CHAPTER 1
INTRODUCTION

A. Background of the Study

The 21st century has brought significant changes in education. The world of education can no longer focus solely on knowledge mastery; it must equip students with a comprehensive set of 21st-century skills to prepare them for professional life (Kolokouri, 2025). This includes learning skills such as critical thinking and communication. Critical thinking enables students to analyze information, solve complex problems, and make informed decisions in their academic and professional lives (Bara et al., 2025). Practical communication skills enable students to articulate ideas clearly and collaborate in groups, which are increasingly essential in globalized workplaces (Hapsari & Prasetyarini, 2025; Thornhill-Miller et al., 2023). However, these skills prepare students to navigate rapid technological and workplace changes, ensuring their resilience in an uncertain future (Thornhill-Miller et al., 2023). Recent studies emphasize that these competencies, often referred to as the "4Cs", are fundamental for success in both educational settings and the modern workforce (Judijanto et al., 2024). These skills are interconnected and can be developed simultaneously through the right teaching approach. For instance, communication skills are essential for fostering collaboration and exchanging ideas, while critical thinking and creativity complement one another to help students analyze information, solve problems, and generate innovative solutions across contexts (Edwin et al., 2025).

In Indonesia, vocational high schools (SMK) play a crucial role in preparing graduates for the workforce. They not only develop practical skills relevant to their majors, such as operating industry equipment and applying technical procedures, but also gain experience in developing students' life skills, including communication, teamwork, critical thinking, problem-solving, and adaptability. According to Putra et al. (2025), the primary objective of vocational high schools is not only to equip students with technical skills for potential careers, but also to prepare them with essential skills such as effective English communication.

Technical skills for potential careers may include operating industry-related equipment, performing specialized tasks within a specific field, and applying vocational knowledge in the workplace (Kowal et al., 2022). Beyond these competencies, students also need life skills to succeed in both professional and social settings. Life skills are integral components of 21st-century skills, as they enable students to work effectively in teams, adapt to diverse situations, and engage meaningfully with others' capabilities, which go beyond technical knowledge and are essential for professional success (Tisa et al., 2024). These skills emphasize not only cognitive abilities but also social and emotional competencies required to thrive in contemporary society (Thornhill-Miller et al., 2023). Therefore, vocational education must prioritize developing these transferable skills to help students prepare for the dynamic demands of the workforce.

However, many vocational graduates continue to struggle to meet the demands of the globalized workforce, mainly due to the imbalance between technical competencies and the soft skills required for professional success (Kuregyan & Khusainova, 2022). For instance, while vocational graduates may be technically capable of operating industrial equipment, a lack of communication and collaboration skills can limit their effectiveness in collaborative work settings (Kamaruzaman et al., 2025). This may be caused by several factors in classroom instruction. This includes classrooms that still emphasize rote memorization and rely on traditional, teacher-centered approaches, which limit students' ability to use English for communication in real-life contexts (Sujinem, 2025). This issue is particularly relevant in vocational education, where students are expected not only to master technical skills but also to communicate effectively, collaborate with others, solve workplace-related problems, and adapt to a rapidly changing professional environment (Putra et al., 2025). Nevertheless, classroom practices often remain focused on covering curriculum content and preparing students for assessments, leaving little opportunity for students to develop their competencies. As a result, students may meet academic requirements but still struggle to apply their knowledge and communication skills in real-world situations. This limits students' opportunities to develop 21st-century skills, which are central to

succeeding in modern academic and professional environments (Thornhill-Miller et al., 2023; Trilling & Fadel, 2009). Given this context, there is growing recognition that applying pedagogical deep learning (PDL) in today's education may offer a promising approach to addressing these challenges.

The *Kurikulum Merdeka* (emancipated curriculum) addresses this issue by promoting PDL through mindful, meaningful, and joyful learning principles (Hasanah et.al., 2025; Kemendikdasmen, 2025). These three principles are intrinsically connected to the development of 21st-century skills. Mindful learning encourages students to engage reflectively with content, fostering critical thinking and metacognitive awareness. Meaningful learning connects classroom material to real-world contexts, enabling students to apply knowledge creatively and solve authentic problems. Joyful learning creates a positive emotional environment that enhances motivation, collaboration, and communication, all of which are essential for developing well-rounded 21st-century learners (Feriyanto & Anjariyah, 2024; Kemendikdasmen, 2025). Research indicates that when these principles are integrated into teaching practice, students demonstrate improved engagement, deeper understanding, and stronger development of critical and creative thinking skills (Bachtiar et al., 2025). This approach aligns with the knowledge that language education should develop critical thinking, creativity, and problem-solving skills rather than relying on rote memorization, shifting the focus from passive knowledge reception to active knowledge construction and application in meaningful contexts (Sujinem, 2025).

In English language learning, the implementation of pedagogical deep learning (PDL) supports the development of students' 21st-century competencies through active and meaningful learning experiences (Fullan et al., 2018; Bachtiar et al., 2025). By engaging students in project-based learning, reflective practice, and collaborative activities, PDL encourages students to analyze real-world problems, build knowledge through interaction, and critically reflect on their learning process (Bachtiar et al., 2025). The success of implementing the deep learning approach depends on teachers' readiness and strategies in navigating pedagogical practices and subject content, which are crucial for meaningful education (Fitrah et al., 2025).

Teachers play an essential role in creating learning experiences that embody the principles. Their pedagogical choices, such as selecting meaningful learning activities and implementing reflective learning into classroom instruction, directly determine how effectively PDL principles are applied in practice and how well students develop the competencies needed for the 21st century (Zebua, 2025).

Several studies have confirmed the use of deep learning in various educational contexts. Long et al. (2025) examined the relationship between deep learning, intercultural sensitivity, and learning outcomes in the context of teaching English as a medium of instruction (EMI) in China. They concluded that deep learning has a positive impact on student learning outcomes. However, their study focused on higher education students and defined deep learning as a learning process rather than a pedagogical approach. Bachtiar et al. (2025) directly applied deep learning in the training of junior high school English teachers through the "*Merdeka Belajar*" framework. That study's results showed a significant increase in teacher awareness, pedagogical confidence, and readiness to integrate more meaningful learning. However, their research focused on junior high school students and did not examine the vocational school context. In addition, Fitrah et al. (2025) found that 21st-century competencies and technological knowledge strongly influence willingness to adopt deep learning pedagogy. However, their study also focused on teachers' overall readiness across educational levels. It did not examine the use of teaching strategies in English as a foreign language (EFL) vocational classroom settings. Furthermore, Aditama et al. (2025) found that deep learning strategies can increase student engagement in EFL classes in vocational education. However, the study did not specifically examine the development of 21st-century skills among students. Previous studies have demonstrated the effectiveness of deep learning-based approaches across various educational settings. There remains a lack of research on teachers' strategies for implementing PDL in vocational EFL classrooms to foster students' 21st-century skills.

Therefore, to fill the gaps in previous research, this study aims to investigate teachers' strategies for implementing PDL to foster 21st-century skills in English as a foreign language (EFL) vocational classrooms. Previous research has primarily

focused on deep learning in the context of EMI at the university level, on teachers' readiness to adopt deep learning pedagogy, professional development programs for middle school teachers, and on teacher strategies in the vocational context (Aditama et al., 2025; Bachtiar et al., 2025; Fitrah et al., 2025; Long et al., 2025). In contrast, this study specifically examines how vocational English teachers apply the pillars of deep learning, mindful, meaningful, and joyful learning in classroom practice to foster students' 21st-century skills. Therefore, this study focuses on the vocational EFL context and on exploring teachers' strategies as practical manifestations of PDL. This is also necessary because teachers' strategies in implementing PDL are crucial for vocational students, enabling them to acquire 21st-century skills relevant to their lives and futures.

B. Formulation of the Problem

How do EFL vocational teachers implement pedagogical deep learning (PDL) to foster students' 21st-century skills?

C. Operational Definitions

To avoid misunderstanding about the term set out in this study, the researcher provides some definitions related to this study, as follows:

1. Teachers' Strategies

Teachers' strategies are the teaching practices English teachers implement in vocational classrooms to enhance student engagement and skill development. These strategies include project-based assignments, collaborative group work, reflective questions, and digital tools, as identified through classroom observation and teacher interviews.

2. Pedagogical Deep Learning

Pedagogical Deep Learning (PDL) is a learning approach characterized by mindful, meaningful, and joyful learning principles. This approach is characterized by teaching practices that foster reflective thinking, contextual problem-solving, creativity, and active student participation.

3. 21st-Century Skills

Vocational students demonstrate 21st-century skills in their English language learning experiences, including communication, collaboration, critical thinking, and creativity. These skills can be observed in students' ability to communicate effectively in English, work as a team, and adapt to various learning challenges.

4. EFL Vocational Classroom

EFL vocational classroom in this study refers to English language learning environments in vocational high schools (SMK), where students are not only prepared to achieve English proficiency, but also to develop communication skills and other skills oriented towards the world of work.

D. Aim(s) of the Study

This study aims to investigate teachers' strategies in implementing Pedagogical Deep Learning (PDL) to foster students' 21st-century skills in EFL vocational classrooms.

E. Significance(s) of the Study

1. Theoretical Significance

This study contributes to the development of pedagogical deep learning, utilizing the principles of mindful, meaningful, and joyful learning in EFL vocational education. This research offers conceptual clarity on the relationship between PDL and 21st-century skills, thereby enriching existing theories of deep learning pedagogy in the context of Indonesian vocational education.

2. Practical Significance

The findings of this study provide vocational English teachers with concrete guidance and strategies to implement PDL in their classrooms. These practical insights can help teachers design effective strategies for implementing PDL (Pedagogical Deep Learning) to build 21st-century skills in students within the context of EFL vocational classrooms.

3. Empirical Significance

This study provides new empirical evidence on the implementation of PDL in vocational high schools, thereby expanding research on EFL (English as a Foreign Language) teaching practices. By presenting real classroom observations and interview findings, this study expands the empirical evidence on PDL and enriches the research landscape in EFL pedagogy.