



Challenges and Opportunities in Applying the Deep Learning Approach in English Language Learning in the Context of the Merdeka Curriculum at Vocation High School

Elok Trisnawati, Abdullah, Sukardi Weda

^{1,2,3}English Education Study Program Graduate Department Universitas Negeri Makassar

Article Info	Abstract
Received: 2026-06-08 Revised: 2026-09-11 Accepted: 2026-09-16 Keywords: <i>deep learning;</i> <i>Merdeka Curriculum;</i> <i>English language learning;</i> <i>vocational school;</i> <i>HOTS;</i> <i>student engagement</i> DOI: 10.24256/ideas.v14i2. 11124 Corresponding Author: Elok Trisnawati elokelok963@gmail.com English Education Study Program Graduate Department Universitas Negeri Makassar	<i>This study investigates the challenges and opportunities in applying the deep learning approach in English language learning within the context of the Merdeka Curriculum at SMKN 2 Pasangkayu. The study was motivated by the growing demand for English instruction that moves beyond memorization and supports meaningful understanding, higher-order thinking skills, contextual communication, and the development of the eight graduate profile dimensions. Although the Merdeka Curriculum encourages flexible, student-centered, and contextual learning, its implementation in vocational schools, particularly in coastal and resource-limited areas, remains complex. This research employed a qualitative case study design. The participants consisted of two English teachers as key informants and the principal or vice principal for curriculum affairs as supporting informants. Data were collected through in-depth interviews, classroom observations, and documentation of lesson plans, teaching modules, and curriculum-related documents. The data were analyzed using thematic analysis and the interactive model of Miles, Huberman, and Saldaña, consisting of data collection, data reduction, data display, and conclusion drawing. Triangulation was applied to strengthen the credibility of the findings. The results show that the implementation of deep learning faced several challenges, including difficulties in instructional design, limited learning time, diverse student characteristics, limited facilities and infrastructure, and assessment difficulties. Nevertheless, the approach also provided important opportunities, such as increasing student engagement, developing higher-order thinking skills, strengthening character aligned with the eight graduate profile dimensions, and promoting meaningful and contextual English learning. Teachers attempted to optimize implementation through professional development, learning innovation, technology use, and increased student interaction. The study concludes that deep learning has strong potential to support the Merdeka Curriculum, but its success depends on teacher competence, institutional support, resource availability, and systematic professional collaboration.</i>

1. Introduction

The Merdeka Curriculum represents an important paradigm shift in Indonesian education. It moves learning away from a rigid, teacher-centered, and memorization-oriented model toward a more flexible, contextual, and student-centered approach. This curriculum emphasizes the development of twenty-first-century competencies, including critical thinking, creativity, communication, collaboration, independence, and character formation. In vocational education, the Merdeka Curriculum is especially important because learning is expected to connect school-based knowledge with workplace needs, practical skills, industrial collaboration, and students' future career readiness. Therefore, English learning in vocational schools should not only focus on grammar, vocabulary, and textbook exercises, but should also support authentic communication, problem-solving, and meaningful use of language.

In the context of English language learning, the Merdeka Curriculum requires teachers to design learning that is relevant to students' lives and vocational backgrounds. English should be taught as a functional communication tool rather than merely as a formal subject. Students in vocational schools need English for workplace communication, digital information access, product promotion, service interaction, technical explanation, and future employment opportunities. Richards (2015) argues that English language teaching should be connected to learners' communicative needs and real-life purposes. Therefore, English instruction should provide opportunities for students to use language in authentic and meaningful contexts.

One pedagogical approach that aligns strongly with the Merdeka Curriculum is deep learning. In education, deep learning refers to a learning approach that emphasizes meaningful understanding, critical reflection, problem-solving, knowledge transfer, and the application of concepts in real situations. Marton and Säljö (1976) distinguish deep learning from surface learning. Surface learning focuses mainly on memorization and reproduction of information, while deep learning encourages learners to understand meaning, connect new information with prior knowledge, and apply knowledge in different contexts. This distinction is important in English learning because students should not only memorize vocabulary and grammar rules but also use language to think, communicate, analyze, and solve problems.

Deep learning in English language learning encourages students to connect linguistic knowledge with real-world issues and communicative practices. Students are expected to understand language meaningfully, use vocabulary and grammar in authentic contexts, collaborate with peers, and reflect on learning. Biggs and Tang (2011) explain that deep learning promotes sustainable understanding because students are actively involved in constructing meaning. In EFL classrooms, this means that students should be guided to move beyond mechanical exercises and engage in tasks such as project discussion, problem-solving, presentations, workplace simulations, and contextual writing or speaking activities.

The concept of deep learning also intersects with meaningful learning theory. Ausubel (1968) states that meaningful learning occurs when new information is connected substantively with concepts already existing in learners' cognitive structures. This theory is relevant to vocational English learning because students come to the classroom with vocational experiences, local knowledge, and practical interests. Teachers can use these experiences as entry points for English instruction. For example, English tasks can be connected with students' vocational programs, local coastal environments, business activities, or workplace simulations. In this way, English learning becomes more meaningful because students can connect language with their own context.

Deep learning is also closely related to constructivism. Piaget (1972) views learners as active constructors of knowledge, while Vygotsky (1978) emphasizes that learning develops through social interaction and scaffolding. In English classrooms, deep learning can be implemented through collaborative projects, discussions, inquiry activities, reflective tasks, and group problem-solving. The teacher functions as a facilitator who guides students to think critically, connect ideas, and apply English in meaningful tasks. This is consistent with the Merdeka Curriculum, which positions teachers not as the only source of knowledge but as designers of learning experiences.

The framework of twenty-first-century learning also supports the use of deep learning. The Partnership for 21st Century Learning emphasizes critical thinking, creativity, communication, and collaboration as essential competencies for students. Similarly, OECD (2018) highlights the need for students to develop knowledge, skills, attitudes, and values to adapt to dynamic and digital societies. In vocational schools, these competencies are highly relevant because graduates are expected to be adaptive, communicative, and able to think critically in workplace contexts. Deep learning can support these competencies by engaging students in authentic tasks that require inquiry, collaboration, communication, and reflection.

In the Indonesian policy context, deep learning is increasingly associated with the development of the eight graduate profile dimensions. The thesis explains that deep learning supports critical reasoning, creativity, communication, collaboration, independence, citizenship, health and well-being, and spirituality or morality. These dimensions reflect the broader educational goal of developing students not only academically but also socially, emotionally, ethically, and professionally. Therefore, deep learning in English instruction should not be limited to language mastery. It should also support students' character, communication competence, collaboration, and readiness for real-world participation.

At SMKN 2 Pasangkayu, the implementation of deep learning is highly relevant but also challenging. The school is located in a coastal district of West Sulawesi and serves students from rural and coastal communities. Students may have limited exposure to English outside the classroom and limited access to educational resources and technological infrastructure. These conditions make English learning more dependent on classroom design, teacher creativity, and available facilities. The thesis notes that geographical and socio-economic factors may further complicate curriculum implementation. Therefore, English teachers need strategies that are contextual, student-centered, and realistic for local school conditions.

The need for this research emerges from the gap between curriculum ideals and classroom realities. Although the Merdeka Curriculum promotes deep learning, many teachers still face difficulties in translating the approach into daily English teaching. Teachers must design activities that promote higher-order thinking, authentic communication, differentiation, meaningful assessment, and student engagement. However, these tasks require sufficient time, resources, training, and institutional support. If teachers do not receive enough support, deep learning may remain a policy concept rather than an effective classroom practice.

Previous studies cited in the thesis suggest that deep learning can improve students' engagement, critical thinking, authentic language use, and long-term retention. Deep learning practices can encourage students to connect vocabulary and grammar with cultural, social, and vocational contexts. However, these studies also indicate challenges such as teacher readiness, limited resources, assessment alignment, and the complexity of

classroom implementation. This shows that deep learning has both pedagogical promise and practical barriers.

Research on deep learning in EFL classrooms under the Merdeka Curriculum remains limited, particularly in vocational schools located in developing or resource-limited regions. Many studies focus on policy-level discussions, while fewer investigate how teachers actually interpret and apply deep learning in classroom practice. This gap is important because successful curriculum implementation depends on teachers' understanding, school context, available resources, and students' characteristics. The thesis positions SMKN 2 Pasangkayu as a meaningful case for exploring how deep learning is applied in a real vocational English learning context.

Based on this background, the present study investigates the challenges and opportunities in applying the deep learning approach in English language learning in the context of the Merdeka Curriculum at SMKN 2 Pasangkayu. Specifically, it aims to identify the real challenges faced by English teachers, explore teachers' views on the opportunities and effectiveness of deep learning in realizing the Merdeka Curriculum and the eight graduate profile dimensions, and investigate the strategies used by teachers to overcome obstacles and optimize implementation.

This study is significant theoretically and practically. Theoretically, it enriches the literature on deep learning in EFL instruction under the Merdeka Curriculum, especially in vocational schools in coastal regions that remain under-researched. Practically, it provides insights for English teachers, school leaders, curriculum developers, and policymakers. For teachers, the findings can support lesson design, assessment, and classroom management. For school leaders, the findings can inform professional development, resource allocation, and systemic support. For future researchers, this study provides a reference for further inquiry into deep learning and curriculum implementation in other vocational and regional contexts.

2. Method

This study employed a qualitative case study design. The design was selected because the research aimed to explore the challenges, opportunities, and teacher strategies in applying the deep learning approach in English language learning within a specific real-life context, namely SMKN 2 Pasangkayu. Yin (2018) explains that a case study is appropriate when researchers investigate a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and context are not clearly separated. In this study, deep learning implementation could not be understood apart from the school context, teacher readiness, student characteristics, infrastructure, and curriculum policy.

The research was conducted at SMKN 2 Pasangkayu, a public vocational high school located on Jl. Trans Sulawesi, Pasangkayu, West Sulawesi Province. The school was selected because it has implemented the Merdeka Curriculum and provides a relevant context for examining the application of deep learning in English language learning. The research was conducted from February to April 2026. The school context was important because students came from diverse academic and vocational backgrounds, and the location presented both opportunities and limitations for contextual and technology-supported learning.

The subjects of the research consisted of two English teachers as main informants and the principal or vice principal for curriculum affairs as supporting informants. The two teachers were selected purposively because they were directly involved in English teaching and had experience implementing the Merdeka Curriculum. One teacher was certified and had participated in external deep learning training, while the other teacher had received

internal school-based dissemination. This selection allowed the researcher to compare teachers' understanding, training exposure, and classroom implementation. The principal or vice principal was included to provide information related to policy, curriculum, and infrastructure support.

Data were collected through classroom observations, in-depth interviews, and documentation. Classroom observations were used to examine how deep learning principles appeared in English learning practice. The observations focused on pedagogical interaction, teacher facilitation, student engagement, collaboration, problem-solving, questioning, technology use, classroom atmosphere, and evidence of meaningful learning. Observation was important because it allowed the researcher to compare interview statements with actual classroom practices. Cohen, Manion, and Morrison (2018) state that observation is useful in educational research because it provides direct evidence of classroom behavior and interaction.

In-depth interviews were conducted with English teachers and school leaders. Teacher interviews explored their understanding of deep learning, how they integrated deep learning into the Merdeka Curriculum, the challenges they faced, and the strategies they used to optimize implementation. Interviews with the principal or vice principal focused on school policy, infrastructure, professional development, and institutional support. Kvale and Brinkmann (2015) explain that interviews are useful for understanding participants' lived experiences and interpretations. In this study, interviews helped reveal teachers' perceptions and reflections on deep learning implementation.

Documentation was used to support and validate observation and interview data. The documents included lesson plans or RPM, teaching modules, syllabi, curriculum documents, assessment instruments, and school policies related to technology and learning. Document analysis focused on whether lesson objectives, activity steps, assessment tools, and learning materials reflected deep learning principles, higher-order thinking skills, contextual learning, differentiation, and authentic assessment. Merriam and Tisdell (2016) note that documents provide valuable contextual evidence in qualitative research.

The data were analyzed using the interactive model of Miles, Huberman, and Saldaña (2014), consisting of data collection, data reduction, data display, and conclusion drawing or verification. During data reduction, the researcher coded and categorized interview transcripts, observation notes, and documents into themes such as instructional design challenges, time limitation, student diversity, facilities, assessment, student engagement, HOTS development, graduate profile dimensions, and teacher strategies. During data display, the findings were organized into matrices and descriptive narratives. Finally, conclusions were drawn and verified by comparing data across sources. Triangulation was used to strengthen credibility by comparing interviews, observations, and documentation.

3. Results

The findings of this study are presented based on three main themes: challenges in applying the deep learning approach, opportunities offered by deep learning in English language learning, and teachers' efforts or strategies to optimize implementation.

The first major finding concerns the challenges faced by teachers in implementing deep learning. The most prominent challenge was difficulty in instructional design. Teachers found it difficult to design English learning activities that moved beyond content delivery and memorization. Deep learning required them to create tasks that encouraged critical thinking, reflection, collaboration, authentic language use, and contextual application. This was more demanding than conventional lesson planning because teachers had to align learning objectives, classroom activities, assessment, and graduate profile dimensions. Some teachers still needed stronger conceptual understanding of deep

learning, especially in translating abstract curriculum principles into concrete classroom procedures.

The second challenge was limited learning time. English learning in vocational schools is often constrained by a limited number of instructional hours. Deep learning activities, however, require sufficient time for inquiry, discussion, project work, reflection, feedback, and assessment. Teachers reported that it was difficult to implement all stages of meaningful learning within a limited class schedule. As a result, some deep learning activities had to be simplified, shortened, or implemented only partially. This condition shows that time allocation is an important structural factor in curriculum implementation.

The third challenge was the diversity of student characteristics. Students at SMKN 2 Pasangkayu came from different academic abilities, vocational backgrounds, motivation levels, and English proficiency levels. Some students were active and could participate in discussion, while others needed more guidance and language support. This diversity made it difficult for teachers to design one learning activity that worked equally well for all students. Deep learning ideally requires differentiation, but the findings show that differentiation was not yet optimal. Teachers still needed more support in designing tasks that matched students' readiness, interests, and learning profiles.

The fourth challenge was limited facilities and infrastructure. The implementation of deep learning often requires access to learning resources, technology, internet connectivity, learning media, and flexible classroom arrangements. However, the school context still faced resource limitations. Technology could support authentic learning, digital exploration, and collaborative tasks, but uneven access and infrastructure constraints limited its use. In some cases, teachers had to adapt activities using available resources and local contexts rather than relying fully on digital tools.

The fifth challenge was assessment. Deep learning requires assessment that measures not only memorization but also higher-order thinking, collaboration, communication, creativity, reflection, and authentic performance. Teachers found it challenging to design assessment instruments that captured these complex competencies. Traditional tests were easier to administer but less suitable for measuring deep learning outcomes. Teachers needed rubrics, performance assessment, project assessment, and reflective assessment, but these required more time, expertise, and consistency.

The second major finding concerns the opportunities provided by deep learning. Despite the challenges, teachers viewed deep learning as a promising approach for improving English language learning. One important opportunity was increased student engagement. When learning activities were connected to real-life contexts, vocational needs, local issues, or collaborative tasks, students became more involved. They were more willing to participate in discussion, express ideas, and complete tasks because the learning felt more relevant. This indicates that deep learning can reduce passivity and make English learning more meaningful.

Another opportunity was the development of higher-order thinking skills. Deep learning encouraged students to analyze information, solve problems, make connections, reflect on meaning, and apply English in real situations. In English classes, this could be seen through activities such as discussing real problems, presenting ideas, interpreting texts, and producing contextual language outputs. These activities helped students move beyond memorization and engage in deeper cognitive processing.

Deep learning also supported the development of the eight graduate profile dimensions. Teachers perceived that English learning could contribute to critical reasoning, creativity, communication, collaboration, independence, citizenship, health and well-being, and spirituality or morality when learning tasks were designed meaningfully. For example,

group discussions supported collaboration and communication; project-based activities supported creativity and independence; contextual topics supported citizenship and moral awareness; and reflective learning supported personal growth. The thesis findings specifically state that deep learning provides opportunities to foster students' character in line with the eight graduate profile dimensions.

Another opportunity was the promotion of meaningful and contextual learning. Teachers realized that English learning became more effective when students could connect language materials with real experiences. In the coastal context of Pasangkayu, local issues such as coastal life, environment, vocational practices, and community activities could become learning resources. This helped students see English not only as a subject but also as a tool to communicate about their own world. Deep learning therefore opened opportunities to integrate local context, vocational relevance, and language learning.

The third major finding concerns teachers' efforts and strategies to optimize deep learning implementation. Teachers attempted to improve their competence through professional development. One teacher had participated in external deep learning training, while another received internal school-based dissemination. This shows that professional learning played an important role in helping teachers understand and apply the approach. However, the findings also indicate that professional development still needed to be strengthened and made more systematic.

Teachers also used learning innovation to adapt deep learning to classroom realities. They tried to design activities that involved discussion, collaboration, contextual tasks, and student interaction. In some situations, teachers simplified deep learning activities to fit available time and resources. This indicates that teachers did not simply reject curriculum innovation but attempted to adapt it based on school conditions.

The use of technology was another strategy. Teachers used available digital tools and resources to support learning when possible. Technology helped expand access to information, support student exploration, and make learning more interactive. However, technology use remained limited by infrastructure and access. Therefore, teachers combined digital tools with non-digital strategies, such as group discussion, local materials, classroom interaction, and teacher-guided inquiry.

Teachers also attempted to enhance student interaction. Deep learning was optimized through collaborative learning, questioning, discussion, and group activities. These strategies helped students become more active and supported social learning. However, formal collaboration among teachers was not yet optimal. The thesis notes that differentiation and formal collaboration still needed further improvement. This means that teacher efforts were present, but systemic support was still required.

Overall, the findings show that deep learning at SMKN 2 Pasangkayu has strong potential but is not yet fully optimized. The approach provides opportunities for meaningful English learning, student engagement, HOTS development, and character formation. However, its implementation is constrained by instructional design difficulties, time limitations, student diversity, facility limitations, and assessment challenges. Teachers have made efforts through training, innovation, technology use, and interaction-based strategies, but stronger support is needed to make deep learning more sustainable.

4. Discussion

The findings of this study show that applying the deep learning approach in English language learning at SMKN 2 Pasangkayu involves both significant challenges and meaningful opportunities. The challenges indicate that curriculum transformation is not only a matter of changing policy documents but also changing teacher practice, learning culture, classroom design, assessment systems, and institutional support. The

opportunities, on the other hand, show that deep learning has strong pedagogical value for making English learning more meaningful, contextual, and aligned with the Merdeka Curriculum.

The first major challenge was instructional design. Teachers had difficulty designing lessons that reflected deep learning principles. This finding is consistent with the idea that deep learning requires more than ordinary lesson planning. Teachers must design learning objectives, materials, activities, and assessments that promote inquiry, critical thinking, collaboration, reflection, and authentic application. Biggs and Tang (2011) emphasize that deep learning is supported when learning activities and assessment are constructively aligned with intended outcomes. If objectives demand higher-order thinking but activities remain memorization-based, deep learning cannot occur effectively.

Instructional design difficulty also reflects the gap between policy ideals and classroom realities. The Merdeka Curriculum encourages student-centered and contextual learning, but teachers need concrete guidance to translate these principles into English classroom practice. Teachers must decide what activities are suitable, how to guide students, how to differentiate tasks, and how to assess learning outcomes. This requires pedagogical competence, creativity, and reflective practice. Therefore, professional development is essential for successful implementation.

The second challenge was limited learning time. Deep learning activities require time for exploration, discussion, reflection, feedback, and assessment. This finding supports the view that deep learning is process-oriented, not instant. Marton and Säljö (1976) argue that deep learning involves understanding meaning and connecting ideas, which cannot be achieved through short memorization activities. In English learning, students need time to process vocabulary, practice communication, reflect on meaning, and apply language in real contexts. If class time is limited, teachers may struggle to implement deep learning fully.

The third challenge was student diversity. Students at SMKN 2 Pasangkayu had different levels of English proficiency, motivation, vocational backgrounds, and learning readiness. This diversity made deep learning more complex because students could not all engage with the same task in the same way. Vygotsky's (1978) concept of scaffolding is relevant here. Students need support that matches their current ability and helps them move toward higher levels of performance. Therefore, deep learning should be combined with differentiation. However, the findings show that differentiation was not yet optimal, indicating the need for further teacher support in designing flexible tasks and learning pathways.

Limited facilities and infrastructure also influenced implementation. Deep learning often benefits from technology, access to learning resources, collaborative spaces, and flexible learning media. In the context of SMKN 2 Pasangkayu, limited infrastructure restricted the implementation of some innovative learning activities. This finding is important because it shows that pedagogical innovation depends not only on teacher willingness but also on resource conditions. Teachers may understand the value of deep learning but still face practical barriers when technology, internet access, or learning materials are insufficient.

Assessment challenges were also significant. Deep learning requires assessment that captures complex competencies such as critical thinking, creativity, collaboration, communication, reflection, and authentic language use. Traditional tests may not adequately measure these outcomes. Wiggins (1998) argues that authentic assessment should require students to apply knowledge in real-world tasks. In English learning, authentic assessment may include presentations, projects, portfolios, reflective journals, dialogue performance, or problem-solving tasks. However, such assessment requires

rubrics, time, and teacher competence. The findings show that teachers still needed support in developing assessment instruments aligned with deep learning.

Despite these challenges, the study found important opportunities. The first opportunity was increased student engagement. When English learning was connected to real-life contexts, vocational needs, and collaborative tasks, students became more active. This supports Fullan, Quinn, and McEachen's (2018) view that deep learning engages students when learning is connected to real problems and meaningful outcomes. In vocational schools, this relevance is essential because students often value learning that connects to work, life, and practical skills.

The second opportunity was the development of higher-order thinking skills. Deep learning encouraged students to analyze, evaluate, create, solve problems, and reflect. These skills are central to twenty-first-century learning. The Partnership for 21st Century Learning and OECD (2018) emphasize that students need critical thinking, creativity, communication, collaboration, and adaptability. In English learning, HOTS can be developed through tasks that require students to interpret texts, discuss issues, design solutions, present arguments, and communicate meaningfully. This shows that English learning can contribute to broader cognitive development, not only language mastery.

The third opportunity was character development through the eight graduate profile dimensions. The findings indicate that deep learning can support critical reasoning, creativity, communication, collaboration, independence, citizenship, health and well-being, and spirituality or morality. This is important because the Merdeka Curriculum aims to develop holistic learners. English learning can contribute to these dimensions when teachers design tasks that involve ethical issues, collaboration, responsibility, communication, reflection, and local or global awareness. Thus, English becomes a medium for character development as well as language learning.

The fourth opportunity was meaningful and contextual learning. In SMKN 2 Pasangkayu, local coastal life and vocational contexts provide rich learning resources. Teachers can use local topics, workplace simulations, coastal environmental issues, and vocational projects as English learning materials. This aligns with Ausubel's (1968) theory of meaningful learning, which emphasizes the connection between new knowledge and learners' existing cognitive structures. When students learn English through familiar and relevant contexts, they are more likely to understand and retain the material.

Teachers' strategies to optimize implementation show that professional agency is important. Teachers attempted to improve competence through training, school-based dissemination, learning innovation, technology use, and student interaction. This indicates that teachers were not passive implementers of policy. They actively adapted deep learning to classroom realities. However, the findings also show that individual teacher effort is not enough. Systemic support is needed through continuous professional development, collaborative lesson planning, resource provision, and assessment guidance.

The finding that formal collaboration was not yet optimal is particularly important. Deep learning implementation should not depend only on individual teachers. Professional learning communities can help teachers share materials, design projects, develop rubrics, reflect on classroom practices, and solve implementation problems. Darling-Hammond et al. (2017) emphasize that effective professional development should be sustained, collaborative, practice-based, and connected to teachers' classroom needs. Therefore, schools should strengthen teacher collaboration to support deep learning implementation.

The study also suggests that technology use should be strategic, not merely decorative. Deep learning does not require technology for its own sake. Technology should support inquiry, collaboration, resource access, creativity, and authentic communication.

When infrastructure is limited, teachers can still apply deep learning through non-digital methods such as discussions, role plays, local projects, problem-solving tasks, and reflective activities. However, improved infrastructure would expand the possibilities for digital exploration, multimedia projects, and broader communication.

Overall, the findings confirm that deep learning is highly relevant to English learning in the Merdeka Curriculum but requires careful adaptation. In SMKN 2 Pasangkayu, deep learning provides opportunities to increase engagement, develop HOTS, support graduate profile dimensions, and make learning contextual. However, challenges in instructional design, time, student diversity, facilities, and assessment must be addressed. Therefore, deep learning should be implemented gradually, supported institutionally, and adapted to local vocational contexts.

The implications of this study are clear. English teachers need training in deep learning lesson design, differentiated instruction, authentic assessment, and contextual task development. Schools need to provide infrastructure, schedule flexibility, and collaborative spaces for teachers. Curriculum leaders need to ensure that policy expectations are realistic and supported by practical guidance. Future researchers may examine deep learning implementation in other vocational schools, compare rural and urban contexts, or conduct intervention studies to measure its impact on English achievement and student engagement.

5. Conclusion

This study explored the challenges and opportunities in applying the deep learning approach in English language learning in the context of the Merdeka Curriculum at SMKN 2 Pasangkayu. The findings show that the implementation of deep learning faced several challenges. These included difficulties in instructional design, limited learning time, diverse student characteristics, limited facilities and infrastructure, and challenges in assessment. These challenges indicate that deep learning requires careful planning, sufficient time, flexible strategies, appropriate resources, and assessment tools that can measure complex competencies.

Despite these challenges, deep learning provided important opportunities for English learning. It increased student engagement, developed higher-order thinking skills, supported the eight graduate profile dimensions, and promoted meaningful and contextual learning. Through deep learning, English could be connected with students' vocational needs, local coastal context, real-life problems, and future workplace communication. This made English learning more relevant and meaningful for students.

Teachers made several efforts to optimize the implementation of deep learning. These efforts included professional development, learning innovation, technology use, and increasing student interaction through discussion and collaborative activities. However, the findings also show that differentiation and formal teacher collaboration were not yet optimal. Therefore, further support is needed to strengthen teacher competence, improve infrastructure, and build collaborative professional learning cultures.

In conclusion, the deep learning approach has strong potential to support the Merdeka Curriculum in English language learning at SMKN 2 Pasangkayu. However, its effectiveness depends on teacher readiness, institutional support, resource availability, curriculum flexibility, and systematic assessment development. Future studies are recommended to involve more schools, include student perspectives more deeply, and examine the long-term impact of deep learning on English competence, motivation, and vocational readiness.

6. References

- Ausubel, D. P. (1968). *Educational psychology: A cognitive view*. Holt, Rinehart and Winston.
- Biggs, J., & Tang, C. (2011). *Teaching for quality learning at university* (4th ed.). Open University Press.
- Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education* (8th ed.). Routledge.
- Creswell, J. W., & Poth, C. N. (2023). *Qualitative inquiry and research design: Choosing among five approaches* (5th ed.). SAGE Publications.
- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Learning Policy Institute.
- Fullan, M., Quinn, J., & McEachen, J. (2018). *Deep learning: Engage the world, change the world*. Corwin.
- Kvale, S., & Brinkmann, S. (2015). *InterViews: Learning the craft of qualitative research interviewing* (3rd ed.). SAGE Publications.
- Marton, F., & Säljö, R. (1976). On qualitative differences in learning: I—Outcome and process. *British Journal of Educational Psychology*, 46(1), 4–11.
- Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation* (4th ed.). Jossey-Bass.
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). SAGE Publications.
- OECD. (2018). *The future of education and skills: Education 2030*. OECD Publishing.
- Piaget, J. (1972). *The psychology of the child*. Basic Books.
- Richards, J. C. (2015). *Key issues in language teaching*. Cambridge University Press.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Wiggins, G. (1998). *Educative assessment: Designing assessments to inform and improve student performance*. Jossey-Bass.
- Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). SAGE Publications.