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The Impact of Contextual Teaching and Learning (CTL) Approach on Students in Learning English for Maritime at Indonesian Maritime Polytechnic

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ABSTRACT
This research was conducted to examine the significance of implementing the Contextual Teaching and Learning (CTL) model and its effects on students' English for Maritime learning at the Indonesian Maritime Polytechnic. The study employed a descriptive research design, with data collected through observation, interviews, and documentation techniques. The collected data were analyzed using Miles, Huberman, and Saldaña's interactive analysis model, which consists of data collection, data condensation, data display, and conclusion drawing. The results revealed that the implementation of the CTL model significantly influenced students' learning motivation, participation, and comprehension of English for Maritime. The approach encouraged students to become more active, motivated, and collaborative by connecting classroom learning materials with real-world maritime contexts. Furthermore, the model enhanced students' critical thinking, problem-solving abilities, and reflective learning practices, enabling them to apply knowledge actively rather than merely memorize concepts. The implementation of CTL also helped reduce students' learning anxiety and improved their retention of maritime-related terminology.

INTRODUCTION

The maritime industry can be identified as one of the fastest-moving sectors in the world, where effective communication plays an essential role in operational efficiency and safety assurance (Lameesa et al., 2024; Sridhar et al., 2023). English has therefore become the internationally accepted language for global maritime operations. Radio communications, crew reports, and safety instructions on ships must be delivered clearly in English. The Standard Marine Communication Phrases (SMCP), introduced by the International Maritime Organization (IMO), were developed to minimize communication errors and prevent misunderstandings in maritime operations. These factors demonstrate that Maritime English is not merely an academic area within linguistics or a form of professional English; rather, it is an essential professional competency that contributes directly to maritime safety.

The strategic importance of maritime education in Indonesia cannot be overlooked. As an archipelagic country consisting of more than 17,000 islands and extensive maritime areas, Indonesia relies heavily on the maritime sector for domestic and international trade activities. Maritime education institutions, including the Indonesian Maritime Polytechnic and Barombong Merchant Marine, were established to prepare cadets with both technical

competencies and English communication skills required in maritime environments. However, previous studies have indicated that many cadets still experience difficulties in using English effectively, particularly in communication-based situations (Nurdin et al., 2023).

English for Maritime is categorized within the broader field of English for Specific Purposes (ESP), which focuses on developing English competencies according to specific professional contexts (Hutchinson & Waters, 1987). Unlike general English instruction, ESP emphasizes language skills required in particular professional domains. In the maritime context, this includes navigational expressions, safety communication, engineering-related communication, and radio communication. Therefore, effective learning requires an instructional process that integrates English with authentic maritime contexts by connecting classroom learning activities with practical applications in maritime environments (Bernadtua Simanjuntak et al., 2023; Khoiruman & Irawan, 2026; Rasita Gloria Barus & Bernadtua Simanjuntak, 2023; Simanjuntak et al., 2025).

One learning paradigm that can effectively support these objectives is Contextual Teaching and Learning (CTL). This approach enables learners to construct knowledge by connecting learning materials with real-world experiences (Sears, 2003). CTL consists of several key components, including constructivism, inquiry, questioning, learning communities, modeling, reflection, and authentic assessment (Nazwa et al., 2026; Ratnaningsih & Triwahyuni, 2025; Rohim et al., 2026; Situmorang, 2025). These components promote active participation, critical thinking, and experiential learning, which are essential in vocational education. Therefore, CTL represents more than an instructional technique, as it transforms learners from passive recipients of knowledge into active constructors of understanding (Diahyleva et al., 2025; Rasita Gloria Barus & Bernadtua Simanjuntak, 2023; Simanjuntak et al., 2025).

Internationally, the integration of CTL into language learning has demonstrated positive outcomes. Johnson (2002) observed that CTL helps bridge the gap between theoretical knowledge and professional skills in English for Specific Purposes (ESP) education. In the maritime education context, Limbong et al. (2024) found that CTL-based learning improved maritime cadets' confidence and speaking abilities by connecting learning activities with authentic contexts, such as vessel safety simulations and cargo communication practices. Similarly, Widyaningrum (2023) identified that contextualized learning encourages students to perceive English not merely as a theoretical subject but as a practical skill, thereby increasing learner ownership and engagement.

In Indonesia, recent curriculum reforms have emphasized the importance of contextual and competency-based learning. The Merdeka Belajar–Kampus Merdeka (MBKM) initiative launched by the Ministry of Education and Culture highlights the importance of producing graduates who are adaptable, reflective, and capable of solving real-world problems. CTL aligns with this national educational direction by creating meaningful, collaborative, and professionally relevant learning experiences. In the context of Maritime English, CTL provides a pedagogical connection between language education and maritime practice, supporting the development of graduates capable of communicating effectively in international maritime environments.

Despite the increasing implementation of CTL, research examining its broader implications for learners, particularly within Indonesian maritime higher education, remains limited. Previous studies (Munir & Nur, 2018; Widyaningrum, 2023) have primarily focused on the effectiveness of CTL in English learning and secondary education contexts. However, limited attention has been given to its psychological and behavioral impacts on learners, including motivation, participation, autonomy, and professional identity development. Examining these dimensions is important for understanding the transformative potential of CTL beyond cognitive learning outcomes.

The novelty of this study lies in its examination of the comprehensive effects of CTL implementation on maritime students' motivation, participation, understanding, and willingness to apply English in maritime contexts within Indonesian maritime higher education. Unlike previous studies that have primarily examined cognitive outcomes, such as vocabulary acquisition and speaking proficiency, this research explores the psychological and behavioral dimensions of CTL implementation. Specifically, this study investigates how CTL influences students' cognitive engagement, professional identity formation, and autonomy in language learning. Furthermore, the analysis of authentic assessment and reflective practice as integral components of CTL provides a more comprehensive understanding of its effectiveness. This research contributes to the limited literature on CTL implementation in maritime education and provides practical insights for vocational language learning.

Maritime education involves not only language acquisition but also the development of contextual competence, including the ability to interpret and use English effectively in critical situations such as navigation, emergencies, and safety procedures. Therefore, the issue extends beyond whether students learn English through CTL; it also concerns how CTL transforms learners' engagement, understanding, and professional readiness. CTL enables students to experience language learning through meaningful contexts, allowing them to develop practical English competencies required in maritime environments. To address this research gap, this study aimed to examine the impact of CTL on students learning English for Maritime at the Indonesian Maritime Polytechnic. The study explored how CTL influenced students' motivation, participation, understanding, and willingness to apply English in maritime situations. Furthermore, it examined how CTL affected students' cognitive engagement and learning behaviors through contextualized instructional processes. Through this investigation, the study contributes to the literature on CTL implementation in vocational English education and provides insights into how contextual and experiential learning approaches can enhance both language competence and professional skills among maritime learners.

METHOD

This study employed a qualitative descriptive method to examine the impact of the Contextual Teaching and Learning (CTL) strategy implemented in Maritime English classes on students' motivation, participation, and understanding. A qualitative approach was selected because it enabled an in-depth examination of the implementation of CTL principles within a natural educational context. The study was conducted at Barombong Merchant Marine, Makassar, Indonesia, a vocational higher education institution that prepares cadets for maritime professions.

The participants consisted of one English lecturer and 27 second-year Nautical cadets who had participated in CTL-based Maritime English learning for one semester. Data were collected through classroom observations, interviews with the lecturer and students, and document analysis. Classroom observations focused on student participation, interaction, and engagement during learning activities, including simulations related to maritime safety procedures and ship operations. Interviews explored the lecturer's and students' experiences and perspectives regarding the influence of CTL implementation on motivation, participation, and learning comprehension.

Data analysis followed the interactive model proposed by Miles et al. (2014), consisting of data condensation, data display, and conclusion drawing. The conclusions were developed based on thematic coding derived from patterns identified in the collected data. Data credibility was strengthened through triangulation by comparing findings from observations, interviews, and document analysis.

The implementation of the CTL approach incorporated several key components in each learning session. For example, a session on ship safety utilized authentic maritime video

materials (modeling), collaborative group activities (learning community), and student reflection journals (reflection). Authentic assessments were also applied to evaluate students' language use and understanding of maritime concepts. Through these procedures, the study obtained comprehensive data regarding the influence of CTL implementation on students' language development and learning experiences.

RESULT AND DISCUSSION

Findings obtained from this study made it apparent that the implementation of the Contextual Teaching and Learning (CTL) strategy in the Maritime English class at the Indonesian Maritime Polytechnic led to effective shifts in the behavior of the students in the class. In fact, this strategy helped to increase the involvement and confidence of the cadets in the class. Their exposure to English language concepts related to the maritime field improved significantly. Their involvement in team-building activities and their attitudes towards the process of learning were also influenced positively.

CTL Enhanced Motivation and Engagement Among Students

One of the most observable effects of CTL implementation can be derived from its ability to encourage greater motivation and class participation among the students. During the observation, the students became more responsive and excited when the lecturer explained the materials utilizing real-life maritime experiences. When the lecturer employed the traditional approach based merely on grammar explanations, the students became passive and disengaged. Nonetheless, when the lecturer employed visual aids, ship models, and communication videos related to the maritime field, the class environment became significantly different.

In the interviews, most of the students felt that their interest in English language studies would increase when the topic covered related to their studies at the maritime program. "*I enjoy the English language studies when the topic revolves around the ship because that will apply to me when I am at sea*," one of the cadets explained. This illustrates the aspect of constructivism in CTL when the students develop their knowledge based on their experiences. "*Contextualized classes made the passive students become more expressive in class*," the lecturer verified.

This outcome confirms the finding of Limbong et al. (2024), as their study discovered that the speaking confidence of the cadets significantly improved as a result of the implementation of activities based on CTL. As the students recognized the real-life application of the English language in their chosen field of studies, the entire learning process became more productive and less mandatory. This outcome also corresponds to the view held by Widyaningrum (2023), stating that the implementation of contextual teaching can increase intrinsic motivation among students as their gained knowledge is linked to their experiences.

CTL Enhanced Comprehension through Contextualized Learning

The students' understanding of Maritime English vocabulary and expressions improved significantly when the classes were conducted in a context. Instead of merely memorizing lists of words to commit to long-term memory, the students were introduced to new vocabulary in context through authentic examples related to the operation of ships. For example, when introducing the topic of Parts of the Ship, the lecturer used diagrams of ships, video clips, and images to demonstrate the meaning of expressions such as bow, stern, and port side.

The lecturer noticed that the students were more able to explain the meanings of the technical terms used after the contextual activities. As the student expressed: "It's easier to remember the words because I can see what they mean on the ship." This shows that the implementation of the modeling and the inquiry components in the CTL approach has been achieved. By relating the learning of English to activities at sea, the students were not only learning the language but also gaining concepts at the specific domain level as required of ESP.

This strategy also aligns with Karimah (2022), as the researcher proved that CTL improves the ability to master the vocabulary because the learner can relate the word to a physical thing and a procedural aspect. In this case, when the cadets were taught the vocabulary, such as bow, stern, deck, and port side, among others, not only were the words remembered but their purpose and location during the operation were also explained.

As mentioned by Abimanto and Mahendro (2025), the fact that the language used in the navigation context has less contextual reference can create obstacles for the cadets when trying to grasp the corresponding technical terminology. In this case, the inclusion of real navigation-related actions in the context of the educational process (for example, the students' understanding of safety manuals or the role-playing communication between ships) made the word usage more accurate and facilitated the correct pronunciation of the word among the participants.

CTL: Encouraging Collaboration and Learning Communities

Another significant aspect of the CTL implementation was the promotion of cooperation and teamwork among the cadets. The lecturer structured the majority of the activities of the students in pairs or groups. Such activities included the design of maritime conversations, simulations of vessel activities, and group presentations related to navigation and safety. This aspect reflected the reality of working in actual sea vessels whereby effective communication among the crew members greatly influences safety.

Students conveyed their view that the routine of learning in groups made them more at ease. "*I am not ashamed of making mistakes when we learn together. Everyone corrects each other*," said one cadet. The lecturer confirmed that the cooperative learning strategy promoted the development of a positive environment for studies. "Weaker" students can derive benefit from the "better" ones. This fits the CTL dimension of learning community based on collective interaction rather than solitary endeavor.

Sartini et al. (2025) stressed the important role of Maritime English language teaching in resembling actual teamwork at sea. This required effective communication. The CTL approach employed in the present research promoted this. In fact, group activities made the cadets more familiar with communication techniques, decision-making, and negotiations. All mentioned aspects are important in the actual context. The lecturer noticed that the activities in the groups promoted peer accountability. In other words, cadets were reminding each other to speak in English.

CTL Encouraged Reflection and Self-Responsibility in Learning

Reflection activities were also a very important aspect of CTL and presented positive results in the study. After each teaching session, the lecturer used the session as an opportunity for the students to reflect on what had been covered and how the students would apply the knowledge covered in the lessons in their future. This was achieved both orally and through writing. The reflections made by the students were indicative of the fact that the cadets gained self-awareness. For example, one cadet wrote, "*I realize I must continue practicing the English language since safety at sea depends on the language proficiency*."

Such reflective activities enabled the students to associate language learning with purposes related to their field of professionalism. Reflections, as described by Sears (2003), play an important role in CTL as they enable the students to translate their experiences of learning into their personal meanings. According to the lecturer, the activities were important because the students were able to identify their weaknesses as well as monitor their progression. In many instances, the students were observed to use English spontaneously.

Authentic assessment facilitated this process. Instead of the traditional grammar tests, the lecturer conducted the assessment of the students through role-playing activities, presentations, and writing reports. These were the activities that reflected actual communication activities between the ships. This assessment tactic incentivized the students

to perform instead of just memorizing. According to one student, "*The test feels like a real job. It's hard but fun, and it makes me remember better*."

In the case of this particular study, reflection also helped the cadets develop autonomy. Gradually, the cadets started their own conversations, speak English outside the classroom, and track their progress. The lecturer acknowledged that the use of reflective journals helped the students gauge their cognitive and affective involvement. In fact, authentic assessment tasks like simulations and presentations helped the students develop ownership of their outcomes.

CTL Created a Meaningful and Student-Centered Learning Environment

The class environment during the implementation of the CTL program became more dynamic and participative. The students were observed to mingle freely among their counterparts and the lecturer. They were enthusiastic about the tasks assigned. The type of learning became more student-centered as the students were more involved in asking questions, answering problems, and finding meanings.

This can be related to the finding of the previous studies that CTL changes the classroom environment to become more active and promotes critical and creative thinking (Munir & Nur, 2018). In Maritime English classes specifically, this can be greatly beneficial since the students were required not only to comprehend the language but also to apply the language skills under stressful situations. In the CTL classes, the students got to experience English as a communication channel instead of a topic studied at school.

In spite of the success achieved, the application of the CTL scheme has not been without difficulties. Some of the cadets face challenges related to proficiency in English. The preparation of context materials like the manuals of the maritime context, audio simulations, and video simulations has proved to be rather time and resource-consuming. This has been expressed in other studies (Karimah, 2022; Hakim & Sari, 2024), stating that the effective delivery of the CTL scheme demands adaptability and creativity.

To overcome such challenges, the lecturer used the following strategies: breaking down the tasks, resorting to bilingual explanations whenever the need arises, allocating peer tutors, and gradually adding complexity to the tasks. This way, all students were given the opportunity to contribute. The lecturer also made the point that one should remain consistent in the principals involved in CTL. This helped the students adjust more easily. As the weeks progressed, the lecturer as well as the students became more comfortable with the strategy.

In general, CTL contributed greatly to the effectiveness of Maritime English learning. This led to improved motivation, vocabulary mastery, and communication skills among the cadets. Their confidence in applying English in their field of endeavor improved as their exposure to simulations and cooperative learning continued. This finding supports Limbong et al. (2024), whose study found that CTL improves the cadets' oral communication skills and confidence. Again, the current study proves that CTL represents the best principles of experiential and vocational education. On the one hand, the approach unites educational and practical activities. This enables students to build their knowledge through action. The strategy matches the requirements related to the competency-based paradigm in maritime education perfectly. According to Sartini et al. (2025), Maritime English should not be studied as grammar. Instead, the topic should become a functional skill in the context of maritime safety and cooperation.

CONCLUSION

The effectiveness of the Contextual Teaching and Learning (CTL) strategy implemented in Maritime English classes at the Indonesian Maritime Polytechnic was demonstrated through improvements in students' motivation, participation, and understanding. As the learning materials were connected to authentic maritime contexts, students became more

enthusiastic and confident in applying English in professional situations. They found it easier to understand maritime vocabulary and expressions because these were related to real-world ship operations and communication practices. The use of authentic materials and collaborative learning activities encouraged students to become more active and responsible participants in the learning process. Furthermore, authentic assessment supported deeper understanding by encouraging students to apply knowledge rather than merely memorize information. These findings indicate that CTL transformed the traditional instructor-centered classroom into a more interactive and student-centered learning environment, where cadets learned English not only as a language but also as a professional communication tool for maritime activities.

Although several challenges, including differences in students' proficiency levels, limited instructional time, and the need for extensive preparation of learning resources, were identified during CTL implementation, the lecturer was able to manage these challenges effectively. Overall, CTL represented a positive and sustainable approach to vocational English learning because it enabled cadets to connect theoretical knowledge with practical maritime contexts. This approach contributed to the improvement of students' communication skills and supported their readiness for professional maritime environments. The findings confirm that CTL was an appropriate and effective learning approach for maritime education, and its continued implementation may contribute to improving the quality of English instruction in Indonesian polytechnic institutions.

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