

CHAPTER 2

LITERATURE REVIEW

A. Theoretical Framework

1. Pedagogical Deep Learning

The concept of deep learning in this research is based on the learning model proposed by the Ministry of Education and Culture (Kemendikdasmen, 2025), which emphasizes that learning is not merely the transfer of knowledge but the creation of a learning environment that values and empowers students. This is based on the theoretical concept of deep learning in education first proposed by Marton & Saljd (1976), who distinguish between surface-level processing, in which learners focus on memorizing the form of the text using memorization strategies, and deep-level processing, in which learners focus on the underlying meaning and intended content of the learning material. The students adopted different learning approaches, resulting in varied outcomes. In addition, the deep approach emphasizes critical thinking, integrating new concepts with existing knowledge and self-directed learning, while surface learning involves memorizing material and low engagement with the content (Alt & Boniel-Nissim, 2018). This process, widely known as Pedagogy in Deep Learning, transforms teachers' roles from mere conveyors of knowledge to learning partners who create rich learning experiences. These concepts serve as a framework for understanding why teachers' instructional practices are so important in fostering student engagement and deeper learning. Given that this study examines how English as a Foreign Language (EFL) teachers in vocational schools implement Pedagogically Deep Learning (PDL), these ideas help explain how classroom practices can shift from merely conveying knowledge to developing students' 21st-century skills.

In this study, deep learning is centered on pedagogy. Pedagogy refers to ethical and reflective practices that aim to guide and transform learners through meaningful relationships (Friesen & Su, 2023). In learning practices, pedagogy requires teachers to be prepared and to consciously design strategies so that the

learning process is not carried out mechanically. The appropriate pedagogy will enable teachers to intentionally create learning conditions that foster learning autonomy, enabling learners to acquire deep knowledge through effective classroom interactions (McGregor, 2020). Thus, Pedagogical Deep Learning (PDL) is humanistic in nature, as it develops learners' cognitive abilities and equips them with 21st-century skills applicable to a range of real-life situations. This pedagogical perspective is highly relevant to this study because it focuses not only on student learning outcomes but also on the strategies teachers use to create meaningful learning experiences.

Deep learning in EFL emphasizes reflection as a key element in fostering students' self-awareness, independence, and holistic development beyond mere cognitive achievement (Benu et al., 2025). Through this approach, English classrooms are positioned not merely as spaces for linguistic instruction but as meaningful learning environments that nurture students' capacity to think critically and to participate actively in their learning. As noted by Aditama et al. (2025), classrooms thus become more than places to learn English; they evolve into spaces where students grow as thinkers and contributors, reflecting the broader purpose of pedagogical deep learning in supporting both academic and personal development.

In Indonesia, Deep Learning (*Pembelajaran Mendalam*) adopts the New Pedagogies for Deep Learning (NPDL) framework proposed by Fullan et al. (2018), with a strong emphasis on integrating local values and the Indonesian cultural context. Although the concept of deep learning was formulated by Fullan et al., (2018), this study uses the framework developed by the Ministry of Education and Culture (2025), which is the official adaptation implemented in schools throughout Indonesia. The Ministry of Education and Culture's framework also situates Fullan's concept within the context of educational policy, curriculum priorities, and classroom realities in Indonesia, making it more applicable for understanding the implementation of deep learning in the practice of vocational EFL teachers. In this regard, Fullan's framework serves as the theoretical foundation for deep learning, while the Ministry of Education

and Culture (2025) framework functions as the operational framework for analyzing the implementation of deep learning within the Indonesian educational context. In line with this direction, the Ministry of Primary and Secondary Education, through the Regulation of the Minister of Primary and Secondary Education (Permendikdasmen) Number 13 of 2025, determined that the curriculum would not be replaced, instead the density of the curriculum would be reduced and the focus would be on essential, interdisciplinary, and contextually relevant competencies that would help encourage deep learning (Sutikno, 2025). This policy change reflects a shift from traditional, content-based teaching methods to a more student-centered learning approach that prioritizes deep understanding and active engagement.

Deep Learning, as initiated by the Kemendikdasmen (2025), is a learning approach that emphasizes mindful, meaningful, and joyful learning experiences. According to Bachtiar et al. (2025), these three pillars are not merely pedagogical preferences but strategic necessities for shaping a generation that is competent, emotionally intelligent, and capable of meeting the demands of the 21st century. It paves the way for a more responsive and humanistic education system. In this context, Deep Learning is not merely a transfer of knowledge, but a learning process that produces high-quality learning, as it involves greater student participation, critical engagement, and reflection on the learning process (Masuku et al., 2020).

In summary, Pedagogical Deep Learning (PDL) serves as the theoretical foundation for this study, emphasizing teachers' roles in providing mindful, meaningful, and joyful learning experiences that support the development of students' 21st-century skills. By integrating Fullan et al. (2018) 6Cs into the Indonesian educational context (Kemendikdasmen, 2025), PDL becomes a relevant framework for investigating how vocational English teachers implement strategies that encourage critical thinking, creativity, collaboration, and communication in line with the objectives of the Emancipated Curriculum. In addition, this framework provides a conceptual framework for examining the specific strategies teachers use to translate the concepts of mindful, meaningful,

and joyful learning into classroom practices that help students develop 21st-century skills.

2. The Three Pillars of Deep Learning: Mindful, Meaningful, and Joyful Learning

In Indonesian education, Deep Learning is understood not only as a new learning strategy but also as a paradigm that explicitly prioritizes transformation of the educational process towards a more reflective, relevant, and enjoyable learning experience. The Ministry of Primary and Secondary Education (Kemendikdasmen, 2025) identified three core pillars of Deep Learning: mindful, meaningful, and joyful learning.

a. Mindful Learning

Mindful learning in education emphasizes students' full awareness of the learning process (Kemendikdasmen, 2025). This concept draws on Langer (1997), who stated that mindful learning is a process characterized by the continual creation of new categories, openness to new information, and awareness of diverse perspectives. Mindful learning is a path toward independence, in contrast to unconscious learning, which is passive, lacking sensitivity, and an empty mind (Piscayanti, 2021). Building on this, mindful learning is an active process of forming new distinctions that make individuals more sensitive to context and perspective (Langer, 1997; Wang et al., 2023). In this process, learners are encouraged to continually explore diverse perspectives and question information, ultimately leading to greater creativity, deeper understanding, and greater adaptability in learning situations.

In addition, Feriyanto & Anjariyah (2024) state that mindful learning is a crucial pillar in the deep learning framework, as it has been reported to enhance cognitive flexibility and foster active student engagement. This view is supported by Santosa et al., (2026), who found that the effect of mindful learning on deep learning is moderate, indicating a significant tendency to support deeper learning outcomes. In other words, when learners engage

consciously by maintaining focus, managing distractions, and remaining fully present, they are more likely to achieve deeper understanding and a more effective learning experience. This aligns with Davenport & Pagnini (2016), who state that mindful learning helps stimulate attention to new things and the observation of different perspectives, thereby developing creativity, cognitive flexibility, and critical thinking skills. These are essential skills in the 21st century. Therefore, mindful learning is a key element in achieving a more meaningful and reflective learning process that is responsive to the requirements of mastering 21st-century skills. This study used mindful learning to examine how EFL teachers in vocational education foster students' critical thinking and reflective engagement through PDL strategies.

b. Meaningful Learning

Meaningful learning strikes a balance between mastering new material and applying it in practical experiences and real-life contexts (Kemendikdasmen, 2025). This concept draws on Ausubel's (1968) work, which states that meaningful learning occurs when students construct the knowledge and cognitive processes necessary for successful problem-solving. This approach enables students to understand and retain the material in a meaningful way, rather than simply memorizing it through rote learning. In support of this, research by Andrews et al. (2023) shows that meaningful learning occurs when students actively integrate new knowledge with their existing understanding, leading to a deeper, more lasting understanding that can be applied across various situations.

According to Vargas-Hernández & Vargas-González (2022), meaningful learning develops when students are given the freedom and confidence to find their own solutions and build their knowledge, both in the classroom and in practical life. Therefore, teaching strategies need to shift from traditional approaches to more active and contextual methods. This shift is crucial, as Santosa et al. (2026) found that meaningful learning has a significant impact on deep learning, positioning it as a strong predictor of students' deeper understanding. In line with this, Feriyanto & Anjariyah

(2024) explain that meaningful learning occurs when students connect new information to prior knowledge, a process that can be reinforced in practice through project-based learning and gamification, thereby encouraging critical thinking and problem-solving skills. Thus, meaningful learning requires the integration of conceptual understanding, authentic experiences, and pedagogical strategies that promote student active engagement. In this study, meaningful learning was used to explore how English as a Foreign Language (EFL) teachers in vocational education design relevant, contextually grounded learning experiences that support students' deeper understanding and problem-solving skills.

c. Joyful Learning

A joyful learning atmosphere would enhance students' creativity and active participation (Kemendikdasmen, 2025). In this context, Wicaksono (2020) views joyful learning as a means of establishing a vibrant learning environment, where students' happiness makes the learning process more natural and sustainable in the long term. Similarly, Bhakti et al. (2018) describe joyful learning as a student-centered approach that fosters a positive psychological environment through songs, games, stories, and meaningful activities. This is further supported by Mubarak et al., (2024), who emphasize that joyful learning in EFL creates a positive emotional climate that not only encourages students' enjoyment but also strengthens their motivation and active participation in the learning process. Based on this, joyful learning not only creates a pleasant classroom atmosphere but also fosters students' emotional engagement and willingness to participate. This is aligned with Rogers's Humanistic Learning Theory, which posits that learning is optimal when students feel emotionally safe, comfortable, and enthusiastic (Insani & Rachmeditha, 2025; Rogers, 2004). When students feel relaxed and happy, they are more open to exploring ideas, communicating, and building relationships with others.

Joyful learning fosters greater engagement, motivation, and creativity by enabling students to explore, take risks, and collaborate in a supportive

environment (Blinkoff et al., 2023), which closely aligns with the goals of 21st-century education. In line with this, Fikri et al. (2025) argue that joyful learning can address the limitations of teacher-centered approaches, such as low levels of collaboration and limited conceptual understanding, while enhancing academic achievement and strengthening essential skills such as communication and teamwork. This study employed a joyful learning approach to investigate how English as a Foreign Language (EFL) teachers in vocational schools foster communication, collaboration, creativity, and active student participation through positive learning experiences.

3. 21st-Century Skills

The framework for 21st-century skills includes the knowledge, skills, and competencies that students must master to succeed in the workplace and in life in the 21st century (Kain et al., 2024; P21, 2007). Education in the 21st century emphasizes the development of core competencies, often referred to as the 4Cs: critical thinking, collaboration, creativity, and communication skills (Judijanto & Naini, 2025; P21, 2019). These competencies are widely recognized as essential learning outcomes because they enable learners to participate actively, think reflectively, and collaborate effectively in increasingly complex learning contexts shaped by global change and technology (Kemendikdasmen, 2025; Trilling & Fadel, 2009). Therefore, the emphasis on the 4Cs indicates that learning should not be limited to understanding subject matter but should also provide opportunities for students to participate actively, communicate ideas, and collaborate.

a. Critical Thinking Skills

According to Arif (2024), critical thinking involves reflective reasoning and the ability to evaluate information logically to solve problems effectively. Supporting this view, Trilling & Fadel (2009) argue that critical thinking plays a significant role in preparing students to navigate unpredictable situations in both academic and professional environments. Moreover, the development of critical thinking is closely related to active student

engagement in the learning process. M. Saputri et al. (2026) explained that these skills can be fostered when students are actively involved in designing, analyzing, and evaluating project solutions. Through such learning experiences, students are encouraged to think independently, explore alternative ideas, and justify their reasoning logically.

Furthermore, Raihani (2025) states that critical thinking enables students to question assumptions, evaluate information critically, interpret evidence carefully, and engage in logical reasoning when facing complex problems. This view is reinforced by Soufi & See (2019), who emphasize that students with critical thinking skills do not simply accept information at face value. Instead, they examine the credibility of sources, distinguish between facts and opinions, test assumptions, and apply analytical reasoning to solve complex problems effectively. Therefore, critical thinking is an essential skill that supports students in becoming reflective, analytical, and independent learners.

b. Collaboration Skills

Collaboration skills are the abilities required for students to work together and take responsibility for the tasks they undertake to achieve shared learning goals (D. Y. Saputri & Maura, 2024). According to the Partnership for 21st-Century Learning framework, collaboration includes working effectively, flexibly, and respectfully with diverse teams, as well as sharing responsibilities and compromising to achieve common goals (P21, 2019). Furthermore, collaboration skills can improve students' ability to participate actively in group projects and to cooperate more effectively in problem-solving, thereby contributing to the attainment of common goals (Sirait & Amnie, 2023). Therefore, these competencies should be developed by providing a learning environment that enables them to work effectively in groups and by offering meaningful and enjoyable activities (Jelodari et al., 2025).

In addition, collaboration can be fostered through project-based learning (PBL) and group work, which encourage teamwork, shared

responsibility, and social learning. According to Khoiri et al. (2023), implementing a Project-Based Learning model grounded in games has been shown to effectively improve students' collaboration skills (Thornhill-Miller et al., 2023). Furthermore, Sappaile et al. (2025a) found that implementing group work significantly enhances students' collaboration skills by fostering effective task division, building mutual trust, and encouraging intensive interpersonal communication to achieve shared goals.

c. Communication Skills

Communication is defined as the exchange of information intended to modify another person's epistemic situation (Thornhill-Miller et al., 2023). In the context of 21st-century education, communication is considered an essential competency students need to develop to participate effectively in both academic and social environments. According to P21 (2019), communication skills are the ability to clearly convey thoughts and ideas using spoken, written, and nonverbal language for a variety of purposes, as well as to listen effectively to understand the underlying meaning. This indicates that communication is not limited to speaking ability alone, but also to expressing ideas appropriately in different contexts.

Furthermore, communication skills can be integrated with language learning through student-centered approaches, particularly in collaborative and project-based learning activities. Pardede (2020) explains that communication skills are effectively fostered when students work collaboratively in groups to complete tasks, solve problems, and produce learning products. Such activities provide students with opportunities to interact actively and use language in meaningful contexts. Similarly, Hapsari & Prasetyarini (2025) stated that the application of communication skills is evident in English-language presentations, discussions, and writing activities, which help students develop their ability to express ideas effectively through both oral and written communication. Therefore, communication skills play an important role in supporting students' active participation and meaningful interaction in the learning process.

d. Creativity Skills

Creativity skills include thinking creatively, generating, developing, and effectively communicating new ideas, and working individually and collaboratively to create innovative and meaningful products or solutions (P21, 2019). The skills acquired include the ability to solve problems, think creatively, generate original ideas and solutions, ask new questions, and offer new answers, all of which are signs of innovation and creativity (Putri et al., 2021). Creativity is regarded as an essential competence in 21st-century education, as it helps students adapt to new situations and think flexibly and creatively when faced with challenges. Similarly, Nurazizah et al. (2025) stated that several key dimensions of creativity, such as fluency, flexibility, originality, and elaboration, also strengthen students' engagement in the learning process. Thus, students need opportunities to generate ideas, explore different points of view, and apply what they know to solve real-life problems.

In addition, Karunarathne (2025) highlights the value of providing students with opportunities to cultivate their creativity, such as activities that enable them to apply their learning in meaningful ways. This experience enables students to learn concepts by theory and to apply them to create their own products or solutions. To support this, Zulyusri et al. (2023) argue that students need to be creative, as this enables them to develop, learn new concepts, and continually improve their skills and knowledge. Therefore, students' creative skills are important for making them active, innovative, and independent learners who can compete in the modern world.

4. The Relationship Between PDL and 21st-Century Skills

Thornhill-Miller et al. (2023) reinforce the conceptual relationship between PDL and 21st-century skills, positioning the 4Cs as transformative competencies that can be optimally developed only through a contextual, reflective, and interaction-centered pedagogical approach. Similarly, Fullan et al. (2014) argue that deep learning encourages active engagement in complex

tasks, interdisciplinary collaboration, and socially meaningful learning contexts, suggesting that developing 21st-century skills requires a fundamental shift in pedagogical practice rather than a sole focus on content mastery. The Ministry of Education and Culture (2025) asserts that Deep Learning is designed to address learning challenges and meet the demands of 21st-century education. This policy direction aligns with the framework proposed by Trilling & Fadel (2009), who emphasize integrating character, citizenship, collaboration, communication, creativity, and critical thinking as essential competencies for preparing learners to participate effectively in the modern world. Moreover, Kemendikdasmen (2025) affirms that Deep Learning fosters creativity, problem-solving, and digital literacy while ensuring that learning remains mindful, meaningful, and joyful, thereby strengthening the conceptual link between PDL and global discourses on 21st-century education. Furthermore, deep learning fosters high-level cognitive engagement and integrates cognitive, social, and emotional dimensions, which are essential for developing 21st-century skills such as critical thinking, collaboration, and adaptability (Baihaqi et al., 2025)

However, the relationship between deep learning and 21st-century skills has been consistently highlighted in previous studies. The deep learning approach, grounded in mindful, meaningful, and joyful learning, serves as a pedagogical framework for implementing 21st-century skills (4Cs) more effectively and practically. The integration of these principles aims to shift the learning paradigm from mere memorization to conceptual understanding, thereby encouraging students to become critical and creative lifelong learners. The effectiveness of PDL will depend on teachers' willingness to create and support reflective, contextual, and differentiated learning. Furthermore, Utomo, et al. (2025) emphasize the importance of training and developing transformational pedagogical competencies to equip teachers to meet the demands of 21st-century classrooms. These competencies are essential to ensure that PDL is not only adopted but also sustained in practice.

Furthermore, Bachtiar et al. (2025) emphasized that the integration of

artificial intelligence (AI) with deep learning provides a crucial pathway for developing globally competent students who are fluent in English, able to engage with global issues, and equipped with skills that bridge the gap between academic preparation and the demands of the 21st-century workforce. Moreover, Taqiyya et al. (2025) emphasize that deep learning strategies align with the principles of the *Merdeka* Curriculum, which focuses on student-centered, context-based learning to enhance 21st-century competencies. In this case, PDL not only focuses on improving academic performance but also facilitates the transfer of sustainable knowledge, creating holistic learners ready to adapt to diverse work and social environments.

In conclusion, this demonstrates that PDL offers a theoretical foundation and practical strategies for developing 21st-century skills. By integrating mindful, meaningful, and joyful principles into classroom practice, PDL serves as a transformative approach that prepares learners to succeed academically, professionally, and socially in the modern world. Overall, deep learning not only enhances conceptual understanding but also systematically supports the development of higher-order thinking skills and essential 21st-century competencies, making it a key approach in modern education (Baihaqi et al., 2025; Zebua, 2025).

5. Teachers' Strategies in Implementing PDL in the EFL Classroom

Pedagogy-based deep learning follows a student-centered approach, emphasizing active student involvement, group work, and reflection in the knowledge-construction process. According to Dada et al. (2022), student-centered learning (SCL) is a type of learning in which teachers play a responsive and evaluative role, rather than a directive one. Instead, students play an active and responsible role in their own learning process. Fullan et al. (2018) emphasize that in deep learning, teachers use their professional knowledge to engage and support learning through new relationships and interactions, shifting from explicit task structures to providing feedback that activates the next learning challenge. This reinforces the idea that teachers' role

is not only to impart knowledge but also to act as learning partners who facilitate autonomy, reflection, and the joint construction of knowledge. Within this framework, collaborative, cooperative, problem-based, and project-based learning serve as practical strategies that develop students' critical thinking, creativity, and teamwork skills (Benlahcene et al., 2020). Similarly, Fullan et al. (2014) note that deep learning involves pedagogical practices that enable students to take on the role of knowledge creators through authentic, problem-based, and collaborative learning tasks. Therefore, the application of student-centered learning in PDL aligns with the objectives of the emancipated curriculum, which aims to facilitate reflective, meaningful, and enjoyable learning experiences that enhance students' 21st-century competencies.

To successfully implement PDL, teachers need to integrate strategies that support mindful, meaningful, and joyful learning within student-centered models. For mindful learning, reflective practices such as journaling, self-assessment, and mindful reading can enhance awareness and focus (Lubis et al., 2024). Meaningful learning can be fostered through contextualized and project-based activities that connect classroom content to students' personal experiences and social realities (Vargas-Hernández & Vargas-González, 2022). Meanwhile, joyful learning emphasizes engagement, creativity, and positive emotions, which can be achieved through gamification, role-playing, and collaborative storytelling (Jeet & Pant, 2023). Collectively, these strategies create an environment where learners not only acquire linguistic competence but also develop 21st-century skills such as communication, collaboration, and critical thinking.

Numerous studies have identified several practical strategies for implementing PDL in the EFL classroom. Zebua (2025) suggests that project-based learning (PBL) helps learners relate theory to practice by engaging them in real-world problem-solving. In addition, Benu et al. (2025) underline the importance of scaffolding with affective support, in which teachers break complex tasks into manageable steps and provide encouragement to reduce anxiety and enhance motivation. Furthermore, to highlight effective strategies

for Pedagogy-Based Deep Learning that can be maximized when teachers consistently integrate three essential principles in EFL classes, as explained by Sujinem (2025):

- 1) Strategies for Mindful Learning: applying reflective practices and awareness through mindful reading, mindful listening, and self-assessment to improve student concentration, reduce anxiety, and develop understanding.
- 2) Strategies for Meaningful Learning: connecting lessons to real-life situations through project-based learning, debates, and context-based writing to develop critical thinking and problem-solving skills.
- 3) Strategies for Joyful Learning: building an active learning environment through role-playing, game-integrated quizzes, and digital stories to increase motivation, creativity, and cooperation.

In conclusion, implementing PDL in EFL classrooms requires a shift toward student-centered pedagogy that integrates mindful, meaningful, and joyful learning principles. These strategies not only improve language skills but also strengthen non-linguistic achievements, enabling students to perform well not only in English but also understand how to build concepts, solve problems, and work in groups, which will be essential in the 21st century. Therefore, PDL offers a comprehensive approach that connects language mastery to the real world, making it one of the most suitable programs in line with the priorities of the Emancipated Curriculum and globally oriented education.

B. Research on the Implementation of Pedagogical Deep Learning

Several previous studies have explored the application of deep learning in pedagogical contexts. To begin with, Sutikno (2025) examined how a vocational high school (SMK) in Central Java implements deep learning using a SWOT analysis. Their study highlights that the success of deep learning depends not only on the efforts of teachers and students but also on leadership, collaboration with industry and higher education institutions, and adequate facilities, all of which are

crucial. However, the study found that a lack of teacher training, a rigid curriculum, and insufficient infrastructure are obstacles to its implementation. Although this study provides valuable insights into how schools manage deep learning, it tends to focus more on managerial and institutional aspects than on how teachers implement deep learning pedagogically in the classroom, particularly in English as a Foreign Language (EFL). In line with this, Salsabila & Lismawati (2026) present classroom-level evidence showing that English teachers possess a comprehensive conceptual understanding of deep learning and successfully apply its principles through inquiry-based activities, problem-based tasks, collaborative learning, and reflective practice. Their findings indicate that such pedagogical integration effectively enhances students' learning autonomy, communicative competence, and thinking skills.

In addition, Nurazizah et al. (2025) demonstrated that the deep learning framework implemented through Project-Based Learning significantly fosters student creativity by providing collaborative, contextual, and exploratory project activities. These experiences develop key dimensions of creativity skills such as fluency, flexibility, originality, and elaboration, while also strengthening students' emotional engagement in the learning process. This is further supported by Benu et al. (2025), who explored pedagogical strategies for integrating deep learning principles into the teaching of English as a Foreign Language (EFL), demonstrating that scaffolding, projects, and cross-curricular integration effectively create conscious, meaningful, and enjoyable learning experiences. These approaches enhance student engagement, critical thinking, and creativity, which are at the core of 21st-century learning. However, their studies make a significant contribution to ongoing research by providing solid evidence on how teaching strategies should be modified to foster engaging, skills-focused learning and communication in English, especially in vocational education, which requires not only linguistic skills but also transferable soft skills in students.

Furthermore, a study by Fitrah et al. (2025) found that English teachers demonstrated a comprehensive conceptual understanding of deep learning and successfully applied its principles through inquiry, collaboration, and reflection,

thereby enhancing students' independence, communicative skills, and critical thinking. However, their study relied on quantitative methods and lacked an in-depth analysis of teacher readiness. In addition, Bachtiar et al. (2025), which investigated the application of deep learning in training junior high school English teachers within the *Merdeka Belajar* framework. The results show that teacher awareness, pedagogical confidence, and willingness to plan lessons more meaningfully and in a student-focused way have improved significantly. Their study explains how professional learning of deep learning concepts by teachers can transform classroom learning into a more reflective and creative learning experience, a finding that remains highly applicable as it emphasizes the critical role of teachers in translating deep learning into classroom activities. Although the study by Bachtiar et al. (2025) was conducted in a junior high school, the results remain applicable because the researchers emphasize the critical role of teachers in translating deep learning into classroom activities. In the context of the current study, this highlights the importance of conducting an additional survey of the application of pedagogical deep learning strategies by vocational EFL teachers to nurture students' 21st-century skills in line with the emancipated curriculum.

However, these studies reveal research gaps, particularly in English as a foreign language (EFL) learning in vocational fields, where students need to be equipped not only with language proficiency but also with the global competencies required for the workforce. Therefore, this study builds on these findings, with a specific focus on how vocational English teachers design strategies to implement deep learning to build students' 21st-century skills.