and professional attitudes into classroom practices.

These preliminary findings are consistent with previous studies on *Deep Learning* implementation. Nurjanah, (2025) found that senior secondary school teachers demonstrated reasonable conceptual understanding and readiness, although challenges remained regarding instructional time, students' readiness, and process-oriented assessment. Similarly, Ramadhani et al., (2026) reported that *joyful learning* and *meaningful learning* had been incorporated into early childhood education, while *mindful learning* required further improvement. Asyari et al., (2025) also highlighted pedagogical readiness, technology integration, and institutional support as key factors in primary schools, despite challenges related to teachers' understanding, professional development, and infrastructure. These findings reveal a research gap concerning a comprehensive analysis of teacher readiness across the four competency dimensions within the context of madrasah education.

Although previous studies have examined the implementation of the *Deep Learning* approach across various educational levels, research on teacher readiness based on the four competencies—pedagogical, professional, personal, and social—in the context of Islamic senior secondary schools (Madrasah Aliyah) remains limited and warrants further investigation. Furthermore, the distinctive characteristics of madrasah education, including the adoption of the Love-Based Curriculum (*Kurikulum Berbasis Cinta*), constitute an important contextual factor in understanding teachers' readiness to implement this approach.

Therefore, further investigation is needed to provide a comprehensive understanding of teachers' readiness to implement the *Deep Learning* approach in accordance with the actual learning conditions in madrasahs.

The novelty of this study lies in employing the four teacher competencies stipulated in Indonesian Law No. 14 of 2005 on Teachers and Lecturers—pedagogical, professional, personal, and social competencies—as an integrated framework for analyzing readiness to implement the *Deep Learning* approach at the Madrasah Aliyah level. This framework examines teachers' instructional planning and implementation, conceptual understanding, professional development, openness to change, responsibility, and communication and collaboration skills. The principles of *mindful learning*, *meaningful learning*, and *joyful learning* are analyzed through these four competency dimensions. This approach is expected to provide a comprehensive understanding of teacher readiness while considering the distinctive characteristics of teaching and learning in madrasahs.

Based on the foregoing discussion, this study focuses on analyzing teachers' readiness to implement the *Deep Learning* approach at Madrasah Aliyah Swasta Tarbiyah Islamiah Batang Kabung. Specifically, this study aims to examine teachers' readiness across four competency dimensions: pedagogical, professional, personal, and social competencies. The analysis is conducted by examining teachers' understanding of the concept of deep learning, their instructional preparation, and the extent to which their readiness is reflected in classroom practices. Through this investigation, the study is expected to provide empirical insights into the current state of teacher readiness while identifying aspects that require further strengthening. The findings are expected to serve as a basis for the madrasah in designing teacher competency development and mentoring programs to support the more effective implementation of the *Deep Learning* approach.

METHODS

This study employed a qualitative approach with a descriptive research design to understand and describe teachers' readiness to implement the *Deep Learning* approach based on their actual conditions, experiences, understanding, and instructional practices in natural settings, without manipulating the research object (Ramli et al., 2023; Waruwu, 2024). The study was conducted at Madrasah Aliyah Swasta (MAS) Tarbiyah Islamiah Batang Kabung, Padang City, West Sumatra, Indonesia. Research participants were selected using purposive

sampling, which involves selecting informants based on criteria relevant to the research objectives (Sulung & Muspawi, 2024). A total of 12 participants were involved in this study, comprising five subject teachers teaching Chemistry, Indonesian Language, English, Informatics, and History as primary informants, as well as the head of the madrasah, the deputy head of the madrasah for curriculum affairs, and five students as supporting informants. The research instruments consisted of the researcher as the primary instrument, supported by interview, observation, and documentation guidelines (Waruwu, 2024).

Data were collected through semi-structured interviews to obtain information about teachers' readiness in terms of pedagogical, professional, personal, and social competencies; open non-participant observations to examine instructional activities, student engagement, the use of teaching strategies and media, as well as classroom communication and interactions, conducted during one instructional session for each primary teacher informant; and document analysis of teaching modules (*Modul Ajar*) and Student Worksheets (*Lembar Kerja Peserta Didik* or LKPD) to examine instructional planning and implementation. Interviews were conducted to explore participants' experiences and perspectives in depth, while observations and documentation served to complement and cross-check the information obtained (Iba & Wardhana, 2023; Putri & Murhayati, 2025).

The data were analyzed using the Miles and Huberman interactive model, which comprises data reduction, data display, and conclusion drawing and verification. Data reduction involved selecting and categorizing information according to the research focus. Data display was conducted in the form of descriptive narratives, while conclusions were drawn by interpreting patterns and relationships among the research findings (Rahmani et al., 2025; Zulfirman, 2022). Data trustworthiness was established through source triangulation by comparing information obtained from teachers, the head of the madrasah, the deputy head for curriculum affairs, and students, as well as methodological triangulation by comparing the findings from interviews, observations, and documentation (Husnullail et al., 2024; Nurfajriani et al., 2024).

RESULTS

1. Teachers' Pedagogical Readiness to Implement the Deep Learning Approach

The findings indicate that the five teachers demonstrated pedagogical readiness through their efforts to understand students' characteristics, design student-centered learning

activities, select appropriate instructional strategies and assessments, and conduct learning reflections. However, the implementation of these aspects varied across teachers. In identifying students' learning needs, teachers employed different approaches, including direct observation, initial questioning, diagnostic assessments, and attention to students' motivation and classroom conditions. Nevertheless, classroom observations revealed that activities for exploring students' prior knowledge and learning difficulties were not consistently conducted. Similarly, student-centered learning was reflected in various activities, such as group discussions, independent reading, problem analysis, and collaborative assignments. However, some classroom practices remained dominated by teacher explanations, note-taking, and exercises, while student participation was not equally distributed. Regarding instructional strategies and assessments, all five teachers had incorporated assessment activities into their teaching plans, although the completeness of assessment instruments and rubrics varied. Classroom observations also revealed differences in providing feedback and evaluating students' understanding. Furthermore, learning reflection had not been consistently implemented. Some teachers conducted regular reflections or reviewed learning outcomes after completing particular topics, whereas others acknowledged that reflection was not routinely performed. Student feedback also indicated that opportunities to evaluate learning experiences and express difficulties remained limited in certain classrooms. Overall, the findings demonstrate that pedagogical readiness has emerged across all five teachers, particularly in recognizing students' needs and preparing varied instructional activities. However, inconsistencies remain in implementing student-centered learning, conducting assessments, providing feedback, and facilitating systematic reflection throughout the learning process.

2. Teachers' Professional Readiness to Implement the Deep Learning Approach

The findings reveal that the five teachers demonstrated professional readiness through their understanding of the *Deep Learning* approach, mastery of subject content, development of contextual learning activities, professional development efforts, and utilization of learning resources and technology. Their understanding generally emphasized meaningful learning, conceptual understanding, student engagement, and critical thinking, although the depth and focus of their explanations differed. These differences were also reflected in classroom practices, where some teachers incorporated problem analysis and contextual discussions, while others relied more heavily on explanations, reading activities, and exercises. Regarding subject mastery and contextual learning, teachers demonstrated the

ability to connect instructional materials with real-life situations. Examples included analyzing historical events, creating persuasive posters, discussing healthy lifestyles, examining internet network problems, and relating chemical concepts to industrial processes and environmental issues. Nevertheless, some contextual activities remained limited to explanations and examples without further practical exploration. Professional development was pursued through workshops, online training, independent learning, educational forums, and discussions with colleagues. The madrasah also facilitated workshops, online training opportunities, and participation in subject-teacher associations. In terms of learning resources and technology, teachers utilized or planned to use textbooks, videos, projectors, worksheets, interactive media, internet resources, and artificial intelligence. However, classroom observations revealed that the utilization of these resources was not always consistent with teachers' interview statements and instructional plans. Limited projector availability and restrictions on students' mobile phone use also formed part of the conditions surrounding classroom implementation. Overall, professional readiness was evident through teachers' subject knowledge, initial understanding of *Deep Learning*, professional development initiatives, and awareness of learning technologies. However, consistency in contextualizing instruction and integrating appropriate learning resources remained varied.

3. Teachers' Personal Readiness to Implement the Deep Learning Approach

The findings indicate that the five teachers demonstrated personal readiness through their openness to educational changes, adaptability, commitment, and responsibility in conducting instructional activities. Their responses to the introduction of the *Deep Learning* approach varied. Some teachers considered its principles relatively familiar because they had previously incorporated meaningful, contextual, and engaging learning activities into their teaching practices. Others perceived curriculum changes as challenging because teachers and students needed time to adjust to new instructional expectations. Nevertheless, teachers generally expressed their willingness to adapt their teaching strategies according to classroom conditions and students' needs. Interviews with the school leadership also revealed that changing established teaching habits and mindsets remained a challenge for some teachers. In terms of commitment and responsibility, the teachers demonstrated various efforts to maintain instructional activities despite classroom difficulties. These included motivating students, addressing low levels of engagement, adjusting teaching strategies, providing alternative learning activities, and maintaining classroom discipline. For example, some teachers used motivational activities or ice-breaking exercises when students appeared tired

or disengaged, while another teacher utilized interactive media through a projector to facilitate classroom participation despite restrictions on mobile phone use. Classroom observations and instructional documents also showed that teachers had prepared learning activities and teaching materials, although not all planned activities were implemented during the observed lessons. The school leadership further supported teachers through supervision, workshops, and instructional guidance. Overall, the findings demonstrate that personal readiness was reflected in teachers' willingness to accept educational changes, adjust instructional practices, and maintain responsibility for classroom learning. However, the process of adapting established teaching habits and translating positive attitudes into consistent instructional practices remained ongoing.

4. Teachers' Social Readiness to Implement the Deep Learning Approach

The findings show that the five teachers demonstrated social readiness through their efforts to establish effective communication with students and collaborate with colleagues and the madrasah. In classroom interactions, teachers employed various approaches to create comfortable learning environments, including humor, informal communication, question-and-answer activities, encouragement, and positive responses to students' questions. Several students reported feeling comfortable asking questions and receiving explanations when they encountered difficulties. However, student experiences also revealed that a comfortable classroom atmosphere did not always encourage active participation. Some students remained reluctant to express confusion because teachers did not consistently initiate opportunities for them to ask questions. Classroom observations further indicated that opportunities for expressing opinions and participating in discussions varied across classes. In some instances, teachers provided feedback before students had fully expressed their ideas, while other classroom interactions offered more opportunities for discussion and student participation. Regarding professional collaboration, teachers engaged in discussions with colleagues, participated in subject-teacher associations, attended workshops, and joined professional discussion groups outside the madrasah. Some teachers collaborated with colleagues teaching related subjects, while others sought external professional forums because they were the only teachers in their respective subject areas at the institution. The madrasah leadership also facilitated collaboration through workshops, professional development activities, and opportunities to participate in subject-teacher associations. Nevertheless, the extent and forms of collaboration differed among teachers, and not all reported activities specifically focused on discussing the implementation of *Deep Learning*.

Overall, social readiness was reflected in teachers' efforts to establish positive classroom relationships and maintain professional interactions with colleagues and school management. However, opportunities for inclusive student communication and more systematic professional collaboration remained areas requiring further development.

DISCUSSION

1. Teachers' Pedagogical Readiness to Implement the Deep Learning Approach

Teachers' pedagogical readiness to implement the *Deep Learning* approach is associated with their ability to understand students' characteristics and needs, design student-centered learning, select appropriate instructional strategies and assessments, and reflect on the learning process. These four aspects are interrelated in determining how teachers plan and conduct instruction. The findings indicate that all five teachers demonstrated concern for students' learning conditions and made efforts to design instructional activities. However, this readiness had not yet been consistently translated into classroom practices.

Teachers' attention to students' characteristics and needs was reflected in various approaches used to identify students' conditions, ranging from observation and question-and-answer activities to attention to students' motivation and emotional states, as well as initial assessments. Nevertheless, such efforts were not always followed by systematic checks of students' understanding or in-depth exploration of their learning difficulties. The experience reported by S2, who indicated that students' understanding was checked progressively, differed from that of S3, who explained that silent students were sometimes assumed to have understood the material. Observation findings also revealed that activities connecting new material with students' prior knowledge were more evident in G2, G3, and G4, whereas such activities were not clearly observed in G1 and G5. Regarding documentation, explicit initial assessment instruments were identified in the teaching modules prepared by G4 and G5, while no initial diagnostic assessment instruments were found in those prepared by G1, G2, and G3. These conditions indicate that teachers were generally attentive to students' needs; however, their efforts to identify students' prior knowledge and utilize this information in instructional planning varied. This finding is consistent with Anggraena et al. (2025), who emphasize that understanding students' readiness and learning needs is an essential component of instructional planning and assessment. Rifa'i et al. (2026) also found that diagnostic assessments had not been

systematically designed to map students' learning readiness. Therefore, teacher readiness is not sufficiently demonstrated by the ability to recognize students' characteristics alone but must also involve using such information to adapt instruction accordingly.

Teachers' readiness to design and implement student-centered learning was reflected in their use of various instructional strategies, including discussions, problem-solving activities, games, information searches, and projects. However, the diversity of activities outlined in the teaching modules was not fully reflected in classroom implementation. Observation findings showed that group discussions conducted by G2 and problem analysis activities implemented by G4 provided opportunities for student participation, although student engagement in G4's class remained uneven. Meanwhile, the lessons conducted by G1, G3, and G5 were still predominantly characterized by teacher explanations, note-taking, reading activities, and exercises. Differences in the experiences reported by S2 and S5 also indicated that students did not have equal opportunities to participate in learning activities. KM and WK further explained that the transition towards more student-centered learning was still taking place gradually because students were accustomed to receiving information directly from teachers. This finding is consistent with Allolinggi et al., (2025) who found that some teachers continued to equate deep learning with project-based learning. Farhurahman et al., (2026) also reported that teachers' understanding of HOTS-based learning had not fully translated into the construction of meaning and active student engagement. These findings indicate that student-centered learning is determined not merely by the use of varied teaching methods but also by teachers' ability to provide all students with opportunities to think, express ideas, and construct their own understanding.

In selecting instructional strategies and assessments, all five teachers demonstrated efforts to adapt learning activities and assessment practices to the characteristics of their respective subjects. The assessment methods included question-and-answer activities, assignments, skills assessments, conceptual understanding assessments, and pre- and post-tests. Observation findings also revealed the provision of feedback by G2 and G4, reinforcement of learning materials by G5, and correction of vocabulary usage by G3. Meanwhile, feedback on the Student Worksheets (LKPD) used by G1 could not be observed because of time constraints. In terms of instructional planning, the completeness of assessment instruments also varied. G1 and G4 had more detailed assessment instruments, G3 and G5 still lacked elaboration in their rubric descriptors, while G2 needed to clarify the planning of initial and ongoing assessments. These findings indicate that teachers had

demonstrated readiness in planning and conducting assessments, although the completeness of assessment instruments and the provision of feedback still required improvement. Anggraena et al., (2025) explain that learning and assessment constitute an interconnected cycle. This means that assessment should not only be used to measure final learning outcomes but also to identify developments in students' understanding and determine appropriate instructional follow-up. Therefore, teachers' readiness in this aspect needs to be examined in terms of their ability to align learning objectives, instructional activities, and assessments, as well as their capacity to utilize assessment results to improve the learning process.

The reflection aspect also revealed variations in teachers' readiness. G5 acknowledged that reflection had not been conducted in sufficient depth or on a regular basis. G2 and G3 more frequently conducted reflection after completing particular topics or chapters, whereas G4 scheduled weekly reflection sessions to evaluate teaching practices. Meanwhile, G1 conducted oral reflection with students by asking them to summarize the material and share their understanding and responses. These differences indicate that reflection was recognized and practiced by teachers, although it was not always directed towards the systematic evaluation of their own teaching practices. Observation findings and student interviews also revealed that reflection involving students had not been implemented consistently. In several classrooms, closing activities primarily involved teacher-led summaries or reinforcement of learning materials rather than providing students with opportunities to express their understanding and learning experiences. In fact, student reflection can provide teachers with valuable information for evaluating the learning process. This finding is consistent with Farhurahman et al. (2026), who found that student reflection was not routinely conducted in every learning session. Therefore, teachers' reflective readiness requires further strengthening, both in evaluating their own instructional practices and in providing students with opportunities to reflect on their learning processes.

Based on these findings, the pedagogical readiness of the five teachers to implement the *Deep Learning* approach was evident in their attention to students' needs, the planning of varied learning activities, the use of assessments, and their efforts to conduct reflection. Nevertheless, implementation continued to vary, particularly in identifying students' prior knowledge, ensuring equitable student engagement, preparing complete assessment instruments, and conducting regular reflection. These findings indicate that teachers' pedagogical readiness had been established at the levels of understanding and planning but

required further strengthening in classroom implementation to better support the principles of *mindful*, *meaningful*, and *joyful learning*. This conclusion should be interpreted in light of the scope of the study, as observations were conducted only once for each teacher.

2. Teachers' Professional Readiness to Implement the Deep Learning Approach

Teachers' professional readiness to implement the *Deep Learning* approach is associated with their understanding of deep learning concepts, mastery and development of subject matter, ability to enhance their professional competencies, and utilization of learning resources and educational technologies. Under Indonesian Law No. 14 of 2005 on Teachers and Lecturers, professional competence encompasses the ability to master subject matter broadly and deeply. In the context of this study, such mastery is also associated with teachers' ability to develop learning materials so that students can understand, connect, and apply knowledge. The findings indicate that all five teachers possessed an initial understanding of *Deep Learning* and demonstrated subject-matter mastery in their respective fields. However, their ability to translate this understanding into material development and instructional practices had not been demonstrated consistently.

Teachers' understanding of the *Deep Learning* concept was reflected in the ways they associated it with meaningful learning, conceptual understanding, critical thinking, and student engagement. Nevertheless, the emphasis placed by each teacher varied. KM also assessed that teachers' understanding remained uneven, while WK considered that teachers generally had a reasonable understanding of the concept but still needed to adapt its implementation to classroom conditions. Observation findings indicated that elements of deep learning had emerged in several instructional activities, such as the analysis of internet network problems conducted by G4 and group discussions facilitated by G2. However, the observed lessons conducted by G1, G3, and G5 were still predominantly characterized by teacher explanations, calculation exercises, reading activities, and summarizing tasks. These differences indicate that teachers had developed a conceptual understanding of the approach, but its translation into instructional practices remained varied. Rahayu et al., (2026) found that the understanding of *Deep Learning* among Islamic senior secondary school English teachers remained fragmented, while Allolinggi et al., (2025) reported that some teachers continued to equate deep learning with project-based learning. These findings reinforce the importance of ensuring that conceptual understanding of the terminology and characteristics

of *Deep Learning* is accompanied by the ability to determine how its principles can be implemented in accordance with subject matter and students' needs.

Regarding subject-matter mastery, all five teachers demonstrated the ability to explain content within their respective areas of expertise. However, subject-matter mastery needs to be accompanied by contextual development to ensure that the knowledge delivered does not remain limited to conceptual explanations. This was evident in G4's ability to connect computer networking material with the problem of slow internet connections, although the lesson was not followed by a practical network simulation. G1 also demonstrated mastery of stoichiometry and connected the topic with industrial waste issues, but this connection was not further developed into an exploratory learning activity. Meanwhile, G5 connected historical materials with the values of nationalism and cause-and-effect relationships. Accounts from S1 and S5 indicated that they did not frequently experience connections between learning materials and everyday life. Nevertheless, the teaching modules prepared by all five teachers contained relevant contexts, including strategies of struggle, the surrounding environment, healthy living habits, technology use, and environmental pollution. These differences indicate that teachers had demonstrated the ability to design contextual learning materials, but their development and implementation in classroom practices still required strengthening. Anggraena et al. ,(2025) identify the application of knowledge to real-life contexts as an essential component of learning experiences within the deep learning approach. Rahayu et al., (2026) also illustrate that learning materials can be developed into more contextual activities through digital storytelling projects and investigations of local phenomena. Therefore, professional readiness is demonstrated not only through mastery of subject content but also through the ability to develop learning materials that enable students to understand the relationship between concepts and real-world problems.

Efforts to develop professional competencies also indicated that teachers were concerned with improving their professional capacities. All five teachers had engaged in professional development through various activities, including training programs, workshops, the Teacher Professional Education Program (PPG), Subject Teacher Forums (MGMP), activities outside the madrasah, independent learning, and discussions with colleagues. The madrasah also provided support through *Deep Learning* workshops, online training via eGuru.id, and MGMP activities. Nevertheless, participation in professional development activities did not automatically indicate improvements in teachers'

understanding and instructional practices. This was also reflected in KM's statement that some teachers still required a deeper understanding of the concept. Rifa'i et al., (2026) reported improvements in teachers' understanding following training in teaching module development accompanied by practical mentoring, although the sustainability of training outcomes in classroom implementation remained a limitation. These findings highlight the importance of professional development activities that go beyond the delivery of theoretical materials and include mentoring and practical application in teaching. Therefore, teachers' readiness to develop their professional competencies should be assessed not only through participation in training activities but also through their ability to apply the knowledge acquired to improve instructional quality.

In addition to professional development, teachers' professional readiness was reflected in their use of learning resources and educational technologies. All five teachers were familiar with and utilized various instructional media, including textbooks, videos, projectors, the internet, Student Worksheets (LKPD), and interactive media. However, observation findings indicated that the use of instructional media did not always correspond to teachers' accounts or instructional plans. G2 used videos and Student Worksheets, while G4 utilized visual media and a projector during instruction. Conversely, the videos usually used by G5, the projector and music mentioned by G3, and the interactive media reported by G1 were not observed during the respective sessions. On the other hand, G4 had utilized artificial intelligence (AI) to assist in preparing teaching modules and Student Worksheets. KM also encouraged the critical use of technology, while WK explained that the limited availability of projectors remained one of the facility-related challenges faced by the madrasah. These conditions indicate that technology utilization had become part of teachers' professional readiness, although its implementation remained influenced by media suitability, instructional needs, and facility availability. This condition can be understood through Koehler and Mishra's 2009 Technological Pedagogical Content Knowledge (TPACK) framework, which emphasizes the interconnectedness of technological, pedagogical, and content knowledge. This means that technological mastery needs to be accompanied by the ability to select appropriate media in accordance with subject matter and learning objectives. The use of technology or AI alone does not necessarily indicate deep learning unless it contributes to students' understanding and application of knowledge.

Based on these findings, teachers' professional readiness to implement the *Deep Learning* approach was evident in their initial understanding of deep learning concepts,

mastery of subject matter within their respective areas of expertise, efforts to develop professional competencies, and utilization of various learning resources and technologies. However, their ability to develop contextual learning materials, translate conceptual understanding into instructional practices, apply the outcomes of professional development, and select media according to instructional needs continued to vary. Thus, teachers' professional readiness had been established in terms of knowledge and subject-matter mastery but required further strengthening in developing learning experiences that enable students to understand, analyze, and apply knowledge more deeply.

3. Teachers' Personal Readiness to Implement the Deep Learning Approach

Teachers' personal readiness to implement the *Deep Learning* approach is associated with openness to change, willingness to adapt, and commitment and responsibility in carrying out instructional duties. This aspect is important because the implementation of a new approach requires teachers to adjust their established teaching habits and adapt instruction to students' conditions. The findings indicate that all five teachers demonstrated acceptance of change and efforts to fulfill their responsibilities in the learning process. However, their responses to change and the forms of adaptation they adopted varied.

Teachers' openness to implementing *Deep Learning* was reflected in their perspectives on changes in instructional approaches. G4 demonstrated enthusiasm for learning about the new approach, while G1 emphasized the importance of flexibility and willingness to adapt. G3 acknowledged that curriculum changes presented challenges but also recognized the need to adjust instructional strategies. Meanwhile, G2 and G5 considered that several principles of *Deep Learning* had already been incorporated into their previous teaching practices. These differences indicate that teachers had different starting points in accepting change, ranging from enthusiasm for new approaches to efforts to adapt their existing instructional practices. KM also explained that changes in teachers' mindsets and teaching habits required time and gradual mentoring. This finding is consistent with Ruhul & Hamimi, (2026) who identified variations in teachers' self-efficacy in responding to the implementation of deep learning, ranging from adaptive teachers to those who still experienced uncertainty about the changes. Thus, openness to change was evident among all five teachers, although such acceptance needed to be followed by adjustments in instructional practices.

Teachers' willingness to adapt was also reflected in how they responded to classroom conditions that differed from their initial plans. G3 attempted to change instructional strategies when students appeared less enthusiastic, while G4 used ice-breaking activities to address student boredom. G1 sought an alternative way to use Wordwall by displaying it through a projector because students were not permitted to bring mobile phones to school. G2 also paid attention to students who were tired after participating in dormitory activities, while G5 made efforts to maintain student discipline and motivation. These efforts indicate that teachers were not entirely bound by their initial instructional plans but attempted to consider the conditions encountered during classroom activities. Nevertheless, observation findings revealed variations in instructional practices. G2 and G4 engaged students through discussions and analytical activities, whereas the lessons conducted by G1, G3, and G5 during the observed sessions were still predominantly characterized by explanations, reading, note-taking, and exercises. These differences provide an overview of variations in instructional implementation but are insufficient to determine each teacher's overall level of openness because adaptive attitudes cannot be assessed solely through a single observation.

In addition to openness to change, personal readiness was also reflected in teachers' commitment and responsibility in conducting instruction. All five teachers demonstrated efforts to address challenges, pay attention to students' conditions, and ensure that learning activities continued. This was supported by teaching modules containing learning objectives, activities, and assessments as part of instructional preparation. However, these plans did not always correspond directly to actual classroom implementation, as illustrated by the use of Wordwall by G1, which was not observed during the session. This condition cannot immediately be interpreted as a lack of commitment, considering that observations were conducted only once for each teacher. KM also explained that supervision was conducted through discussions of lesson plans and classroom observations as a basis for identifying teachers' professional development needs. Meanwhile, WK's information regarding the Academic Competency Test (TKA) for Grade XII students and the presence of teachers working at more than one school provided an overview of the circumstances surrounding instructional implementation, although their effects on individual teachers' commitment could not be established with certainty.

In relation to teachers' personal competence, Minister of National Education Regulation No. 16 of 2007 identifies a stable, mature, wise, and authoritative personality, exemplary conduct, as well as work ethic and responsibility as components of teacher

competence. These provisions are relevant to understanding the findings concerning teachers' dedication to fulfilling their duties and addressing instructional challenges. Meanwhile, openness and adaptability in this study were used to examine teachers' readiness to respond to changes associated with the *Deep Learning* approach, rather than being treated as separate indicators explicitly formulated in the personal competency standards. Therefore, teachers' personal readiness should be understood through their acceptance of change, willingness to adapt, and sense of responsibility in conducting instruction.

Based on these findings, the personal readiness of all five teachers was evident in their acceptance of the *Deep Learning* approach, willingness to respond to change, and efforts to fulfill their instructional responsibilities. However, the process of adapting to change continued to occur in different ways and at varying levels. Thus, teachers had developed personal dispositions that could support the implementation of *Deep Learning*, but these dispositions needed to be reflected more consistently in adjustments to established teaching habits and improvements in instructional practices. This conclusion represents an interpretation of teachers' attitudes and responsibilities based on interviews, observations, and documentation, rather than the results of personality measurement using a standardized scale.

4. Teachers' Social Readiness to Implement the Deep Learning Approach

Teachers' social readiness to implement the *Deep Learning* approach is associated with their ability to establish effective communication and interaction with students and develop collaborative relationships with colleagues and other members of the madrasah community. These two aspects are important because deep learning requires supportive interpersonal relationships that encourage student engagement, as well as opportunities for teachers to exchange experiences and improve instructional practices collaboratively. The findings indicate that all five teachers demonstrated efforts to establish interactions with students and maintain professional relationships. However, the quality of communication and forms of collaboration varied.

In communicating with students, the five teachers adopted different approaches, including humor, discussions, adjustments in speaking styles, attention to students' conditions, and the provision of appreciation. The experiences reported by S1, S2, and S4 indicated that students received responses and explanations when they asked questions or provided incorrect answers. However, S3's experience showed that a comfortable classroom

atmosphere did not necessarily encourage all students to express their learning difficulties, particularly when teachers did not actively provide opportunities for them to ask questions. Observation findings also indicated that opportunities to express opinions had been provided, although in G1's and G4's classes, teachers sometimes responded before students had finished speaking. Meanwhile, interactions in G3's and G5's classes did not develop extensively during the observed sessions. These conditions indicate that the ability to establish rapport with students needs to be accompanied by a willingness to listen and provide equitable opportunities for communication. This finding is consistent with Rahayu et al., (2026) who reported that overly formal learning environments and one-way interactions could discourage students from asking questions. Ruhul & Hamimi, (2026) also found variations in students' willingness to express ideas without fear of making mistakes. Therefore, teachers' social readiness is not demonstrated solely by creating an enjoyable classroom atmosphere but also by their ability to establish interactions that make all students feel heard and confident in expressing their opinions.

Collaboration with colleagues and the madrasah community also demonstrated teachers' efforts to develop professional relationships. G1 and G2 engaged in discussions with colleagues, while G3 participated in the English Subject Teacher Forum (MGMP) and interschool forums because there were no other teachers from the same subject area at the madrasah. Meanwhile, G4 and G5 primarily reported participation in training and professional development activities, meaning that direct exchanges of ideas with colleagues were not described in detail. The madrasah also provided support through workshops, online training, MGMP activities, and transportation assistance. Fermaisuri, (2026) found that MGMP could serve as a professional development platform through peer mentoring, workshops, and the exchange of teaching practices. These findings indicate that professional forums have the potential to support teachers' readiness to implement deep learning. However, the data in this study did not provide an in-depth account of the extent to which discussions and collaborative activities were used to discuss, evaluate, and improve the implementation of *Deep Learning*. Therefore, participation in professional forums and institutional support indicate an existing foundation for collaboration but are insufficient to establish whether these activities have resulted in changes to classroom practices.

Based on these findings, teachers' social readiness to implement the *Deep Learning* approach was evident in their efforts to establish positive relationships with students, provide opportunities for interaction, and maintain professional relationships with colleagues and the

madrasah community. Nevertheless, communication practices that encourage all students to express their ideas and learning difficulties require further strengthening. Similarly, professional collaboration needs to be directed more towards the exchange of experiences and collective evaluation of deep learning implementation. Thus, teachers' social readiness had been established through interpersonal interactions and professional relationships but required further strengthening to support the more effective implementation of the *Deep Learning* approach.

Research implications, the findings indicate that implementing the *Deep Learning* approach requires teachers' comprehensive readiness across pedagogical, professional, personal, and social competencies. Therefore, madrasah administrators need to strengthen mentoring, supervision, training, and teacher collaboration to improve teachers' understanding and instructional practices. Teachers should also enhance their consistency in implementing student-centered learning, conducting assessments, and facilitating learning reflection.

Research limitations, this study was limited to five teachers at MAS Tarbiyah Islamiah Batang Kabung; therefore, its findings cannot be generalized to all educational institutions. Furthermore, classroom observations were conducted during only one lesson for each teacher. Consequently, the findings reflect teachers' readiness and instructional practices during the research period rather than their overall teaching practices over an extended period.

CONCLUSION

The findings indicate that the five teachers at MAS TI Batang Kabung have demonstrated readiness to implement the *Deep Learning* approach across four competencies: pedagogical, professional, personal, and social. This readiness is reflected in their initial understanding, subject mastery, instructional planning, openness to change, and efforts to establish positive relationships with students and colleagues. However, its implementation remains varied and inconsistent. Pedagogical readiness requires further improvement in identifying students' prior knowledge, ensuring equal participation, providing feedback, and conducting reflection. Professional readiness needs strengthening in contextualizing subject matter, translating the *Deep Learning* concept into meaningful learning activities, and selecting appropriate learning media. Personal readiness is evident in teachers' willingness to adapt

and their sense of responsibility, although changes in teaching practices are still gradual. Social readiness is reflected in positive teacher–student communication and professional collaboration, but opportunities for student participation and collaborative evaluation need to be expanded. Overall, teachers have established a foundation for implementing *Deep Learning*, but further development is necessary to ensure consistent instructional practices and to integrate the principles of *mindful*, *meaningful*, and *joyful learning* more comprehensively.

This study contributes to educational research, particularly to the understanding of teachers' readiness to implement the *Deep Learning* approach. It provides insights into teacher readiness through four main competencies: pedagogical, professional, personal, and social. The findings also highlight the importance of aligning teachers' understanding, instructional planning, and classroom implementation. These insights may serve as a reference for further research and the evaluation of *Deep Learning* implementation in madrasahs.

Future researchers are encouraged to involve a larger number of teachers and educational institutions with diverse characteristics to obtain a broader understanding of teacher readiness. Data collection should also be conducted over a longer period through repeated classroom observations to examine changes in teachers' readiness and the consistency of their instructional practices. Furthermore, future studies could investigate the relationship between teacher readiness and student engagement and learning outcomes in the implementation of the *Deep Learning* approach.

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