6th CELTI
Conference in English Language Teaching
AN INTERNATIONAL VIRTUAL CONFERENCE
Decolonize English at the Age of Artificial Intelligence: Rethinking Language, Literature, and Pedagogy

Deep Learning in Indonesian EFL Classrooms: Supporting Students' Readiness for the English TKA

Author:
Ririn Ariyani Saputri

Affiliation:
Universitas Persatuan Guru Republik Indonesia, Semarang, Indonesia

Corresponding email:
ririnariyanisaputri@gmail.com

DOI:
https://doi.org/10.24090/16kqee81

Pages:
1-16

Abstract: The English Academic Achievement Test (*Tes Kemampuan Akademik*/TKA) in Indonesia requires students to demonstrate higher-order thinking skills, including interpreting texts, drawing inferences, and evaluating information. This raises questions about whether classroom practices adequately support students' readiness for such cognitively demanding assessments. While deep learning pedagogy has been widely recognized for promoting inquiry, collaboration, and reflective learning, its role in supporting students' readiness for the English TKA in Indonesian EFL contexts remains underexplored. This study examines how deep learning practices support high school students' readiness for the English TKA. The research was conducted with Grade XII students at a senior high school in Semarang where deep learning pedagogy has been implemented over several years. A mixed-methods design was employed. Quantitative data were collected using the Student Perception of Deep Learning Implementation Scale (SP-DLI), measuring learning partnerships, learning environments, digital tool integration, and pedagogical practices. These data were complemented by semi-structured interviews exploring students' learning experiences and strategies in understanding complex English texts. Collaborative discussions, inquiry-based reading, and project-based learning play a significant role in supporting students' readiness to meet the analytical demands of the English TKA. Meaningful learning experiences appear to play an important role in helping students develop the analytical and interpretive competencies required in contemporary English assessments.

Keywords: deep learning pedagogy; EFL classrooms; English TKA; student learning experiences; Indonesian secondary education

Introduction

Educational systems are increasingly expected to equip students with the ability to think critically, solve problems, and apply knowledge in unfamiliar situations rather than merely recall information. As social, technological, and economic changes continue to reshape the demands placed on learners, schools are encouraged to foster competencies that enable students to interpret information, evaluate evidence, and make informed decisions (OECD, 2018; UNESCO, 2021). These expectations have influenced curriculum reforms and assessment practices across many educational contexts, including Indonesia. In response, greater attention has been given to classroom practices that help students interpret, question, and use knowledge in meaningful ways.

Within the Indonesian context, these changing expectations are reflected in efforts to strengthen competency-based learning and assessment. One example is the implementation of the Academic Achievement Test (Tes Kemampuan Akademik/TKA), which is intended to provide information about

students' academic achievement and reasoning abilities through standardized assessment (Pusat Asesmen Pendidikan, 2025). In English language education, students are expected to engage with texts beyond the surface level by identifying implied meanings, drawing conclusions from evidence, evaluating information, and interpreting ideas across different contexts. Such demands require learners to employ higher-order thinking skills while using English as a tool for understanding and reasoning. Consequently, an important question emerges: to what extent do classroom learning experiences prepare students for these analytical demands? Such expectations are consistent with contemporary approaches to competency-based assessment, which emphasize students' ability to transfer knowledge, apply higher-order thinking skills, and demonstrate learning across contexts rather than merely reproduce factual information (Care et al., 2018).

Among the approaches proposed to address this challenge, deep learning pedagogy has received growing attention. Deep learning views learning as a process of developing meaningful understanding through inquiry, collaboration, reflection, and the application of knowledge in authentic situations (Fullan et al., 2017). Rather than emphasizing the accumulation of isolated facts, it encourages students to connect ideas, examine problems from different perspectives, and transfer learning to new contexts. Learners are expected not only to understand what they learn but also to use that understanding in situations that require judgment, creativity, and advanced reasoning abilities. Such characteristics make deep learning particularly relevant to educational contexts that seek to develop complex cognitive skills and meaningful engagement with knowledge. In many contemporary classrooms, these learning experiences are increasingly supported by digital technologies that enable students to access information, collaborate with others, and create knowledge in more flexible ways.

Technology has further expanded opportunities for deep learning by enabling students to access information, collaborate with peers, create digital products, and engage with learning beyond the physical classroom. Dede (2014) argues that digital technologies can support deeper forms of learning when they are used to promote inquiry, communication, and authentic problem-solving rather than passive information consumption. More recently, Timotheou et al. (2022) reported that technology-rich learning environments can contribute to educational transformation by supporting collaboration, knowledge construction, and student-centered learning. These findings indicate that the effective integration of technology is not simply a matter of providing digital tools but of creating learning experiences that encourage active participation and meaningful intellectual engagement.

A growing body of research has reported positive outcomes associated with instructional approaches that reflect the principles of deep learning. In an Ethiopian EFL context, Wale and Bishaw (2020) found that inquiry-based learning contributed to the development of students' critical thinking skills by encouraging them to analyze information, justify opinions, and evaluate arguments. Similar results were reported by Kamaruddin et al. (2023), who found that inquiry-based learning positively influenced EFL students' critical thinking abilities in Indonesian classrooms. These findings are particularly relevant because critical thinking is closely related to the ability to interpret texts, evaluate information, and construct reasoned responses, all of which are required in academic language assessment.

Project-based learning has also been associated with deeper forms of engagement and understanding. Sari and Prasetyo (2021) found that project-based learning enhanced students' critical reading skills and encouraged more thoughtful engagement with texts in an EFL setting. Likewise, Song et al. (2025) reported that project-based learning supported the development of both critical thinking and reading comprehension among EFL learners. Beyond language development, these studies highlight the value of authentic tasks that require students to investigate issues, synthesize information, and communicate ideas. Collectively, the existing literature suggests that learning environments characterized by inquiry, collaboration, reflection, authentic tasks, and purposeful technology use can support the development of competencies associated with complex academic performance. Although these studies examined different instructional approaches, they share key characteristics associated with deep learning, including inquiry, collaboration, authentic learning tasks, and active knowledge construction.

Despite these promising developments, existing studies have primarily examined deep learning-related approaches in relation to student engagement, critical thinking, reading performance, language achievement, or broader learning outcomes. Comparatively less attention has been given to how students experience these learning practices in preparation for high-stakes academic assessments. This

issue is particularly relevant in Indonesia, where the English TKA represents a relatively recent development in the national assessment landscape and places considerable emphasis on analytical reasoning and higher-order thinking skills (Pusat Asesmen Pendidikan, 2025). Although the competencies promoted through deep learning are conceptually aligned with the demands of the English TKA, empirical evidence connecting students' classroom experiences with readiness for the assessment remains limited. More specifically, little is known about how students themselves perceive the contribution of deep learning practices to their preparation for the analytical challenges presented in the test. Consequently, evidence remains limited regarding how students connect their classroom learning experiences with their readiness to respond to the analytical demands of the English TKA.

Understanding how students interpret these learning experiences may offer useful insights for teachers and researchers seeking to strengthen the connection between classroom learning and assessment preparation. While previous studies have demonstrated the potential of inquiry-based and project-based learning to strengthen higher-order thinking skills, understanding how students interpret these experiences within the context of assessment preparation may offer a more nuanced perspective on the relationship between learning and assessment. Such insights may help teachers identify classroom practices which students perceive as beneficial and provide a clearer picture of how deep learning principles are experienced in English language classrooms.

Therefore, this study investigates how deep learning practices support students' readiness for the English TKA in an Indonesian EFL context. Specifically, the study examines students' perceptions of deep learning implementation and explores the learning experiences they consider helpful in preparing for the analytical demands of the test. To achieve this objective, the study employs a mixed-methods design that combines quantitative data from the Student Perception of Deep Learning Implementation Scale (SP-DLI) with qualitative data obtained through semi-structured interviews. By bringing together students' perceptions and experiences, the study aims to provide a clearer understanding of how classroom learning practices are experienced in relation to preparation for the English TKA.

Literature Review

Deep Learning Pedagogy

Deep learning pedagogy has emerged as an educational approach that emphasizes meaningful understanding, knowledge application, and the development of competencies required for learning beyond the classroom. Rather than focusing primarily on the acquisition of factual knowledge, deep learning encourages students to actively construct understanding through inquiry, collaboration, reflection, and engagement with authentic problems. In this perspective, learning is not viewed as the accumulation of information but as a process through which learners connect ideas, interpret experiences, and apply knowledge in new situations (Fullan et al., 2017). This emphasis on active participation and learner agency is also reflected in the OECD Learning Compass 2030 framework, which positions students as active contributors to their own learning and highlights the importance of developing competencies that enable learners to navigate complex and uncertain contexts (OECD, 2019). Recent research has similarly highlighted learner agency as a critical element of technology-enhanced learning environments, where students are expected to regulate learning, make informed decisions, and actively participate in knowledge construction processes (Hooshyar et al., 2023).

A key feature of deep learning pedagogy is its emphasis on learner participation in the learning process. Students are encouraged to explore questions, examine issues from multiple perspectives, and take an active role in constructing meaning. Such experiences provide opportunities for learners to move beyond surface-level understanding and engage in deeper forms of reasoning and problem-solving. As a result, learning becomes more closely associated with the ability to transfer knowledge, make informed judgments, and respond to complex challenges.

The implementation of deep learning is often supported by learning environments that promote collaboration and student agency. Fullan et al. (2017) describe deep learning as a process that develops through meaningful partnerships among students, teachers, and learning communities. These partnerships encourage learners to participate actively in decision-making, exchange ideas, and learn from one another. Through collaborative engagement, students are exposed to diverse perspectives that can broaden understanding and strengthen critical reflection. Such experiences are particularly relevant

in language learning contexts, where communication and interaction play an essential role in the construction of knowledge.

Another important aspect of deep learning involves the purposeful use of digital technologies. Digital tools can expand access to information, facilitate collaboration, and support the creation of learning products that extend beyond traditional classroom activities. However, technology itself does not automatically lead to deeper learning. Dede (2014) argues that digital technologies contribute most effectively when they are used to support inquiry, communication, and authentic problem-solving. Similarly, Timotheou et al. (2022) emphasize that technology-enhanced learning environments can foster student-centered learning when digital resources are integrated into meaningful learning experiences rather than used solely for content delivery.

Drawing on these perspectives, this study conceptualizes deep learning pedagogy through four interconnected dimensions: learning partnerships, learning environments, leveraging digital, and pedagogical practices. These dimensions provide a framework for understanding how students experience deep learning in English classrooms and how such experiences may contribute to their preparation for academically demanding tasks. Consequently, they serve as the theoretical foundation for examining students' perceptions of deep learning implementation in the present study.

Deep Learning and Readiness for Complex Academic Tasks

One of the central goals of deep learning pedagogy is to prepare students to engage with complex tasks that require analysis, interpretation, and reasoned decision-making. Rather than emphasizing the reproduction of information, deep learning encourages learners to investigate questions, evaluate evidence, and construct understanding through active participation. These experiences are particularly important in educational contexts where students are expected to apply knowledge in unfamiliar situations and respond to tasks that require higher levels of cognitive engagement.

Inquiry-based learning is one instructional approach that reflects many of the principles associated with deep learning. Through inquiry, students are encouraged to ask questions, examine information critically, and develop explanations based on evidence. Such processes require learners to move beyond passive reception of knowledge and become active participants in learning. In an EFL context, Wale and Bishaw (2020) found that inquiry-based learning contributed to the development of students' critical thinking skills by promoting analysis, evaluation, and reasoned argumentation. Similarly, Kamaruddin et al. (2023) reported that inquiry-based learning positively influenced EFL students' critical thinking abilities, suggesting that structured opportunities for questioning and investigation can support deeper cognitive engagement.

Project-based learning has also been identified as a learning approach that supports the development of competencies associated with complex academic performance. By engaging students in authentic tasks that require planning, information gathering, collaboration, and presentation, project-based learning creates opportunities for learners to apply knowledge in meaningful contexts. Sari and Prasetyo (2021) found that project-based learning enhanced critical reading skills among EFL learners while encouraging more reflective engagement with texts. Likewise, Song et al. (2025) reported improvements in both critical thinking and reading comprehension among students participating in project-based learning activities. These findings suggest that learning experiences involving authentic inquiry and sustained engagement with information can strengthen students' ability to process, interpret, and evaluate texts.

The development of critical reading and analytical reasoning is particularly relevant in language learning. Academic tasks often require students to identify main ideas, recognize implicit meanings, distinguish relevant information from supporting details, and evaluate the credibility of arguments. Such skills extend beyond language knowledge alone and involve the ability to interpret information thoughtfully and make reasoned judgments. Learning experiences that encourage discussion, reflection, inquiry, and problem-solving may therefore provide opportunities for students to develop these capabilities in meaningful ways.

Although inquiry-based learning and project-based learning differ in their instructional procedures, both share several characteristics commonly associated with deep learning. These include active knowledge construction, collaboration, authentic learning tasks, reflection, and learner participation. Through these experiences, students are encouraged not only to understand information

but also to use it, question it, and connect it to broader contexts. Consequently, deep learning pedagogy can be understood as an approach that creates conditions in which learners engage with knowledge at a deeper level and develop competencies that are relevant to complex academic tasks. This perspective provides an important foundation for examining how students perceive the contribution of deep learning practices to their readiness for the analytical demands of the English TKA.

English TKA and Higher-Order Thinking Skills

The Academic Achievement Test (Tes Kemampuan Akademik/TKA) was introduced to provide standardized information regarding students' academic achievement and reasoning abilities across different subject areas (Pusat Asesmen Pendidikan, 2025). As part of ongoing efforts to strengthen competency-based assessment, the TKA is intended to evaluate not only what students know but also how effectively they can use their knowledge in academic contexts. This orientation reflects broader educational priorities that place increasing emphasis on reasoning, problem-solving, and the application of knowledge rather than the simple recall of information.

Within English language education, these expectations are reflected in the types of tasks students encounter in the assessment. Learners are often required to engage with written texts in ways that extend beyond literal comprehension. They may need to identify implicit meanings, recognize relationships among ideas, draw conclusions from textual evidence, evaluate arguments, and interpret information presented across different contexts. Such tasks require students to process information actively and make judgments based on their understanding of the text. Consequently, successful performance depends not only on language knowledge but also on the ability to think critically and reason effectively. Similar tendencies have been reported in Indonesian literacy assessment research, where learners are increasingly expected to interpret information, draw inferences, evaluate arguments, and engage critically with texts rather than rely solely on factual recall (Damaianti et al., 2020). This emphasis on analytical reasoning is consistent with the growing integration of higher-order thinking skills into English language assessment, where learners are expected to analyze, evaluate, and apply information rather than rely solely on factual recall (Wiyaka et al., 2020; Hamma et al., 2023).

These characteristics are closely aligned with broader discussions of higher-order thinking skills in contemporary education. According to the OECD (2018), students are increasingly expected to use knowledge flexibly, respond to unfamiliar situations, and make informed decisions based on available information. In language learning contexts, these competencies involve interpreting meaning, analyzing perspectives, evaluating evidence, and integrating information from multiple sources. Therefore, the skills required in academically demanding English assessments extend beyond vocabulary knowledge or grammatical accuracy and include the capacity to engage thoughtfully with information.

Readiness for assessments such as the English TKA involves more than familiarity with test formats or content areas. Students must be able to navigate complex texts, identify relevant information, distinguish explicit and implicit meanings, and construct interpretations supported by evidence. They also need strategies that help them manage cognitively demanding reading tasks and respond to questions that require analysis rather than direct retrieval of information. As a result, classroom learning experiences may play an important role in shaping how students develop these competencies over time.

From this perspective, learning environments that encourage inquiry, discussion, critical reading, reflection, and problem-solving may provide opportunities for students to develop the kinds of skills associated with the demands of the English TKA. While previous research has demonstrated the potential of deep learning-related approaches to support critical thinking and reading development, relatively little attention has been given to how students themselves perceive the contribution of these experiences to assessment preparation. Existing discussions have tended to focus on instructional approaches, learning outcomes, or assessment policies, while students' perspectives remain comparatively underexplored. Examining these perspectives may therefore provide valuable insights into how classroom learning experiences are connected to readiness for the analytical demands of the English TKA. For this reason, the present study explores students' perceptions of deep learning implementation and investigates how they describe the contribution of classroom learning experiences to their preparation for the English TKA.

Research Method

Research Design

This study employed an explanatory sequential mixed-methods design to investigate how deep learning practices support students' readiness for the English TKA. This design was selected because the study sought to obtain both a broad overview of students' perceptions and a deeper understanding of the experiences underlying those perceptions. In explanatory sequential mixed-methods research, quantitative data are collected and analyzed in the first phase, while qualitative data are subsequently gathered to explain, elaborate, and contextualize the quantitative results.

The use of this design was particularly appropriate for the present study because readiness for academically demanding assessments cannot be fully understood through numerical data alone. While questionnaire responses can provide information regarding students' perceptions of deep learning implementation, they offer limited insight into how learners interpret classroom experiences and how those experiences contribute to their preparation for the English TKA. Semi-structured interviews were therefore conducted after the quantitative phase to explore students' perspectives in greater depth and to provide richer explanations for patterns identified in the survey data.

By integrating quantitative and qualitative evidence, the study aimed to develop a more comprehensive understanding of how deep learning practices are experienced in English classrooms and how students perceive the contribution of those experiences to their readiness for the analytical demands of the English TKA.

Participants and Research Context

The study was conducted in a private secondary school located in Central Java, Indonesia. The school had adopted educational practices consistent with deep learning principles as part of its ongoing efforts to promote meaningful learning, student engagement, and competency development. Within this context, English instruction incorporated activities that encouraged collaboration, inquiry, discussion, technology integration, and active student participation.

The participants were Grade XII students who had experienced English learning within this instructional environment. Grade XII students were selected because they had completed several years of English instruction and were also preparing for academic assessments that required higher-order thinking and reading comprehension skills. As a result, they were considered well positioned to reflect on how their classroom experiences contributed to their preparation for the English TKA.

Twenty-four students participated in the quantitative phase of the study by completing the Student Perception of Deep Learning Implementation Scale (SP-DLI). Following the questionnaire administration, six students were selected to participate in semi-structured interviews. A purposive sampling approach was used to ensure the inclusion of students representing different learning experiences and perspectives reflected in the questionnaire responses. The intention was not to achieve statistical representation but to obtain richer and more varied descriptions of how students experienced deep learning practices in their English classrooms.

Participation in both phases of the study was voluntary. Prior to data collection, students were informed about the purpose of the research and the use of the data for academic purposes. They were also assured that their responses would remain confidential and that their identities would not be disclosed in any publication or presentation resulting from the study.

Data Collection

Data were collected through a questionnaire and semi-structured interviews. The questionnaire served as the primary source of quantitative data, while the interviews provided qualitative evidence that helped explain and expand upon the survey findings.

The quantitative instrument used in this study was the Student Perception of Deep Learning Implementation Scale (SP-DLI), which was developed based on the deep learning framework proposed by Fullan et al. (2017). The instrument consisted of twenty statements measured using a five-point Likert scale ranging from strongly disagree to strongly agree. Higher scores indicated more positive perceptions of deep learning implementation in the classroom. Prior to data collection, the instrument was reviewed by two English education experts to evaluate the relevance, clarity, and alignment of the items with the dimensions of deep learning. Minor revisions were made to improve wording and ensure

contextual suitability for Indonesian EFL classrooms. The review process supported the content validity of the instrument and helped ensure that the questionnaire appropriately represented the constructs being investigated.

The SP-DLI was designed to capture students' perceptions across four dimensions of deep learning. The first dimension, Learning Partnerships, focused on opportunities for collaboration, communication, and shared learning among students and teachers. The second dimension, Learning Environments, examined the extent to which classroom conditions encouraged engagement, participation, and meaningful learning. The third dimension, Leveraging Digital, explored how technology was used to support learning, collaboration, and knowledge construction. The final dimension, Pedagogical Practices, focused on instructional approaches that encouraged inquiry, reflection, problem-solving, and active involvement in learning activities.

The questionnaire was administered to Grade XII students during the data collection period. After the responses had been collected and reviewed, six students were invited to participate in individual semi-structured interviews. The interviews were conducted after the quantitative phase because the study aimed to use qualitative data to provide further explanations of students' survey responses and learning experiences.

The interview protocol was developed to explore several aspects of students' experiences, including classroom activities, collaborative learning, technology use, critical thinking development, and perceptions of readiness for the English TKA. Additional questions were used when necessary to clarify participants' responses and encourage more detailed reflection. Each interview was conducted individually and recorded with the participants' permission. This procedure helped ensure the accuracy of data collection and allowed students to describe their experiences in their own words. The interviews also provided opportunities to identify aspects of classroom learning that students perceived as particularly beneficial in preparing for academically demanding English tasks.

Data Analysis

The quantitative and qualitative data were analyzed sequentially in accordance with the explanatory sequential mixed-methods design. Quantitative analysis was conducted first and served as the basis for the subsequent qualitative inquiry.

Questionnaire responses obtained from the SP-DLI were analyzed using descriptive statistics. Mean scores were calculated for each of the four dimensions as well as for the overall instrument. The analysis aimed to identify patterns in students' perceptions of deep learning implementation and to determine which aspects of deep learning were perceived most positively. Because the study focused on exploring students' experiences rather than testing hypotheses, descriptive statistics were considered sufficient for addressing the quantitative component of the research.

Following the quantitative analysis, the interview data were analyzed using thematic analysis. The interview recordings were transcribed and reviewed repeatedly to ensure familiarity with the data. During the initial stage of analysis, meaningful statements related to classroom learning experiences, assessment preparation, and perceptions of the English TKA were identified and coded. These codes were then compared across participants to identify similarities, differences, and recurring patterns.

In the next stage, related codes were grouped into broader categories representing common ideas expressed by participants. The categories were subsequently refined and organized into themes that captured important aspects of students' experiences and perceptions. Throughout the process, the researcher continuously reviewed the developing themes against the interview data to ensure that the interpretations accurately reflected participants' responses.

The final stage involved integrating the quantitative and qualitative findings. Interview themes were used to explain, enrich, and contextualize the survey results. This process enabled the study to move beyond numerical descriptions and develop a more detailed understanding of how students perceived deep learning implementation and how they connected classroom learning experiences with readiness for the analytical demands of the English TKA.

Finding (s)

Students' Perceptions of Deep Learning Implementation

Students' perceptions of deep learning implementation were examined using the Student Perception of Deep Learning Implementation Scale (SP-DLI). The instrument assessed four dimensions of deep learning practices: Learning Partnerships, Learning Environments, Leveraging Digital, and Pedagogical Practices. Table 1 presents the mean scores for each dimension.

Table 1. Students' perceptions of deep learning implementation

Dimension	Mean
Learning Partnerships	3.79
Learning Environments	4.14
Leveraging Digital	4.46
Pedagogical Practices	4.27
Average Score	4.15

Table 1 shows that students reported positive perceptions of deep learning implementation across all four dimensions of the SP-DLI. The mean scores ranged from 3.79 to 4.46, indicating that students experienced various aspects of deep learning in their English classrooms. This finding suggests that the learning environment was perceived as supportive of meaningful engagement, active participation, and the development of competencies associated with deep learning.

Among the four dimensions, Leveraging Digital received the highest mean score (4.46). Students appeared to view technology as an important component of classroom learning, supporting access to information, task completion, and engagement with learning activities. The prominence of this dimension reflects the increasing role of technology in supporting student-centered learning and knowledge construction within contemporary educational settings.

Pedagogical Practices obtained the second-highest mean score (4.27), indicating that students generally perceived classroom instruction as encouraging active participation, inquiry, reflection, and meaningful engagement with learning tasks. This result suggests that students were exposed to instructional practices that extended beyond the transmission of information and provided opportunities to think critically, explore ideas, and engage with learning more actively. Similarly, Learning Environments received a positive mean score (4.14), suggesting that classroom conditions were generally perceived as supportive of learning and student engagement.

In contrast, Learning Partnerships recorded the lowest mean score among the four dimensions (3.79). Although this score still reflects a generally positive perception, it suggests that opportunities for collaboration and shared decision-making may have been experienced less consistently than other aspects of deep learning implementation. Compared with technology integration and instructional practices, partnership-related experiences appeared to represent an area with greater potential for further development.

The distribution of scores highlights two prominent features of students' learning experiences. Technology-supported learning and classroom instructional practices were perceived particularly positively, while partnership-related experiences appeared less prominent. These patterns provide a useful context for understanding students' descriptions of classroom learning presented in the following sections. This pattern suggests that students perceived technology integration and instructional practices as the most visible manifestations of deep learning in their English classrooms, whereas collaborative partnerships appeared to be experienced less consistently across learning activities. The interview findings presented below help explain how these dimensions were experienced in everyday classroom practice.

Technology and Active Learning as Dominant Features of Deep Learning Implementation

The interview findings provided further insights into the quantitative results, particularly the high scores obtained for Leveraging Digital and Pedagogical Practices. Across participants, technology was consistently described as an integral part of the learning process rather than simply a supplementary tool. Students reported using various digital resources, including Google Classroom, online materials, digital dictionaries, educational videos, and artificial intelligence tools to support learning activities.

These resources were perceived as helping them access information more efficiently, clarify unfamiliar concepts, and complete academic tasks more effectively.

Several participants emphasized that digital technologies allowed them to explore learning materials independently and extend learning beyond classroom instruction. Online resources provided opportunities to search for additional information, compare different sources, and gain a broader understanding of topics discussed during lessons. Some students also mentioned the use of artificial intelligence tools to assist with brainstorming ideas, checking language use, and obtaining explanations when encountering difficulties. Such experiences suggest that technology functioned not only as a medium for information access but also as a tool that supported inquiry and independent learning.

The interview data also revealed that students frequently engaged in learning activities that required active participation. Participants described classroom experiences involving presentations, debates, group discussions, research projects, and problem-solving tasks. Rather than receiving information passively, students were often expected to investigate topics, share ideas, and communicate their understanding to others. These activities encouraged learners to engage with content more actively and provided opportunities to develop reasoning, communication, and critical thinking skills.

One recurring theme across interviews was the value of inquiry-oriented learning experiences. Students reported being encouraged to search for information, analyze issues from different perspectives, and justify their opinions during classroom discussions. Such experiences required them to think beyond factual recall and become more actively involved in the learning process. In addition, several participants noted that project-based activities allowed them to connect classroom learning with real-world issues, making learning more meaningful and engaging.

Taken together, the qualitative findings help explain why Leveraging Digital and Pedagogical Practices emerged as the strongest dimensions in the questionnaire results. Students perceived technology as an important support for learning, while active and inquiry-oriented classroom activities provided opportunities to engage with knowledge in more meaningful ways. These experiences reflect several key characteristics of deep learning, including active participation, knowledge construction, collaboration, and the application of learning beyond routine classroom tasks.

Learning Experiences Supporting Readiness for the English TKA

The interview findings revealed that students perceived several classroom learning experiences as helpful in preparing them for the English TKA. Although participants did not always associate these experiences directly with assessment preparation, they consistently described activities that developed skills closely related to the analytical demands of the test. Three interconnected themes emerged from the data: engagement with reading-intensive activities, opportunities for critical thinking and discussion, and teacher support through feedback and guided practice.

One of the most frequently mentioned experiences involved reading-based learning activities. Students reported regularly working with various English texts, completing reading exercises, identifying key information, and discussing the meanings of texts during classroom instruction. Several participants explained that these activities helped them become more familiar with longer passages and more complex questions. Through repeated exposure to reading tasks, students developed greater confidence in identifying main ideas, locating relevant information, and interpreting textual meaning. Many participants believed that these experiences were beneficial because the English TKA requires students to understand and analyze information presented in written texts.

Critical thinking and discussion-based activities also emerged as important aspects of assessment preparation. Students described participating in debates, group discussions, presentations, and problem-solving activities that required them to justify opinions, evaluate information, and consider alternative perspectives. These experiences encouraged learners to move beyond memorization and engage more actively with ideas. Several participants noted that discussing different viewpoints helped them understand issues more deeply and become more comfortable expressing reasoned arguments. Such experiences were perceived as valuable because they strengthened analytical thinking skills that students considered relevant when answering more challenging English questions.

Another recurring theme involved the role of teacher guidance and feedback. Participants frequently emphasized the importance of teachers' explanations, examples, and corrective feedback in helping them improve their understanding. Feedback on assignments, discussions of common mistakes, and guided review activities were often mentioned as particularly useful. Students reported that these

forms of support helped them recognize weaknesses, refine their learning strategies, and develop greater confidence when working with academic tasks. In addition, several participants highlighted the value of practice activities that resembled examination tasks because they provided opportunities to apply what had been learned in classroom contexts.

The findings also suggest that readiness for the English TKA was perceived as extending beyond mastery of language content alone. Students frequently referred to the need to understand texts carefully, think critically, evaluate information, and manage challenging questions. These responses indicate that participants viewed assessment preparation as a process involving both language development and broader cognitive skills. Rather than focusing exclusively on memorizing content, many students emphasized the importance of developing strategies for understanding, interpreting, and responding to complex information.

The interview findings indicate that students viewed assessment preparation as a process extending beyond language knowledge alone. Reading-intensive activities, opportunities for critical engagement, and sustained teacher support were consistently described as meaningful contributors to their preparation. These experiences were perceived as helping students develop the strategies, confidence, and analytical approaches needed to respond to the demands of the English TKA.

Discussion

Deep Learning as a Technology-Supported Learning Environment

Technology emerged as a central feature of students' learning experiences. Both the questionnaire results and interview accounts indicate that digital tools were embedded in everyday classroom activities rather than functioning as occasional instructional supports. Participants frequently referred to online resources, educational videos, digital dictionaries, artificial intelligence tools, and learning management platforms as resources that helped them access information, complete learning tasks, and deepen their understanding of classroom content. This observation is consistent with research suggesting that the educational value of technology depends less on access to digital tools and more on how those tools are used to support meaningful learning experiences and learner engagement (Wang et al., 2024).

Students' descriptions of technology use closely align with contemporary perspectives on deep learning. Dede (2014) argued that digital technologies can contribute to deeper forms of learning when they are used to support inquiry, communication, and problem-solving rather than simple information delivery. A similar perspective was reported by Timotheou et al. (2022), who emphasized that technology-rich learning environments can promote knowledge construction and student-centered learning when learners actively engage with digital resources. The experiences reported by participants reflect these characteristics, particularly in relation to information exploration, independent inquiry, and active engagement with learning tasks.

An interesting aspect of the present study is the way students described the value of technology. Rather than focusing on the tools themselves, participants consistently emphasized what technology enabled them to do as learners. Digital resources were described as helping them search for information, compare different sources, clarify difficult concepts, and continue learning beyond classroom instruction. This suggests that students perceived technology primarily as a means of supporting learning processes rather than as an educational goal in its own right.

The role of technology appears particularly relevant within the context of English language learning. Access to a wide range of texts, explanations, and learning materials provided students with opportunities to engage with language beyond the boundaries of classroom instruction. Such opportunities may be especially valuable when students are expected to interpret information, evaluate ideas, and respond to increasingly complex academic tasks. Viewed from this perspective, technology-supported learning not only reflects an important component of deep learning implementation but also provides students with additional pathways for developing the competencies associated with readiness for the English TKA. This observation is consistent with findings showing that students' readiness to benefit from technology-enhanced learning depends not only on access to digital resources but also on their ability to use those resources purposefully to support learning processes and academic development (Santosa et al., 2024).

Active Learning Experiences and the Development of Academic Competencies

A recurring pattern throughout the interviews was students' emphasis on active participation in learning. Discussions, debates, presentations, research projects, and problem-solving activities were frequently described as meaningful classroom experiences. Rather than portraying learning as a process of receiving information, participants often associated effective learning with opportunities to investigate ideas, exchange perspectives, and communicate understanding. Such experiences suggest that engagement with knowledge was an important feature of their classroom learning environment.

Students' accounts closely reflect Fullan et al.'s (2017) conception of deep learning, which emphasizes inquiry, collaboration, reflection, and the application of knowledge in meaningful contexts. From this perspective, learning becomes more powerful when students actively construct understanding and connect learning with authentic situations. The activities described by participants illustrate several characteristics of this approach, particularly the emphasis on learner engagement, knowledge construction, and meaningful participation in learning processes.

Similar tendencies have been reported in studies examining inquiry-oriented learning. Wale and Bishaw (2020) found that inquiry-based approaches contributed to the development of critical thinking by encouraging learners to analyze information, evaluate evidence, and justify conclusions. Comparable outcomes were reported by Kamaruddin et al. (2023), who observed positive relationships between inquiry-focused instruction and the development of critical thinking skills among EFL learners. While those studies primarily examined measurable learning outcomes, the present study offers a complementary perspective by highlighting how students themselves interpret the value of such learning experiences.

The same pattern can be observed in relation to project-based learning. Research has shown that project-based activities can support critical reading, critical thinking, and deeper engagement with learning tasks (Sari & Prasetyo, 2021; Song et al., 2025). Participants in this study similarly described projects, presentations, and collaborative investigations as opportunities to explore information more thoroughly and consider issues from multiple perspectives. Their accounts suggest that these activities encouraged sustained engagement with ideas rather than short-term completion of classroom tasks.

What appears particularly significant is the connection students made between active learning experiences and the development of competencies associated with academic success. When discussing meaningful learning, participants frequently referred to interpreting information, evaluating ideas, defending arguments, and considering alternative viewpoints. These competencies emerged not as isolated skills taught separately from classroom content but as natural outcomes of participation in inquiry-oriented and collaborative learning experiences. This observation suggests that the value of deep learning may lie not only in the competencies it promotes but also in the learning environments it creates: environments where critical engagement, reflection, and meaningful participation become routine aspects of classroom practice.

Readiness for the English TKA Beyond Language Knowledge

Students rarely described readiness for the English TKA in terms of memorizing language rules or mastering isolated language content. Instead, their accounts consistently emphasized reading comprehension, analytical thinking, interpretation, and the ability to evaluate information. When discussing activities that helped them prepare for the assessment, participants frequently referred to reading-based tasks, classroom discussions, feedback from teachers, and opportunities to engage with complex questions. Such responses suggest that students viewed assessment preparation as a process that extended beyond language knowledge alone.

This perspective is particularly significant when considered in relation to the purpose of the English TKA. As discussed earlier, the assessment is intended to evaluate students' ability to comprehend, interpret, and apply knowledge rather than simply recall information. The competencies highlighted by participants closely reflect these expectations. Reading-intensive activities familiarized students with longer and more complex texts, while discussion-based learning encouraged them to justify opinions, evaluate ideas, and consider multiple perspectives. Together, these experiences appear to have supported the development of the analytical abilities that students associated with success in the assessment.

Students' emphasis on higher-order thinking also resonates with broader discussions of academic literacy and competency-based assessment. Academic literacy extends beyond language proficiency and

includes the ability to interpret, evaluate, and construct meaning within academic contexts (Wingate, 2018). The importance of critical engagement with texts is also reflected in recent studies showing that reading comprehension develops more effectively when learners are encouraged to evaluate information, examine alternative perspectives, and justify interpretations rather than focus solely on literal understanding (Agustina & Ro'isatin, 2024). Contemporary educational frameworks increasingly recognize that academic success depends not only on subject knowledge but also on learners' ability to analyze information, construct interpretations, and make reasoned judgments (OECD, 2018).

The experiences described by participants reflect this shift. Rather than viewing assessment preparation as the accumulation of content knowledge, students frequently associated readiness with the capacity to engage critically with information and respond thoughtfully to challenging tasks. Similar conclusions have been reported in studies highlighting the importance of critical reading and analytical reasoning in English language learning, particularly when students are required to interpret information, evaluate evidence, and construct meaning from complex texts. Similar patterns have been reported in Indonesian EFL classrooms, where reading activities designed to promote higher-order thinking encourage students to analyze information, evaluate arguments, and formulate independent interpretations of texts (Indriyana & Kuswandono, 2019). Evidence from Indonesian EFL contexts further suggests that higher-order thinking skills are positively associated with students' achievement in reading comprehension tasks, highlighting the importance of analytical and evaluative thinking for academic performance (Silalahi et al., 2022). Comparable findings have been reported in studies of critical reading, where learning experiences that encourage reflection and analytical interpretation contribute to stronger engagement with academic texts and more sophisticated reading strategies (Khonamri et al., 2020).

An important aspect of the present study is the way students connected classroom experiences with assessment preparation. Previous studies have demonstrated that inquiry-based learning, project-based learning, and other active learning approaches can contribute to the development of critical thinking and academic skills. The present study adds a complementary perspective by showing how learners themselves interpret the relationship between these experiences and their readiness for assessment. Participants did not describe classroom activities as separate from examination preparation; instead, they frequently perceived meaningful learning experiences as part of the preparation process itself. This interpretation suggests that deep learning and assessment readiness may be more closely connected than they are often portrayed in traditional assessment-oriented contexts.

Another noteworthy observation is that teacher support remained an important element of students' preparation despite the emphasis on active and student-centered learning. Feedback, guided practice, and classroom explanations were repeatedly identified as valuable sources of support. This highlights the continuing role of teachers within deep learning environments. Learner agency and active participation did not replace instructional guidance; rather, both appeared to operate together in supporting students' development. Such a balance reflects contemporary understandings of deep learning, where meaningful learning emerges through interactions among learners, teachers, learning tasks, and classroom contexts.

Viewed collectively, these interpretations suggest that readiness for the English TKA is best understood as a multidimensional process involving language development, critical engagement with information, and participation in meaningful learning experiences. Students' accounts point toward a conception of assessment preparation that extends beyond test practice and content review. Instead, readiness appears to develop through sustained engagement with learning activities that encourage inquiry, reflection, interpretation, and the application of knowledge in academically challenging contexts.

Conclusion

This study explored students' perceptions of deep learning implementation and its contribution to readiness for the English TKA within an Indonesian EFL context. The findings suggest that students experienced deep learning through a combination of technology-supported learning, active participation in classroom activities, inquiry-oriented tasks, and sustained instructional support. Rather than viewing assessment preparation as a process centered on memorizing language content,

participants frequently associated readiness with the ability to understand texts, interpret information, evaluate ideas, and engage critically with learning materials.

The discussion highlights that readiness for the English TKA appears to develop through meaningful learning experiences rather than through assessment practice alone. Students described technology as a resource that supported exploration and independent learning, while discussions, projects, presentations, and problem-solving activities provided opportunities to engage more deeply with knowledge. At the same time, teacher guidance and feedback remained important in helping learners refine their understanding and build confidence when approaching academically demanding tasks. These elements collectively suggest that deep learning creates conditions that support the development of competencies associated with contemporary assessment demands.

The study contributes to the growing body of research on deep learning by extending attention beyond learning outcomes and instructional practices to students' own interpretations of assessment readiness. While previous studies have commonly focused on the effects of inquiry-based learning, project-based learning, or deep learning approaches on critical thinking and academic achievement, the present study highlights how learners perceive the relationship between classroom experiences and preparation for a newly introduced academic assessment. In doing so, it provides insight into how deep learning may support students' readiness for complex assessment tasks within English language education.

Several limitations should be acknowledged. The study was conducted in a single school and involved a relatively small number of participants, which may limit the transferability of the findings to other contexts. Future research may involve larger samples across different educational settings and examine how students' perceptions of readiness relate to actual English TKA performance. Such investigations would contribute to a more comprehensive understanding of the relationship between deep learning experiences, assessment readiness, and academic achievement.

References

Agustina, L., & Ro'isatin, U. A. (2024). The efficacy of case-based learning model integrated with critical thinking skills to improve EFL learners' reading comprehension. Journal of Languages and Language Teaching, 12(3). https://doi.org/10.33394/jollt.v12i3.11619

Care, E., Kim, H., Vista, A., & Anderson, K. (2018). Education system alignment for 21st century skills: Focus on assessment. Brookings Institution. https://www.brookings.edu/articles/education-system-alignment-for-21st-century-skills-focus-on-assessment/

Damaianti, V. S., Abidin, Y., & Rahma, R. (2020). Higher order thinking skills-based reading literacy assessment instrument: An Indonesian context. Indonesian Journal of Applied Linguistics, 10(2), 513–525. https://doi.org/10.17509/ijal.v10i2.28600

Dede, C. (2014). The role of digital technologies in deeper learning. Jobs for the Future. https://files.eric.ed.gov/fulltext/ED561254.pdf

Fullan, M., Quinn, J., & McEachen, J. (2017). Deep learning: Engage the world, change the world. Corwin.

Hamma, S. I., Nappu, S., & Akib, E. (2023). Assessing students' higher-order thinking skills in reading comprehension. IDEAS: Journal on English Language Teaching and Learning, Linguistics and Literature, 11(2). https://doi.org/10.24256/ideas.v11i2.4182

Hooshyar, D., Pedaste, M., Yang, Y., Zhang, Y., Wang, M., Lim, H., & Delev, D. (2023). Learning analytics in supporting student agency: A systematic review. Sustainability, 15(18), 13662. https://doi.org/10.3390/su151813662

Indriyana, B. S., & Kuswandono, P. (2019). Developing students' higher order thinking skills (HOTS) in reading: English teachers' strategies in selected junior high schools. Journal of English Teaching, 5(3), 204–216. https://doi.org/10.33541/jet.v5i3.1313

Kamaruddin, A., Patmasari, A., Agussatriana, A., Whanchit, W., Suriaman, A., & Nadrun, N. (2023). The effect of inquiry-based learning model on EFL students' critical thinking skills. KEMBARA: Jurnal Keilmuan Bahasa, Sastra, dan Pengajarannya, 9(1), 15–23. https://doi.org/10.22219/kembara.v9i1.22766

Khonamri, F., Azizi, M., & Králik, R. (2020). Using interactive e-based flipped learning to enhance EFL students' critical reading. Science for Education Today, 10(1), 25–42. https://doi.org/10.15293/2658-6762.2001.02

Organisation for Economic Co-operation and Development. (2018). The future of education and skills: Education 2030. OECD Publishing. https://www.oecd.org/education/2030-project/

Organisation for Economic Co-operation and Development. (2019). OECD Learning Compass 2030: A series of concept notes. OECD Publishing. https://www.oecd.org/education/2030-project/

Pusat Asesmen Pendidikan. (2025). Tes Kemampuan Akademik (TKA). Kementerian Pendidikan Dasar dan Menengah Republik Indonesia. https://pusmendik.kemendikdasmen.go.id/tka/

Santosa, M. H., Putra, I. B. Y. B. S., & Pratiwi, N. P. A. (2024). EFL students' online learning readiness: Performing out the basic functions of technology. Pedagogy: Journal of English Language Teaching, 12(1), 59–80. https://doi.org/10.32332/joelt.v12i1.3590

Sari, D. M. M., & Prasetyo, Y. (2021). Project-based learning on critical reading course to enhance critical thinking skills. Studies in English Language and Education, 8(2), 442–456. https://doi.org/10.24815/siele.v8i2.18407

Silalahi, D. E., Herman, H., Sihombing, P. S. R., Damanik, A. S., & Purba, L. (2022). An analysis of students' achievement in reading comprehension through higher order thinking skills (HOTS). Al-Ishlah: Jurnal Pendidikan, 14(2), 1853–1868. https://doi.org/10.35445/alishlah.v14i2.1249

Song, X., Razali, A. B., & Jeyaraj, J. J. (2025). How project-based learning improves college EFL learners' critical thinking skills and reading comprehension ability: A case study. Language Teaching Research. Advance online publication. https://doi.org/10.1177/13621688251352275

Timotheou, S., Miliou, O., Dimitriadis, Y., Villagrá-Sobrino, S. L., Giannoutsou, N., Cachia, R., Monés, A. M., & Ioannou, A. (2022). Impacts of digital technologies on education and factors influencing schools' digital capacity and transformation: A literature review. Education and Information Technologies, 28(6), 6695–6726. https://doi.org/10.1007/s10639-022-11431-8

UNESCO. (2021). Reimagining our futures together: A new social contract for education. UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000379707

Wale, B. D., & Bishaw, K. S. (2020). Effects of using inquiry-based learning on EFL students' critical thinking skills. Asian-Pacific Journal of Second and Foreign Language Education, 5(1), Article 9. https://doi.org/10.1186/s40862-020-00090-2

Wang, C., Chen, X., Yu, T., Liu, Y., & Jing, Y. (2024). Education reform and change driven by digital technology: A bibliometric study from a global perspective. Humanities and Social Sciences Communications, 11, Article 256. https://doi.org/10.1057/s41599-024-02717-y

Wingate, U. (2018). Academic literacy across the curriculum: Towards a collaborative instructional approach. Language Teaching, 51(3), 349–364. https://doi.org/10.1017/S0261444816000264

Wiyaka, W., Prastikawati, E. F., & Adi, A. B. P. K. (2020). Higher-order thinking skills (HOTS)-based formative assessment: A proposed model for language learning assessment. Vision: Journal for Language and Foreign Language Learning, 9(2), 115–130. https://doi.org/10.21580/vjv9i25859