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# Integrating Teaching Factory Method in ESP Maritime English: Cadets' Perceptions and Implications for Maritime Training

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**Abstract**

***Background:***
The Teaching Factory (TEFA) method has emerged as a practical approach in ESP Maritime English, particularly in enhancing cadets' participation in simulated maritime scenarios such as loading and unloading communication, onboard communication checking, and goods tracking via phone. Grounded in experiential learning theory, TEFA bridges the gap between theoretical knowledge and real-world application, preparing cadets for industry demands.

***Methodology:***
This study used a qualitative case study approach to explore seventh-year maritime cadets' perceptions of the TEFA method. The subjects were seventh semester maritime cadets from the maritime academy. Data collection involved classroom observations and semi-structured interviews, focusing on the cadets' engagement, confidence, and learning outcomes.

***Findings:***
The results showed that 65% of cadets agreed that TEFA made learning Maritime English easier, while 60% found the method enjoyable and engaging. Additionally, 55% of cadets reported reduced anxiety, attributing their increased confidence to the hands-on learning experience provided by TEFA simulations. However, 15% of cadets remained neutral, expressing the need for more structured guidance and additional practice to adapt to the interactive learning approach fully.

***Conclusion:***
This study concludes that TEFA effectively bridges the gap between theoretical knowledge and practical maritime communication, making learning more industry relevant. Future research should examine blended learning methods, digital feedback systems, and long-term evaluations to strengthen TEFA's role in improving cadets' communication skills and preparedness for maritime operations. Integrating online and practical training can enhance learning flexibility while reinforcing real-world applications through virtual simulations. Digital feedback tools can help cadets refining pronunciation and fluency by providing immediate assessments and personalized guidance.

***Originality:***
This study addresses a gap in understanding how TEFA influences cadets' perceptions and learning outcomes in ESP Maritime English, particularly in simulated maritime scenarios. It provides insights into the method's effectiveness and areas for improvement, offering a foundation for future innovations in maritime education.

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## INTRODUCTION

The maritime sector is a cornerstone of global trade and economic development, serving as the backbone of international commerce by facilitating the movement of goods, resources, and people across the world's oceans. With over 90% of global trade being carried by sea, the industry's reliance on skilled professionals cannot be overstated (Slaughter et al., 2020). Traditional methods of Maritime English education primarily focus on rote memorization, standardized phrasebooks, and classroom-based instruction, often lacking practical, interactive components that reflect real-world maritime communication. However, the complexity of modern maritime operations demands technical expertise and practical communication skills, particularly in Maritime English, to maintain safety standards and operational efficiency (Ismail et al., 2020). James et al. (2018) emphasized the crucial role of Maritime English (ME) in ensuring safety and effective communication in the maritime industry. Their study highlights the gaps in current maritime teaching practices and advocates for integrating authentic activities into the curriculum to enhance communication skills where collaboration between maritime educators and industry stakeholders is necessary to develop more effective teaching and assessment methods.

English for Specific Purposes (ESP) plays a vital role in the maritime industry, helping seafarers and maritime professionals develop the language skills needed for their specialized field. Maritime English, a branch of ESP, focuses on the specific linguistic and communicative demands of maritime operations, emphasizing relevant terminology, structures, and discourse related to navigation, safety procedures, and international regulations. Gaffas (2023) highlight the importance of Maritime English (ME) in ensuring safety and effective communication within the industry. Maritime educators must integrate real-world activities into ME training curricula. Simulations, role-playing exercises, and onboard training programs should be emphasized to enhance learners' practical language skills. Digital tools, such as virtual reality (VR) simulations and interactive maritime communication software, can further improve engagement and learning outcomes (Rakka, 2022).

Maritime English, a specialized form of English used in the shipping industry, serves as the lingua franca of the seas. It is the primary medium of communication among multinational crews, port authorities, and maritime organizations worldwide (Manuel, 2017). The International Maritime Organization (IMO), a United Nations agency responsible for regulating shipping, has emphasized the importance of language proficiency through conventions such as the International Convention on Standards of Training, Certification, and

Watchkeeping for Seafarers (STCW). The STCW mandates seafarers demonstrate competence in Maritime English to ensure clear and unambiguous communication, which is critical for preventing accidents, coordinating emergency responses, and complying with international regulations (Slaughter et al., 2020). Despite the IMO's efforts, gaps remain in how Maritime English is taught, with limited industry-focused methodologies that align with real-world maritime operations (Simanjuntak, 2024**;** James et al., 2018**).**

Incorporating ESP principles into Maritime English education can help bridge these gaps by emphasizing context-specific language training, task-based learning, and simulation exercises that mimic real-life maritime scenarios (Barus & Simanjuntak, 2023). By aligning Maritime English instruction with ESP methodologies, educators can better equip seafarers to communicate effectively in high-pressure situations, ultimately enhancing safety and operational efficiency at sea.

As the world's largest archipelagic nation, Indonesia holds a strategic position in global maritime trade. With over 17,000 islands and a coastline spanning 108,000 kilometers, Indonesia's maritime sector is vital to its economy and national identity (Pusparani et al., 2020). Recognizing the importance of maritime development, the Indonesian government has prioritized enhancing the capabilities of its human resources through comprehensive vocational education reforms. These reforms aim to bridge the gap between academic training and industry requirements, ensuring that graduates have the technical and linguistic competencies to thrive in the maritime sector (Kwartama, 2024). Simanjuntak (2024) examines the role of English communication skills in fostering Environmental, Social, and Governance (ESG) leadership among maritime cadets. His findings indicate that cadets with strong communication skills perform better in leadership tasks such as negotiation, conflict resolution, and stakeholder engagement, reinforcing the need for specialized communication training in maritime education**.**

One of the key innovations in Indonesia's vocational education system is implementing the Teaching Factory (TEFA) method. TEFA is an educational approach that simulates real-world industrial practices within the academic environment, allowing students to gain hands-on experience and develop practical skills (Maksum et al., 2024). Despite its benefits, the integration of TEFA into maritime education remains underexplored, with limited research on its effectiveness in addressing industry-specific skill gaps. Many vocational institutions still struggle to align their training with evolving maritime industry standards, leading to a mismatch between graduates' competencies and industry expectations (Barasa et al., 2025).

Barus & Simanjuntak (2023) also explore the integration of environmental education into Maritime English training, highlighting challenges such as linguistic complexity, resource constraints, and instructor competence. Their findings suggest that effective curriculum design, flexibility, and collaboration with industry partners can improve environmental education in maritime training. Additionally, while TEFA has been shown to enhance technical proficiency, its impact on soft skills development, such as teamwork, problem-solving, and communication, requires further investigation Wibowo et al. (2025) by examining the implementation of TEFA in maritime education, this study aims to bridge these gaps, ensuring that cadets receive comprehensive training that prepares them for real-world challenges.

The application of TEFA in Maritime English education is particularly significant, as it aligns the learning process with the practical needs of the maritime industry. Cadets are exposed to real-world scenarios, such as loading unloading activity, cargo documentation, and safety procedures, where effective use of Maritime English is crucial (Abila, 2016). Cadets can practice and refine their language skills through simulated exercises and role-playing activities in contexts that reflect their future professional environments. This approach improves linguistic competence and builds confidence and readiness for the challenges of maritime careers (Ziarati et al. 2011; Simanjuntak, 2024). Additionally, Mudakir & Simanjuntak (2024) analyze the effectiveness of different pedagogical strategies in maritime education, emphasizing the importance of integrating emerging technologies, soft skills, and a strong safety culture to enhance learning outcomes. They advocate continuous curriculum improvement to ensure alignment with international maritime standards.

This paper explores cadets' perceptions of using the TEFA method in Maritime English education, focusing on its effectiveness in preparing them for the linguistic and operational demands of the maritime industry. By examining the alignment between the TEFA approach and practical maritime applications, this study aims to provide insights into how vocational education can be optimized to meet the evolving needs of the global maritime sector. The findings of this research will contribute to the ongoing discourse on maritime education reform and offer practical recommendations for enhancing the quality and relevance of Maritime English training (Pyne, 2012 ; Mudakir & Simanjuntak, 2024).

The maritime industry is inherently global, with ships, crews, and cargo traversing international waters and interacting with diverse cultures and languages. In this context, effective communication is not merely a convenience but necessary for ensuring safety, efficiency, and compliance with international regulations (Slaughter et al., 2020).

Miscommunication or language barriers can lead to catastrophic consequences, such as collisions, groundings, or environmental disasters. For example, the 2007 grounding of the MV Cosco Busan in San Francisco Bay, which resulted in a significant oil spill, was partly attributed to communication failures between the ship's crew and the local pilot (Fielding et al., 2010). Such incidents underscore the critical importance of language proficiency in the maritime sector.

Maritime English, as a specialized domain of language use, encompasses a wide range of communicative functions, including navigation, engineering, safety, and administrative tasks. It is characterized by standardized phrases, technical terminology, and precise, concise expressions designed to minimize ambiguity and ensure mutual understanding (Ziarati et al., 2011). The IMO's Standard Marine Communication Phrases (SMCP) provide a framework for effective communication in maritime contexts, covering essential scenarios such as vessel traffic services, distress signaling, and port operations. Mastering Maritime English makes seafarers to address complex operational environments, collaborate with international colleagues, and respond effectively to emergencies ESP-based industrial needs (Sari & Sari, 2020; Barus & Simanjuntak, 2023; Dirgeyasa, 2018).

Despite its importance, Maritime English poses significant challenges for non-native speakers, particularly those from countries where English is not the primary language. Many maritime professionals struggle with the technical vocabulary, grammatical structures, and pronunciation required for effective communication (Rachman et al., 2024). These challenges are compounded by the diverse linguistic backgrounds of multinational crews, which can lead to variations in accent, fluency, and comprehension (Sari & Sutopo, 2018).

The need for Maritime English proficiency in Indonesia is particularly acute, given the country's strategic role in global shipping and its aspirations to become a global maritime fulcrum (Saray et al., 2021). The Indonesian government has launched various initiatives to strengthen maritime education and training, including establishing specialized maritime academies and adopting international standards for seafarer certification (Wibowo et al., 2025). However, the effectiveness of these efforts depends on the quality of language instruction and the extent to which it aligns with industry requirements. Traditional language teaching methods, which often focus on grammar and vocabulary in isolation, may not adequately prepare cadets for the communicative demands of the maritime workplace (Agustina, 2019).

The TEFA method offers a promising solution to this challenge by integrating language learning with practical, industry-relevant activities. In a TEFA-based Maritime English , cadets

engage in simulated tasks that replicate real-world maritime operations, such as conducting radio communications, preparing cargo manifests, and participating in emergency drills (Maksum et al., 2024). These activities provide opportunities for cadets to apply their language skills in authentic contexts, reinforcing their understanding of technical terms and improving their ability to communicate effectively under pressure. Moreover, the collaborative nature of TEFA exercises fosters teamwork and intercultural communication, which are essential skills for working in multinational crews (Pyne, 2012).

The benefits of the TEFA approach extend beyond language proficiency to encompass broader competencies required for success in the maritime industry. By immersing cadets in realistic scenarios, TEFA helps them develop critical thinking, decision-making, and problem-solving skills (Maksum et al., 2024). For example, during a simulated emergency response exercise, cadets must use Maritime English to coordinate their actions and analyze the situation, prioritize tasks, and implement solutions. This holistic approach to education ensures that cadets are linguistically competent and operationally ready to handle the complexities of maritime work (Ziarati et al., 2011).

Furthermore, the TEFA method aligns with the principles of competency-based education, which emphasizes acquiring skills and knowledge directly applicable to the workplace (Wibowo et al., 2025). In Maritime English, this means focusing on communicative competence the ability to use language effectively and appropriately in specific contexts rather than mere linguistic accuracy. By emphasizing practical application over theoretical knowledge, TEFA prepares students to meet the performance standards set to improve their employability and career prospects (Purwanto et al., 2022).

This paper investigates cadets' perceptions of the TEFA method in Maritime English education, focusing on its impact on their language skills, confidence, and readiness for the maritime industry. Through a combination of surveys, interviews, and classroom observations, the study will explore how cadets experience the TEFA approach, their challenges, and how they perceive its relevance to their future careers (Puspandari & Utari, 2024). The findings will provide valuable insights into the effectiveness of TEFA as a pedagogical tool and its potential for broader adoption in maritime education. By exploring cadets' perceptions of TEFA, this study aims to contribute to the ongoing efforts to enhance the quality and relevance of Maritime English education, ultimately supporting the development of a skilled and competent maritime workforce (Rahman et al., 2022). Simanjuntak (2024) examines the relationship between psychological resilience and English language proficiency among maritime cadets, finding that

those proficient in English exhibit better emotional regulation and decision-making skills during emergencies, underscoring the need for maritime training programs to incorporate psychological preparedness alongside language education.

## LITERATURE REVIEW

The Teaching Factory (TEFA) method is an experiential learning theory, which emphasizes learning through experience and reflection (Fatmawati et al., 2023). This theory aligns with the maritime industry's demand for practical skills, enabling cadets to apply theoretical knowledge in real-world scenarios. TEFA's integration of simulated maritime environments, such as ship-to-ship communication and emergency drills, provides cadets with immersive learning experiences that enhance both technical and linguistic competencies (Purwanto et al., 2022).

Previous studies have highlighted the importance of communicative competence in Maritime English, particularly in multinational and multicultural settings (Gao, 2019). Communicative competence goes beyond grammatical accuracy, focusing on the ability to use language effectively in specific contexts. Research by (Sari & Sari, 2020) underscores the challenges faced by non-native English speakers, such as mastering technical vocabulary and overcoming pronunciation barriers. These challenges are exacerbated in high-stakes situations, where miscommunication can lead to operational failures or safety incidents.

The competency-based education (CBE) framework further supports the adoption of TEFA in maritime education. CBE emphasizes the acquisition of skills and knowledge directly applicable to the workplace, ensuring that graduates meet industry standards (Gervais, 2016). In the context of Maritime English, this means focusing on practical communication skills, such as using Standard Marine Communication Phrases (SMCP) during navigation or emergency responses. By aligning language training with industry requirements, TEFA prepares cadets to meet the performance standards set by regulatory bodies like the International Maritime Organization.

Finally, the sociocultural theory of learning, proposed by (Vygotsky, 2011), highlights the importance of social interaction and collaborative learning in skill development. TEFA's emphasis on teamwork and role-playing activities fosters intercultural communication and problem-solving skills, which are essential for working in multinational crews (Maksum et al., 2024). This theoretical foundation reinforces the relevance of TEFA in preparing cadets for the linguistic and operational demands of the maritime industry.

## METHODOLOGY

This qualitative study used a case study approach to explore the perceptions of seventh-year cadets from the Maritime Department regarding using the Teaching Factory (TEFA) method in Maritime English education. The research design was guided by the analytical framework proposed by (Miles & Huberman, 1984) which emphasizes systematic data collection, coding, and analysis to identify patterns and themes. Data collection involved two primary methods: observation and semi-structured interviews. Data collection involved classroom observations and semi-structured interviews. Observations focused on cadets' engagement in simulated maritime scenarios, such as loading/unloading communication, onboard communication, and goods tracking, with field notes documenting their interactions, language use, and participation.

First, classroom observations assessed how cadets engaged with the TEFA method during Maritime English lessons. The observations focused on cadets' participation in simulated maritime scenarios, such as loading and unloading communication, onboard communication checking, and goods tracking. Field notes were taken to document cadets' interactions, language use, and overall engagement with the TEFA activities. This method provided real-time insights into the practical application of the TEFA approach and its effectiveness in enhancing language proficiency and operational readiness.

Second, 10 selected cadets were interviewed semi-structured to gain deeper insights into their experiences with TEFA-based learning in practical maritime scenarios. The interviews focused on specific aspects of the TEFA method, such as its alignment with real-world maritime tasks. Its impact on language proficiency, and its role in building confidence and readiness for the industry. The interviews were audio-recorded, transcribed, and analyzed using thematic analysis to identify recurring patterns and themes. Semi-structured interviews with 10 selected cadets provided deeper insights into TEFA's real-world alignment, its impact on language proficiency, and its role in confidence-building. These interviews were audio-recorded, transcribed, and thematically analyzed to identify recurring patterns.

Data analysis followed the three-step process outlined by (Miles & Huberman, 1984) data reduction, data display, and conclusion drawing/verification. Data analysis followed the three-step process including data reduction (organizing and filtering data), data display (structuring information for clarity), and conclusion drawing/verification (ensuring rigor and reliability). However, the study lacks statistical rigor, as it presents percentages of cadets' responses without applying statistical validation techniques such as p-values or confidence intervals. The study's limited sample size, focusing only on seventh-year cadets from a single

maritime department, restricts the generalizability of the results. A broader sample, including cadets from multiple institutions or different countries, along with a longitudinal study tracking cadets' progress over time, would provide a more comprehensive understanding of TEFA's effectiveness. Applying stratified sampling could also improve demographic representation and enhance the applicability of the findings across various maritime education settings.

## FINDINGS

The findings of this study showed the perceptions of seventh-year cadets from the Maritime Department regarding the use of the Teaching Factory (TEFA) method in Maritime English education. The findings are based on classroom observations and semi-structured interviews, which provided insights into the cadets' engagement, understanding, and confidence in applying Maritime English in real-world scenarios.

### *Cadets' Interest in the Teaching Factory (TEFA) Model*

The first aspect explored was whether the cadets found the TEFA method interesting and engaging for learning maritime English. The interview results indicated that most cadets expressed enthusiasm for the TEFA approach. They appreciated the method's practical, hands-on nature, which allowed them to simulate actual maritime tasks such as loading and unloading communication, onboard communication checking, and goods tracking via phone.

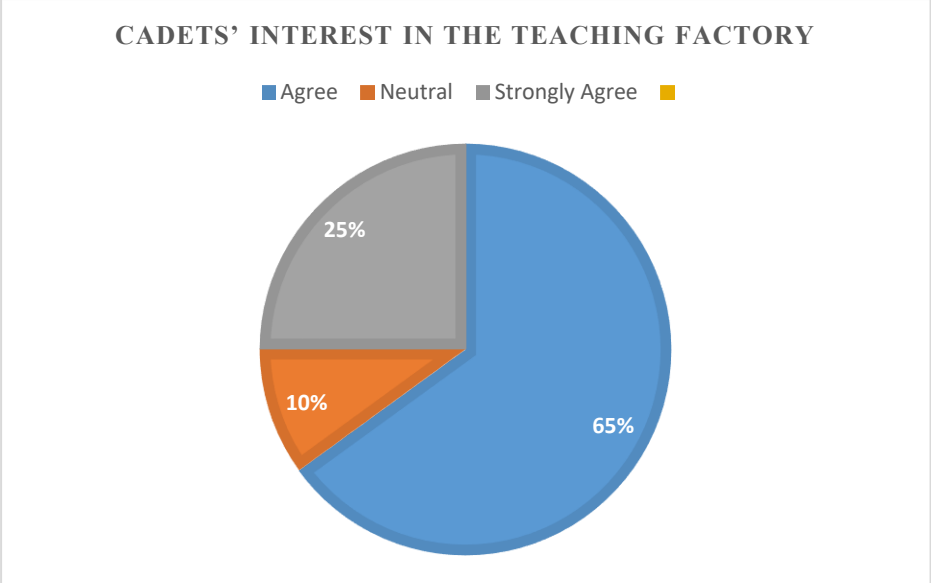


Figure 1. Cadets' interest in the Teaching Factory (TEFA)

The pie chart illustrates cadets' interest in the Teaching Factory (TEFA) method as a tool for learning ESP Maritime English. Most cadets (65%) agreed that the TEFA method was engaging and relevant to their future careers. This response highlights the effectiveness of TEFA in providing a practical, hands-on learning environment where cadets could simulate

real maritime tasks, such as onboard communication and goods tracking. These practical applications made the learning process more meaningful and closely aligned with the realities of the maritime industry. In addition, 25% of cadets strongly agreed, emphasizing that the TEFA method helped them connect theoretical knowledge with practical applications. This group found the simulations particularly valuable in understanding real-world scenarios and gaining confidence in their language and operational skills. The ability to practice in a realistic, controlled environment allowed these cadets to prepare for the maritime workplace's demands more effectively. Meanwhile, a smaller % of cadets (10%) remained neutral in their assessment, citing the need for more structured guidance during the simulations. This indicates that while the TEFA method is generally well-received, some cadets may require additional support to benefit from the approach fully. Structured instructions and step-by-step guidance could further enhance the learning experience and help bridge the gap for those who feel less confident during simulations. The chart reflects a highly positive perception of the TEFA method among cadets, with the vast majority finding it engaging and beneficial for their Maritime English learning. However, neutral responses suggest opportunities for refinement, particularly in providing clearer instructions and support during simulated tasks. These findings underscore the importance of aligning educational methods with practical industry needs to maximize engagement and learning outcomes.

***Importance of the Teaching Factory (TEFA) Model in ESP Maritime English Education***

The second aspect examined the perceived importance of the TEFA method in preparing cadets for real-world maritime tasks. The results showed that most cadets viewed the TEFA method as a critical tool for bridging the gap between classroom learning and industry requirements.

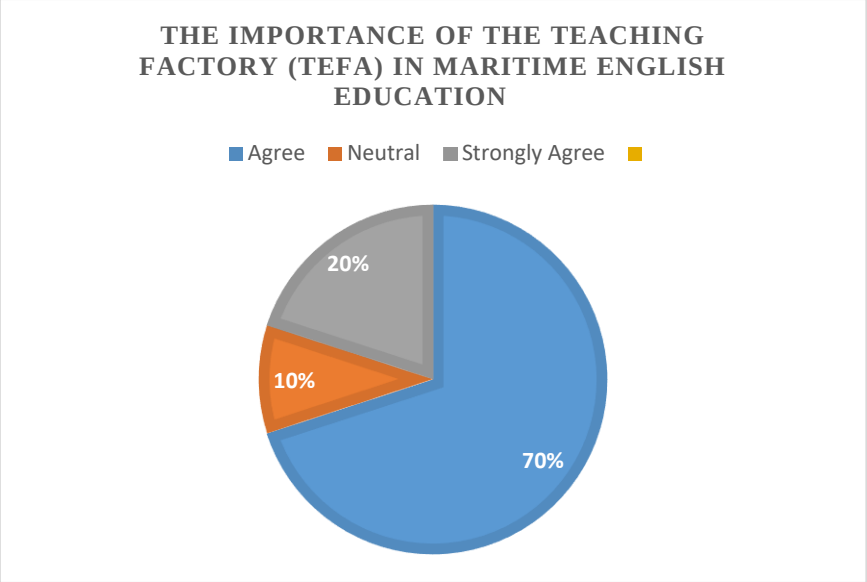


Figure 2. The importance of the teaching factory (TEFA) in Maritime English Education

The pie chart illustrates cadets' perceptions of the importance of the Teaching Factory (TEFA) model in Maritime English education. The responses are divided into three categories: Agree, Strongly Agree, and Neutral. Most cadets, accounting for 70%, agreed that the TEFA model is crucial for developing their Maritime English skills. They appreciated how the model aligns with industry requirements, offering practical opportunities to engage in real-world tasks such as cargo handling and emergency communication. These activities were seen as highly relevant to their future professional roles. Additionally, 20% of cadets strongly agreed, emphasizing the model's effectiveness in simulating industry-specific scenarios. This group highlighted that the method improved their operational readiness and boosted their confidence in applying linguistic and technical skills in real-life maritime contexts. However, 10% of cadets expressed neutrality, citing challenges related to the complexity of certain tasks. This suggests that while the TEFA model is mainly effective, more structured guidance and support could help ensure all cadets benefit fully from the method.

***Cadets' Understanding of ESP Maritime English Materials Using the TEFA Model***

The third aspect investigated whether the TEFA method improved the cadets' understanding of Maritime English materials. The results indicated that the method was effective in enhancing comprehension, particularly in areas requiring technical language and communication skills.

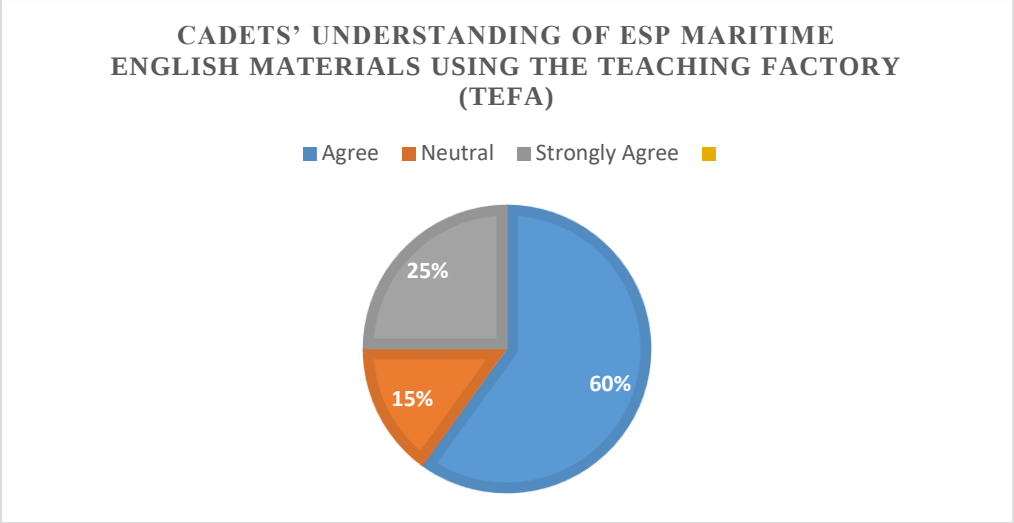


Figure 3. Cadets' understanding of ESP Maritime English Materials using the Teaching Factory (TEFA)

The pie chart shows how cadets feel about the TEFA model in improving their ESP Maritime English skills. Most cadets (60%) agreed that TEFA helped them better understand technical terms and communication, especially through hands-on activities like radio transmissions and cargo documentation. Another 25% strongly agreed that role-playing exercises, such as emergency drills and onboard instructions, made learning easier and more effective. However, 15% of cadets were neutral, feeling that some tasks were too complex and needed more instructor guidance. Overall, the results suggest that the TEFA model is highly effective in improving cadets' comprehension of Maritime English, particularly in areas that require technical communication. However, incorporating additional guidance and support mechanisms could make the learning experience even more beneficial, catering to diverse learning needs and ensuring that all cadets gain a strong command of Maritime English for their future careers.

***Reduction of Anxiety in Practical Maritime Scenarios***

The fourth aspect explored whether the TEFA method reduced cadets' anxiety when performing tasks such as onboard communication checking or goods tracking via phone. The results revealed that the method significantly boosted their confidence in handling real-world maritime situations.

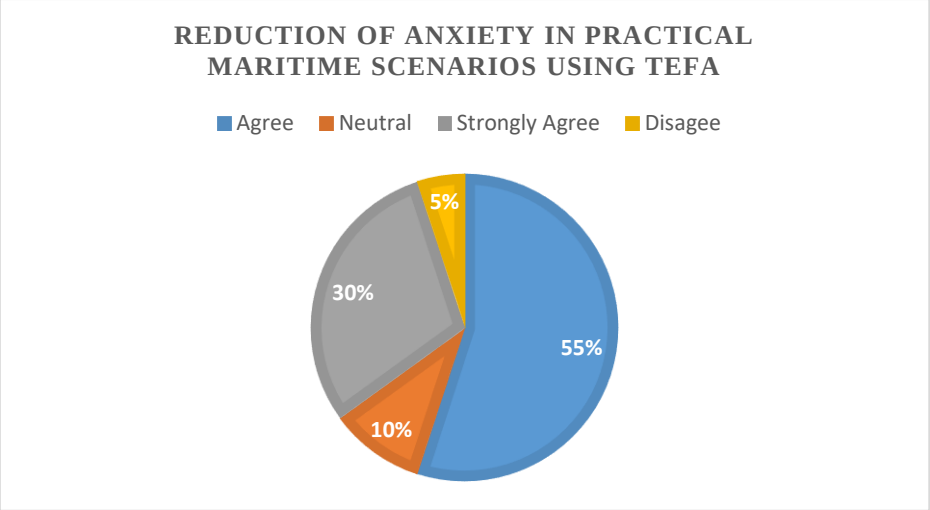


Figure 4. Reduction of Anxiety in Practical Maritime Scenarios using Teaching factory (TEFA)

The pie chart shows cadets' opinions on how the TEFA model helps reduce anxiety in practical maritime tasks. Most cadets (55%) agreed that TEFA made them feel more confident by allowing them to practice communication and cargo tracking in a structured and low-pressure environment. Another 30% strongly agreed, saying that the safe learning space helped them gain confidence and learn from their mistakes. However, 10% of cadets were neutral, meaning they still felt some anxiety and needed more time or support to adjust. A small group (5%) disagreed, mentioning that performing tasks in front of others still made them nervous. The results suggest that the TEFA model effectively reduces cadets' anxiety in practical maritime scenarios. Most cadets found that the method boosted their confidence by providing a structured and safe environment to practice communication tasks. However, some cadets still felt nervous, mainly when performing in front of others. To further improve the learning experience, instructors could incorporate additional confidence-building strategies, such as gradual exposure to high-pressure tasks, peer collaboration, and constructive feedback sessions.

***Ease of Learning ESP Maritime English Using the TEFA Model***

The fifth aspect assessed whether the TEFA method made learning Maritime English easier. Most cadets reported that the method simplified complex concepts by providing practical, hands-on experiences.

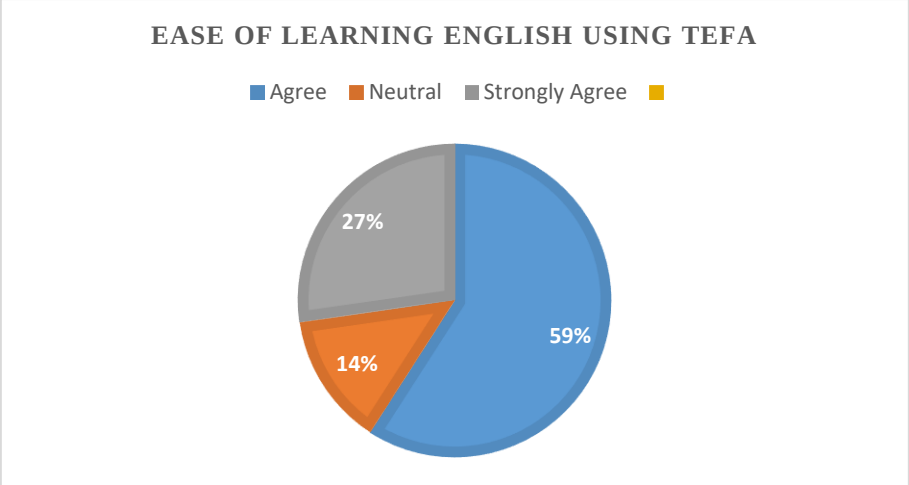


Figure 5. Ease of Learning English using Teaching Factory (TEFA)

The pie chart shows cadets' opinions on how the TEFA model helped them learn Maritime English more easily. Most cadets (65%) agreed that TEFA made learning simpler by allowing them to practice real tasks like ship-to-port communication, cargo documentation, and safety briefings. Instead of memorizing words and grammar, they could use English in real-life situations. Another 20% strongly agreed, saying that TEFA helped break down complex maritime terms into smaller, easier-to-understand parts. They found hands-on exercises and simulations more helpful than traditional classroom lessons. The findings suggest that the TEFA model is an effective tool for simplifying Maritime English learning. Most cadets found it useful in breaking down complex language into practical applications, making it easier to understand and apply in real-world scenarios. However, the neutral responses indicate that some cadets may need additional support, such as extended practice sessions or guided instruction, to adapt to the TEFA learning style fully.

***Enjoyment and Excitement in Learning Maritime English Using the TEFA Model***

The final aspect examined whether the TEFA method made learning Maritime English more enjoyable and exciting. The results showed that the method created a dynamic and interactive learning environment, which cadets found motivating.

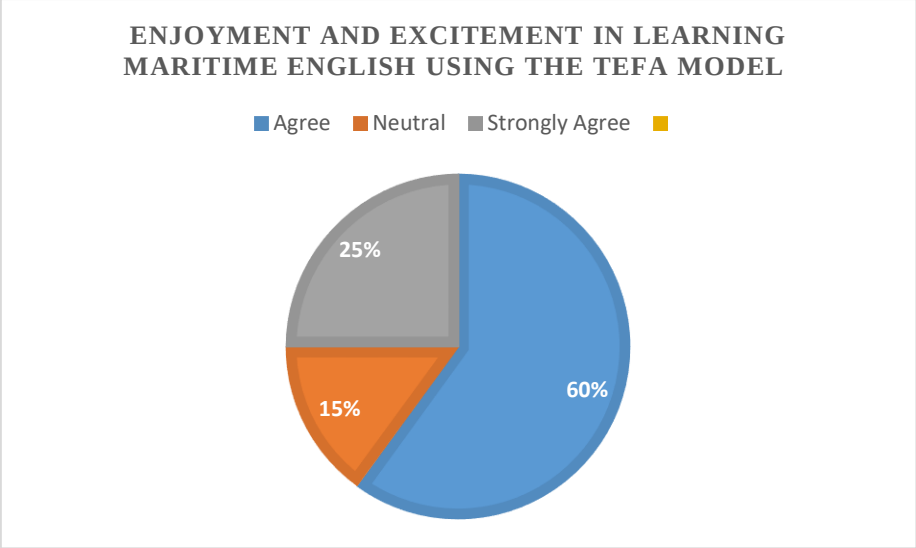


Figure 6. Enjoyment and Excitement in Learning Maritime English Using the TEFA Model

The pie chart shows cadets' opinions on how fun and exciting learning Maritime English was with the TEFA model. Most cadets (60%) agreed that TEFA made lessons more enjoyable because they could practice real-world maritime tasks instead of just reading textbooks. This hands-on approach kept them engaged and motivated. Another 25% strongly agreed, saying that TEFA created an exciting learning environment where they could handle onboard communication, respond to emergencies, and manage cargo documents. However, 15% of cadets were neutral, preferring a mix of traditional classroom lessons and practical simulations. In conclusion, the TEFA model helped make Maritime English more interesting, but combining it with structured classroom learning may work best for all cadets.

***Interview Results: Cadets' Experiences with the TEFA Method***

The following interview provides insights into cadets' experiences with the Teaching Factory (TEFA) method in Maritime English education. The responses highlight their perspectives on engagement, challenges, and expectations for improvement, as follows:

Question 1: How did you feel when learning Maritime English using the TEFA method?

Cadet 1:

*"I found the TEFA method very engaging because it allowed me to practice real tasks like loading and unloading communication in a controlled environment. It felt like I was already working in the industry."*

Cadet 4:

*"At first, I was nervous about the simulations, but over time, I gained confidence. The method helped me understand how to communicate effectively in emergencies."*

Cadet 7:

*"I enjoyed the hands-on approach. It was much better than just reading from a textbook or listening to lectures."*

Question 2: What improvements do you suggest for the TEFA method in Maritime English education?

Cadet 2:

*"I think the method could include more advanced scenarios, such as dealing with international crews or handling complex cargo documentation."*

Cadet 5:

*"Sometimes the tasks felt overwhelming. It would be helpful to have more step-by-step guidance during the simulations."*

Cadet 8:

*"The TEFA method is great, but I think it could benefit from more feedback sessions after each simulation to help us improve."*

Question 3: What are your expectations from instructors when using the TEFA method?

Cadet 3:

*"I hope instructors can provide more real-life examples and share their industry experiences to make the simulations even more realistic."*

Cadet 6:

*"It would be helpful if instructors could give us more time to reflect on our performance after each simulation."*

Cadet 9:

*"I expect instructors to be more involved in guiding us through the tasks, especially when we struggle with technical terms."*

The interview results reveal that the Teaching Factory (TEFA) method has been effective in enhancing cadets' engagement and confidence in Maritime English education. Cadets appreciated the hands-on, industry-relevant approach, which allowed them to practice real-world tasks such as loading and unloading communication, emergency responses, and onboard operations. Many cadets reported that the simulations made learning more enjoyable and practical compared to traditional methods, with some noting significant improvements in their communication skills and readiness for the maritime industry.

However, the interviews also highlighted areas for improvement. Some cadets expressed initial nervousness and found certain tasks overwhelming, suggesting the need for more structured guidance and step-by-step support during simulations. Additionally, cadets recommended incorporating more advanced scenarios, such as handling complex cargo documentation or interacting with international crews, to better prepare them for the diverse

challenges of the maritime workplace. Feedback sessions and reflective practices were also valuable additions to the TEFA method, enabling cadets to learn from their experiences and improve their performance.

Cadets' expectations from instructors emphasized the importance of real-life examples, industry insights, and active involvement during simulations. To maximize the benefits of the TEFA approach, they sought more guidance on technical terms and clearer communication of expectations.

## DISCUSSION

The findings of this study highlight the effectiveness of the Teaching Factory (TEFA) method in Maritime English education, as perceived by seventh-year maritime cadets. The results of classroom observations and semi-structured interviews show that the TEFA method significantly enhances cadets' engagement, confidence, and practical understanding of Maritime English. However, the study also identifies areas for improvement to optimize the method's implementation and ensure all cadets fully realize its benefits.

The Teaching Factory (TEFA) method is an effective approach in English for Specific Purposes (ESP), particularly in Maritime English instruction. This method integrates industry-based learning with classroom education, allowing cadets to engage in real-world professional simulations. A majority of cadets (65%) found TEFA engaging and relevant to their future careers, with 25% strongly agreeing that it helped them connect theoretical knowledge with practical applications. This approach aligns with experiential learning theory (Kolb et al, 2014), which highlights the importance of hands-on experiences in reinforcing learning. By participating in authentic maritime tasks, such as loading and unloading communication, onboard communication checking, and goods tracking via phone, cadets gain practical exposure to industry-specific language use. These activities not only enhance engagement and motivation but also provide a realistic context for developing Maritime English skills. By bridging the gap between education and industry needs, TEFA ensures that ESP learners acquire both language proficiency and professional competencies, preparing them for real-world maritime operations.

However, 10% of cadets remained neutral, citing the need for more structured guidance during simulations. This suggests that while the TEFA method is generally effective, some cadets may require additional support to engage with the tasks fully. Providing clearer instructions, step-by-step guidance, and opportunities for reflection could help bridge this gap and ensure that all cadets benefit from the method.

Importance of TEFA in Preparing for Industry Demands The study also showed that 70% of cadets agreed that the TEFA method is important in preparing them for real-world maritime tasks, with 20% strongly agreeing. Cadets highlighted the method's ability to simulate industry-specific scenarios, such as cargo handling and emergency communication, which they found highly relevant to their future roles. This underscores the value of

competency-based education (CBE), which focuses on developing skills directly applicable to the workplace (Burnette, 2016).

Despite the positive feedback, 10% of cadets expressed neutrality, pointing to the complexity of certain tasks as a challenge. This indicates that while the TEFA method is effective in bridging the gap between classroom learning and industry requirements, it may need to be tailored to accommodate varying levels of proficiency and confidence among cadets. Incorporating more advanced scenarios, such as interacting with international crews or handling complex documentation, could further enhance the method's relevance and effectiveness.

The TEFA method also improved cadets' understanding of ESP Maritime English materials, particularly in areas requiring technical language and communication skills. Sixty percent of cadets agreed that the method helped them better comprehend technical terms, while 25% strongly agreed that role-playing exercises, such as emergency drills, made learning easier and more effective. 55% of cadets reported reduced anxiety when performing practical tasks, with 30% strongly agreeing that the method boosted their confidence. The structured, low-pressure environment of TEFA simulations allowed cadets to practice and learn from their mistakes, which is consistent with the principles of sociocultural theory (Vygotsky, 1978). However, 10% of cadets remained neutral, and 5% disagreed, indicating that some still felt nervous, particularly when performing tasks in front of others. To address this, instructors could incorporate confidence-building strategies, such as gradual exposure to high-pressure tasks, peer collaboration, and constructive feedback sessions.

The TEFA method was widely perceived as making learning Maritime English more enjoyable and exciting. Sixty percent of cadets agreed that the hands-on approach kept them engaged, while 25% strongly agreed that the dynamic and interactive learning environment was motivating. This aligns with research showing that practical, immersive learning experiences can enhance motivation and retention (Hamilton et al, 2021).

However, 15% of cadets were neutral, suggesting that a blended approach combining TEFA simulations with traditional classroom instruction might be more effective for some learners. This highlights the importance of flexibility in educational methods to cater to diverse learning preferences and needs. Therefore, TEFA method has proven to be a valuable tool in Maritime English education, enhancing cadets' engagement, confidence, and practical skills. However, the findings suggest that its implementation can be further optimized by addressing cadets' feedback and incorporating additional support mechanisms. By refining the method to include more structured guidance, advanced scenarios, and increased instructor involvement, maritime educators can ensure that the TEFA approach continues to meet the evolving needs of the industry and prepares cadets for successful careers.

## CONCLUSION

Implementing the Teaching Factory (TEFA) method in maritime English education has proven effective in enhancing cadets' participation in simulated maritime scenarios, such as loading and unloading communication, onboard communication checking, and goods tracking via phone. The study results indicate that 65% of cadets agreed that TEFA made learning maritime English easier, while 60% found it more enjoyable and engaging. Additionally, 55% of cadets reported reduced anxiety, demonstrating that the TEFA approach helped them feel more confident when performing real-world communication tasks. The immersive learning experience provided by TEFA allowed cadets to practice essential maritime communication skills in realistic settings, making their training more applicable to industry needs. However, 15% of cadets remained neutral, suggesting that while the method was effective, some learners required additional guidance, more structured simulations, or a balance between TEFA-based learning and traditional classroom instruction. A small percentage (5%) of cadets still felt anxious when performing tasks in front of others, indicating a need for confidence-building strategies. Therefore, TEFA is a valuable method for training cadets in loading and unloading communication, onboard communication checking, and goods tracking via phone. However, further refinements in implementation are necessary to ensure all cadets fully benefit from the approach and feel prepared for real maritime operations.

Future researchers are encouraged to explore further improvements in implementing the TEFA method in Maritime English education, particularly in enhancing cadets' engagement in simulated maritime scenarios such as loading and unloading communication, onboard communication checking, and goods tracking via phone. Investigating the effectiveness of hybrid learning approaches that integrate TEFA with traditional classroom instruction could provide insights into optimizing learning outcomes. Additionally, future studies could focus on the impact of real-time feedback and AI-driven language assessment tools in improving cadets' communication proficiency. Expanding research to multinational maritime institutions would also help understand how TEFA can be adapted to different cultural and linguistic backgrounds. Lastly, researchers should consider longitudinal studies to evaluate how TEFA-based training influences cadets' performance and confidence once they enter the maritime industry, providing valuable data on its long-term effectiveness in professional settings.

## REFERENCES

Abila, S. S. (2016). *The occupational socialisation of merchant marine cadets in the Philippines.* Cardiff University.

Agustina, I. (2019). Task-Based Language Teaching at the Maritime Education and Training Institute in Indonesia. In *Proceedings of the TBLT in Asia 2018 Conference*.

Barasa, L., Kuntadi, C., Permana, A., & Simanjuntak, M. B. (2025). Improving Maritime Education for Sustainability and Industry Alignment-A Qualitative and Systematic Literature Review. *Action Research Journal*, *2*(1), 29–47.

Burnette, Diane. (2016). The Renewal of Competency-Based Education: A Review of the Literature. *The Journal of Continuing Higher Education. 64*. 84-93. 10.1080/07377363.2016.1177704.

Dirgeyasa, I. W. (2018). The Need Analysis of Maritime English Learning Materials for Nautical Students of Maritime Academy in Indonesia Based on STCW'2010 Curriculum. *English Language Teaching*, *11*(9), 41. https://doi.org/10.5539/elt.v11n9p41

Fatmawati, K., Kusdiyanti, H., & Sumarsono, H. (2023). The Effect Of Entrepreneurial Education And Experiential Learning On Entrepreneurial Intention Mediated By Teaching Factory (TEFA). *International Education Trend Issues*, *1*(2), 285–301. https://doi.org/10.56442/ieti.v1i3.287

Fielding, E., Lo, A. W., & Yang, J. H. (2010). The National Transportation Safety Board: A model for systemic risk management. *Available at SSRN 1695781*. https://dx.doi.org/10.2139/ssrn.1695781

Gaffas, Z. M. (2023). Students' perceptions of e-learning ESP course in virtual and blended learning modes. *Education and Information Technologies*, *28*(8), 10329–10358. https://doi.org/10.1007/s10639-023-11579-x

Gao, Y. (2019). *Study on Navigation College English Teaching Based on SPOC and TBLT*. *294*(Ieesasm 2018), 356–359. https://doi.org/10.2991/ieesasm-18.2019.65

Gervais, J. (2016). The operational definition of competency-based education. *The Journal of Competency-Based Education*, *1*(2), 98–106. https://doi.org/10.1002/cbe2.1011

Hamilton, D., McKechnie, J., Edgerton, E., & Wilson, C. (2021). Immersive virtual reality as a pedagogical tool in education: a systematic literature review of quantitative learning outcomes and experimental design. *Journal of Computers in Education*, *8*(1), 1-32. https://doi.org/10.1007/s40692-020-00169-2

Ismail, M. R. S., Rizani, M. S., & Rauzilan, M. I. M. (2020). A study on improving maritime English performance among cadets at maritime universities. *Maritime Technology and Research*, *2*(2), 82–89. https://doi.org/10.33175/mtr.2020.201687

James, A. J., Schriever, U. G., Jahangiri, S., & Girgin, S. C. (2018). Improving maritime English competence as the cornerstone of safety at sea: a focus on teaching practices to improve maritime communication. *WMU Journal of Maritime Affairs*, *17*(2), 293–310. https://doi.org/10.1007/s13437-018-0145-4

Kolb, D. A., Boyatzis, R. E., & Mainemelis, C. (2014). Experiential learning theory: Previous research and new directions. In Perspectives on thinking, learning, and cognitive styles

(pp. 227-247). Routledge. https://doi.org/10.4324/9781410605986

Kwartama, A. (2024). Bridging the Gap: Enhancing Maritime Education for Shipping Management, Business, and Sustainability. *Meteor STIP Marunda*, *17*(2), 15–24.

Maksum, H., Purwanto, W., Ampera, D., Yuvenda, D., & Hasan, H. (2024). Improving Problem-Solving and Communication Skills in Automotive Vocational Education through the Development of Teaching Factory Model with Problem-Based Learning (TEFA-PBL) Concept. *International Journal of Education in Mathematics, Science and Technology*, *12*(2), 364–386. https://doi.org/10.46328/ijemst.3941

Manuel, M. E. (2017). *Maritime risk and organizational learning*. CRC Press.

Marudut Bernadtua Simanjuntak. (2024). Exploring the Intersection of Psychological Features and Language Proficiency in Seamen's Activity: A Qualitative Analysis of Maritime Cadets at Maritime Institute Jakarta (STIP Jakarta). *Pragmatik : Jurnal Rumpun Ilmu Bahasa Dan Pendidikan* , *2*(1), 216–227. https://doi.org/10.61132/pragmatik.v2i1.254

Miles, M. B., & Huberman, A. M. (1984). *Drawing valid meaning from qualitative data: Toward a shared craft. Educational researcher*,13(5), 20–30. https://doi.org/10.3102/0013189X013005020

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. sage.

Mudakir, M., & Simanjuntak, M. B. (2024). Navigating Perspectives: Maritime Transport Development-Insights from Semester 3 Cadets at STIP Jakarta. *Pendekar: Jurnal Pendidikan Berkarakter*, *2*(1), 83–93. https://doi.org/10.51903/pendekar.v2i1.574

Purwanto, A., Novitasari, D., & Asbari, M. (2022). The Role of Leadership, Teaching Factory (TEFA) Program, Competence of Creative Products and Entrepreneurship On Entrepreneurial Interest of the Vocational School Students. *International Journal of Social and Management Studies*, *3*(5), 58–64. https://doi.org/10.5555/ijosmas.v3i5.185

Puspandari, L. E., & Utari, D. A. (2024). Implementation of Teaching Factory Learning Model in English Teaching Process in View of Students Perception and Learning Strategies. *Prosiding Seminar Nasional Riset Bahasa Dan Pengajaran Bahasa*, *6*(1), 200–207. https://doi.org/10.31940/senarilip.v6i1.200-207

Pusparani, N. A., Ramadita, D. M., Herawan, L., & Solicha, A. (2020). The Role of Information Technology Assessment in the Ministry of Marine Affairs and Fisheries. *2020 2nd International Conference on Cybernetics and Intelligent System (ICORIS)*, 1–5.

Pyne, R. M. (2012). *Internationalising Chinese maritime higher education: Developing content and English language integrated teaching and learning*. University of Plymouth.

Rachman, N. F., Oktavia, W., & Kustanto, J. S. (2024). Characteristics of Facilitated Critical Thinking in Speaking for Maritime English Improvement. *Tell: Teaching of English Language and Literature Journal*, *12*(2). https://doi.org/10.30651/tell.v12i2.23738

Rakka, S. G. A. (2022). *The necessity of cloud-based simulator for Indonesia's maritime education and training institutions*.

Rasita Gloria Barus, I., & Bernadtua Simanjuntak, M. (2023). Integrating Environmental

Education into Maritime English Curriculum for Vocational Learners: Challenges and Opportunities. *BIO Web of Conferences*, *79*. https://doi.org/10.1051/bioconf/20237908001

Saray, S., Satır, T., & Dogan-Saglamtimur, N. (2021). Proficiency of Maritime English course: An investigation in Istanbul, Turkey. *Heritage and Sustainable Development*, *3*(1), 6–15. https://doi.org/10.37868/hsd.v3i1.48

Sari, L. I., & Sari, R. H. (2020). *ESP Course Book Evaluation from the Perspectives of Teachers, Cadets, and Graduates: The Case of Maritime English*. *434*(Iconelt 2019), 56–60. https://doi.org/10.2991/assehr.k.200427.013

Sari, L. I., & Sutopo, D. (2018). The effectiveness of vocabulary self-collection and word mapping strategies for teaching vocabulary to maritime cadets with high and low metacognitive awareness. *English Education Journal*, *8*(1), 35–42. https://doi.org/10.15294/eej.v8i1.22127

Simanjuntak, M. B. (2024). Enhancing maritime ESG leadership through english communication skills. *E3S Web of Conferences*, *577*. https://doi.org/10.1051/e3sconf/202457702014

Slaughter, A., Ray, S., & Shattuck, T. (2020). International Maritime Organization (IMO) 2020 strategies in a non-compliant world. *Deloitte Development LLC*, 1–14.

Vygotsky, L. (2011). *Interaction between learning and development*. Linköpings universitet.

Wibowo, A. A., Prasetya, L. A., Haq, S. T. N., Rofiudin, A., Hendranawan, R. S., Ichwanto, M. A., Isnandar, I., Mariana, R. R., Martin, D., & Suhendri, S. (2025). Analysis of teaching factory (TEFA) implementation in making Pait village profile video. *Journal of Research in Instructional*, *5*(1), 103–125. https://doi.org/10.30862/jri.v5i1.551

Ziarati, M., Ziarati, R., Bigland, O., & Acar, U. (2011). Communication and practical training applied in nautical studies. *International Maritime Lecturers' Association (IMLA), The International Maritime English Conference Proceedings Of Imec*, *23*, 41.