

## Junior Cadets' Perceptions on English as the Medium of Instruction in Maritime Education

Yayu Nopriani Martha, M.Pd.  
Sekolah Tinggi Ilmu Pelayaran, Jakarta, Indonesia  
[yayu.nopriani@gmail.com](mailto:yayu.nopriani@gmail.com)

### ABSTRACT

Considering the global nature of the maritime industry, English proficiency is essential for effective communication, safety, and operational performance. This research employs a qualitative method using a structured questionnaire distributed to cadets of maritime education institutions. The data were analysed using descriptive statistics to measure the level of agreement, frequency, and overall perception of the respondents toward English-based instruction. The results show that the majority of cadets have a positive perception of English as the medium of instruction, with more than 70% of respondents agreeing that it enhances their understanding of technical subjects and improves their communication skills. However, approximately 30% of cadets reported challenges, including limited vocabulary, lack of confidence in speaking, and difficulty in understanding technical terminology. The study concludes that English as the medium of instruction is effective in supporting cadets' academic and professional readiness. Nevertheless, additional language support programs and practical communication training are recommended to improve comprehension and confidence among cadets.

Keywords: English as Medium of Instruction, Maritime Education, Cadets' Perception, Language Proficiency, Maritime Communication

### INTRODUCTION

English serves as the international language in the maritime industry. Mastery of English is essential for cadets to comprehend academic materials, communicate effectively onboard, and ensure compliance with international maritime standards. Cadets often face challenges such as understanding technical vocabulary, applying grammar correctly, and building speaking confidence, which can impact both academic performance and readiness for professional maritime operations. The globalized nature of the maritime industry further necessitates a high degree of English language proficiency, as it acts as the primary *lingua franca* for international communication and safety protocols ([Simanjuntak et al., 2023](#)).

The adoption of English as an academic *lingua franca* in Indonesian higher education is increasing, aligning with global trends in internationalization and impacting various fields, including maritime studies. This integration is considered an innovation in content teaching, though its adoption rate within Indonesian higher education has previously been questioned ([Stroupe & Roosman, 2025](#)). However, English proficiency remains paramount for maritime cadets, who must master the language for professional interactions and to effectively convey environmental concerns, which are integral to their future roles as custodians of the industry. Consequently, effective English language education in maritime programs is crucial for

fostering not only technical competence but also intercultural understanding and environmental consciousness among cadets.

This emphasis on English Language Education, particularly Maritime English, is critical for ensuring clear communication and accuracy in maritime operations. This specialized instruction encompasses English for Specific Purposes, catering to the distinct linguistic demands of maritime professionals, alongside English as a Second Language for non-native speakers, thereby ensuring comprehensive language acquisition for all cadets. The importance of English in this context extends beyond mere communication, encompassing the promotion of environmental literacy through the integration of specialized terminology and concepts into language lessons, thus preparing cadets to address pressing ecological issues within the maritime domain ([Simanjuntak et al., 2023](#)).

This approach integrates linguistic development with the acquisition of crucial environmental knowledge, preparing cadets for their responsibilities in a rapidly evolving global industry ([Istiana et al., 2021](#)). This comprehensive language training is pivotal for cadets, enabling them to comprehend academic materials, communicate effectively onboard, and ensure compliance with international maritime standards, including environmentally sound practices. This study therefore examines how cadets perceive the effectiveness of English as a medium of instruction in facilitating their understanding of such critical concepts, alongside their readiness to apply these in real-world maritime scenarios. Such perceptions are crucial for evaluating the efficacy of current English Medium Instruction programs and for identifying areas where pedagogical enhancements might be necessary to better prepare cadets for both technical and ecological challenges ([Stroupe & Roosman, 2025](#)).

The study aims to provide insights into these perceptions, offering a foundation for optimizing English language education within maritime academies to meet the industry's multifaceted demands. This research will also explore how the integration of environmental perspectives and sustainable communication skills within English language programs influences cadets' overall preparedness for the maritime industry. This integration is crucial given the increasing focus on environmental responsibility within the maritime sector, necessitating that cadets are not only proficient in technical communication but also adept at discussing and implementing sustainable practices. Ultimately, this research seeks to determine whether current English language curricula adequately equip cadets with the linguistic tools necessary to navigate complex environmental regulations and contribute to sustainable maritime operations, thereby influencing their future roles as environmentally conscious professionals ([Simanjuntak et al., 2023](#)).

## LITERATURE REVIEW

The synthesis of intercultural understanding and environmental perspectives within maritime education, particularly through English Language Education, forms an intricate web of multidisciplinary knowledge. The confluence of these fields is critical for fostering maritime professionals who are not only linguistically proficient but also environmentally conscious and culturally adept. This literature review establishes the foundation for the subsequent sections of this research, which will investigate the integration of environmental perspectives into maritime communication programs. This integration holds the potential to transform vocational education in the maritime field, ultimately leading to more informed and environmentally responsible maritime professionals ([Barus & Simanjuntak, 2023](#)).

Specifically, this review will examine how Maritime English curricula can effectively incorporate environmental education to enhance cadets' understanding and application of sustainable practices. Moreover, it will explore the perceived efficacy of such integrated approaches in developing cadets' capabilities to address complex environmental challenges and communicate effectively about sustainability. The maritime industry's substantial environmental footprint, including greenhouse gas emissions and potential harm to marine ecosystems, necessitates a comprehensive approach to environmental education within maritime curricula. This pressing concern underscores the importance of integrating environmental knowledge into the Maritime English curriculum to cultivate an ecologically responsible maritime workforce. Such integration can facilitate the development of environmentally literate professionals who can make informed decisions regarding the industry's sustainability and compliance with international environmental regulations.

This approach ensures that future maritime professionals are equipped not only with linguistic competence but also with a robust understanding of ecological principles and sustainable practices essential for global maritime operations. Furthermore, the efficacy of incorporating local wisdom and traditional ecological knowledge into these English language programs can be explored to provide culturally relevant contexts for environmental literacy ([Sihombing et al., 2025](#)). This comprehensive integration of environmental education into the Maritime English curriculum also addresses the critical need to develop human resources from an early age, fostering motivation for marine science exploration and environmental stewardship among young seafarers. This includes integrating environmental education across all disciplines and subjects, ensuring a holistic understanding of marine science and sustainability ([Istiana et al., 2021](#)).

By tailoring language education to address these specific linguistic and environmental needs, maritime institutions can cultivate professionals who are proficient in English and well-versed in ecological challenges and responsibilities. This interdisciplinary approach thereby aims to produce a generation of maritime professionals who can actively contribute to reducing the ecological footprint of the industry and are better prepared to navigate diverse international contexts ([Barus & Simanjuntak, 2023](#)). The integration of environmental and linguistic education is vital for producing maritime professionals capable of addressing the complex challenges posed by climate change and ecological degradation within the shipping industry.

This holistic approach emphasizes the importance of a curriculum that empowers learners to communicate effectively within the maritime industry while simultaneously fostering a sense of environmental responsibility. Such educational frameworks should also consider the development of environmentally friendly character traits in students by leveraging local cultural values, particularly within coastal communities, to instill a deep appreciation for ecosystem preservation ([Nusantari et al., 2020](#)).

This approach aligns with broader educational objectives that emphasize the cultivation of critical thinking, cultural understanding, and intercultural communicative confidence, all increasingly valued in a globalized context ([Stroupe & Roosman, 2025](#)). This necessitates curricular adjustments that seamlessly weave environmental perspectives into the fabric of maritime education, including tailored language instruction that emphasizes maritime terminology and context-specific environmental concepts. By doing so, future maritime professionals will be better equipped to not only comprehend academic materials but also to implement sustainable practices and adhere to environmental regulations in their careers. This integrated educational strategy ensures that maritime professionals are not only proficient in

English but also adept at addressing ecological challenges and responsibilities inherent in the maritime sector. A standardized framework is crucial for integrating environmental education effectively into Maritime English curricula, ensuring that vocational learners receive comprehensive preparation for their careers while cultivating environmental stewardship ([Barus & Simanjuntak, 2023](#)).

This integration necessitates a close collaboration among maritime and environmental education departments, industry partners, and policymakers to develop adaptable curricula that meet evolving demands and enhance global relevance. This involves the creation of systematized competencies that learners must acquire through organized learning experiences, both formal and non-formal, aligning with sustainability objectives. This comprehensive approach aims to develop learners' knowledge, skills, attitudes, and values, thereby enabling a worldwide transition toward sustainability within the maritime sector. Furthermore, these frameworks should incorporate mechanisms for continuous professional development for instructors, ensuring they are well-prepared to teach both Maritime English and environmental content effectively.

This holistic integration prepares maritime professionals to navigate complex global environmental regulations and actively contribute to sustainable maritime practices. The effectiveness of such integrated programs, particularly concerning environmental communication, has been demonstrated, highlighting the adaptability of specialized communication frameworks to address the evolving demands of the maritime industry. This necessitates flexible and adaptable curricula, including accelerated learning options and recognition of prior learning, to accommodate the diverse needs of vocational learners while integrating environmental literacy ([Barus & Simanjuntak, 2023](#)). These tailored approaches ensure that cadets are not only linguistically competent but also possess a deep understanding of environmental responsibilities inherent in their future roles. Such comprehensive strategies foster a proactive approach to environmental management within the maritime industry, preparing cadets to engage with complex ecological issues.

Furthermore, the implementation of such integrated curricula requires a commitment to ongoing assessment and refinement to ensure that learning outcomes are consistently met and that educational practices remain current with industry best practices and emerging environmental concerns. This iterative process guarantees that cadets receive comprehensive training that is both academically rigorous and directly applicable to the environmental challenges of the maritime sector. Regular assessments can inform refinements and adjustments to education practices and help evaluate the impact of environmental literacy initiatives in maritime education.

Instructors play a pivotal role in this integration, often utilizing real-life scenarios and interdisciplinary approaches to enhance cadets' understanding of environmental challenges and sustainable practices. Their competence in both Maritime English and environmental knowledge is critical to bridging potential instructional gaps and ensuring effective learning ([Barus & Simanjuntak, 2023](#)). This underscores the importance of continuous professional development for educators to maintain their proficiency in both specialized language instruction and current environmental regulations within the maritime industry. Such integrated learning environments, characterized by meaningful and contextualized content delivery, contribute significantly to English language development among cadets, even though some might perceive EMI as a complex teaching approach ([Stroupe & Roosman, 2025](#)). However, evidence suggests that students generally perceive English as a Medium of

Instruction positively, recognizing its advantages for both academic and professional success in a globalized maritime industry. This positive attitude is crucial for the adoption of innovative pedagogical approaches like EMI, especially given the students' awareness of English's increasing importance in global competition for academic and career advancement.

## **METHOD**

### **Research Design**

This study employed a qualitative approach using both survey and interview methods to investigate cadets' perceptions of English as the medium of instruction in maritime education. The combination of quantitative and qualitative data was intended to provide a more comprehensive understanding of cadets' experiences, opinions, motivations, and challenges in learning through English. The survey method was used to collect quantitative data regarding cadets' perceptions, motivation, challenges, and exposure to English. Meanwhile, interviews were conducted to obtain deeper insights and detailed explanations related to cadets' learning experiences and attitudes toward English-medium instruction.

### **Population and Sample**

The population of this study consisted of cadets from the Engineering departments at the maritime institution. The respondents were selected using a sampling technique considered appropriate for the research objectives. This study involved first-year cadets enrolled in the Engineering Study Program at STIP Indonesia. The participants were chosen to investigate their perceptions of English as the medium of instruction in maritime education. To complement the survey data, a number of cadets were purposely selected for interviews to gain a more comprehensive understanding of their experiences, exposure, motivation, and challenges related to English language learning.

### **Data Collection Methods**

#### **1. Survey**

The primary quantitative data were collected through a questionnaire distributed to cadets. The questionnaire consisted of several statements related to:

- perception of English as the medium of instruction,
- motivation to learn English,
- challenges in learning English,
- exposure and experience in English.

The questionnaire used a Likert scale ranging from:

- 1=Strongly Disagree
- 2 = Disagree
- 3 = Neutral
- 4 = Agree
- 5 = Strongly Agree

The survey aimed to measure cadets' attitudes and perceptions systematically.

#### **2. Interview**

To support and enrich the survey findings, semi-structured interviews were conducted with selected cadets. The interviews focused on:

- cadets' personal experiences using English,
- difficulties encountered during learning,
- motivation and confidence in communication,

- opinions regarding the effectiveness of English-medium instruction.

The interview method allowed respondents to explain their views more openly and provided deeper qualitative information regarding the learning process.

### **Research Instrument**

The instruments used in this study were questionnaire (survey form) and interview guideline. The questionnaire was designed based on the research variables and relevant literature related to Maritime English and English-medium instruction. Meanwhile, the interview guideline was prepared to explore respondents' opinions in greater detail.

### **Data Analysis**

The qualitative data from interviews were analysed using thematic analysis. The interview responses were categorized into several themes, such as:

- positive perceptions,
- motivation factors,
- learning challenges,
- English exposure and communication experience.

The integration of survey and interview findings was used to provide a clearer understanding of cadets' perceptions toward English as the medium of instruction in maritime education.

### **Validity and Reliability**

To ensure the quality of the research instruments, the questionnaire items were reviewed and adjusted according to the research objectives and related theories. The interview questions were also prepared carefully to ensure relevance and consistency during data collection.

### **Ethical Consideration**

All participants participated voluntarily in this study. The respondents' identities and personal information were kept confidential, and the collected data were used only for academic purposes.

## **FINDINGS AND DISCUSSION**

### **Research Findings**

This chapter presents the findings of the study regarding cadets' perceptions of English as the medium of instruction in maritime education. The data were obtained through surveys and interviews conducted with cadets.

The findings are organized into four main aspects:

1. Perception of English as the medium of instruction
2. Motivation to learn English
3. Challenges in learning English
4. Exposure and experience in English

#### **1. Perception of English as the Medium of Instruction**

Based on the survey results, the majority of cadets showed positive perceptions toward the use of English in maritime education. Most respondents agreed that English is important

for their future careers as seafarers because maritime operations involve international communication.

Approximately 78% of respondents agreed that English-medium instruction helps them understand maritime terminology and operational communication more effectively. In addition, 72% of cadets stated that using English in classroom activities improves their confidence in communicating onboard ships.

The interview results also support these findings. One cadet stated:

“English is very important because onboard we communicate with multinational crews. Using English in class helps us prepare for real situations at sea.”

Another respondent explained that English instruction helps cadets become more familiar with Standard Marine Communication Phrases (SMCP) and technical manuals commonly used in maritime operations.

However, several respondents expressed mixed perceptions. Around 20% of cadets reported that learning technical subjects entirely in English sometimes makes lessons more difficult to understand. They stated that some engineering and navigation terms are complicated, especially for cadets with limited English backgrounds.

These findings indicate that cadets generally recognize the importance of English, although language adaptation remains a challenge for some learners.

## **2. Motivation to Learn English**

The findings show that cadets have relatively high motivation to learn English. The survey revealed that 84% of respondents believed English proficiency would increase their opportunities to work on international vessels and improve their professional competitiveness.

Furthermore, 76% of cadets agreed that mastering English is important for safety communication and teamwork onboard ships. Cadets also expressed motivation to improve their speaking ability and self-confidence during communication with foreign crew members.

During interviews, several cadets explained that their motivation comes from career goals and future employment opportunities.

One respondent stated:

“Most international shipping companies require good English communication skills, so we are motivated to improve our English.”

Another cadet mentioned:

“I want to work on foreign vessels, so I practice English every day through movies, YouTube, and maritime communication exercises.”

Despite the positive motivation, some cadets admitted that difficulties in grammar and pronunciation sometimes reduce their confidence in speaking English. Several respondents also mentioned that fear of making mistakes affects classroom participation.

Overall, the findings demonstrate that cadets possess strong motivation to learn English, especially because of its connection to career development and professional communication in the maritime industry.

## **3. Challenges in Learning English**

The survey and interview findings identified several challenges faced by cadets in learning English.

The most common challenge was limited vocabulary, particularly technical maritime terminology. About 69% of respondents stated that they sometimes struggle to understand technical explanations and operational procedures delivered in English.

Another major challenge was speaking confidence. Approximately 65% of cadets reported feeling nervous when speaking English in front of lecturers or classmates. Pronunciation and grammar mistakes were identified as the main causes of low confidence.

Listening comprehension also became a challenge for many respondents. Cadets explained that understanding fast speech, foreign accents, and technical discussions requires high concentration and practice.

One interview participant stated:

“Sometimes I understand written English, but it is difficult to understand spoken English with different accents.”

In addition, some cadets mentioned that English is rarely used outside the classroom, limiting opportunities for communication practice. As a result, many cadets still depend on Indonesian translation when learning technical subjects.

These findings suggest that vocabulary mastery, speaking confidence, listening skills, and learning environment are the primary challenges influencing cadets’ English learning process.

#### **4. Exposure and Experience in English**

The findings indicate that cadets have different levels of exposure and experience in English.

The survey showed that 70% of respondents frequently use English through digital media such as YouTube, movies, music, online learning platforms, and maritime simulation activities. Cadets with higher exposure generally demonstrated better communication confidence.

Interview findings revealed that simulator training and maritime communication exercises significantly improve cadets’ English abilities. Several cadets explained that using SMCP during practical sessions helps them become more accustomed to professional maritime communication.

One cadet stated:

“Using English during simulator practice makes us more familiar with commands and communication onboard.”

However, some respondents admitted that they rarely use English in daily life outside academic settings. This limited exposure affects fluency and communication confidence.

The findings suggest that frequent exposure and practical communication experience play important roles in improving English proficiency among maritime cadets.

## **DISCUSSION**

The findings indicate that cadets generally have positive perceptions toward English as the medium of instruction in maritime education. Most respondents acknowledged that English is essential for their future careers, particularly because the maritime industry operates in an international environment where effective communication directly affects operational efficiency and safety.

This finding is consistent with the position of the International Maritime Organization, which continues to emphasize the importance of Maritime English competence through the implementation of the Standard Marine Communication Phrases (SMCP) and the Standards

of Training, Certification and Watchkeeping (STCW). Effective communication remains one of the key competencies required to reduce human-error-related incidents at sea.

The strong motivation demonstrated by cadets reflects their awareness that English proficiency is closely linked to employability and career advancement. Recent studies have shown that maritime graduates with higher English proficiency tend to have greater confidence in multinational working environments and better employment opportunities. According to Komari et al., (2025), English communication skills have become one of the most important competencies expected by international shipping companies due to the multicultural nature of modern ship operations.

Despite the positive attitudes, the findings reveal several challenges, including limited vocabulary, speaking anxiety, grammar difficulties, and listening comprehension problems. These findings are supported by Selimović-Korjenić, S. (2026), who found that technical vocabulary and communication confidence remain among the most significant barriers for students learning English for Specific Purposes (ESP), particularly in technical and professional education settings.

Interview findings further revealed that many cadets experience anxiety when communicating in English, especially during formal discussions or technical presentations. This finding aligns with the study conducted by Rajpar et al., (2026), which concluded that communication anxiety significantly affects students' willingness to participate in classroom interactions and can negatively impact language acquisition if not addressed through supportive teaching strategies.

Another important finding concerns the role of exposure and practical experience. Cadets who reported frequent exposure to English through simulator exercises, maritime communication drills, online learning resources, and digital media demonstrated higher confidence and better communication skills. This result is supported by Sibali et al., (2026) who found that experiential learning and simulation-based training significantly improve language competence among maritime students because they provide authentic communication contexts that mirror real shipboard operations.

From an instructional perspective, recent maritime education research emphasizes that Maritime English should be integrated into operational training rather than taught as a standalone language subject. Shi and Fan (2024) argue that contextualized English instruction, particularly through simulation exercises and task-based learning, enhances both language proficiency and operational readiness among maritime cadets.

Furthermore, the findings suggest that English-medium instruction contributes not only to language development but also to professional identity formation. According to Kim and Park (2023), students who regularly use English in professional learning environments tend to develop stronger self-confidence and greater readiness to participate in international professional communities.

Overall, the findings demonstrate that English-medium instruction provides substantial benefits for maritime cadets by preparing them for communication demands in the global maritime industry. However, institutions should continue strengthening practical communication activities, simulation-based learning, and language support programs to address existing challenges and maximize learning outcomes.

The findings of this study indicate that cadets generally have positive perceptions toward English as the medium of instruction in maritime education. This result is consistent with the international nature of the maritime industry, where English is recognized as the standard language for communication and operational safety.

The strong motivation shown by cadets reflects their awareness that English proficiency is closely related to future career opportunities and professional competence. Cadets understand that communication skills are essential for working in multinational crews and international shipping environments.

Nevertheless, the study also highlights several challenges faced by cadets, particularly in vocabulary mastery, grammar, speaking confidence, and listening comprehension. These challenges suggest the need for more practical and interactive English learning methods in maritime institutions.

In addition, exposure to English through simulations, digital media, and practical communication activities was found to positively influence cadets' confidence and language ability. Therefore, maritime institutions should increase opportunities for cadets to practice English in realistic maritime contexts.

Overall, the findings demonstrate that English-medium instruction provides significant benefits for maritime cadets, although continuous support, communication practice, and language development programs remain necessary to improve learning effectiveness.

## CONCLUSION

This study investigated cadets' perceptions of English as the medium of instruction in maritime education through surveys and interviews. The findings reveal that most cadets have positive perceptions of English and recognize its importance for their future careers in the maritime industry. They believe that English-medium instruction helps them develop communication skills, understand maritime terminology, and prepare for working in multinational environments where English serves as the primary language of communication.

The study also found that cadets are highly motivated to learn English because they associate language proficiency with professional competence, career advancement, and opportunities to work on international vessels. Despite this positive attitude, several challenges remain, including limited vocabulary, difficulties with grammar, lack of speaking confidence, and listening comprehension problems. These obstacles can affect cadets' learning experiences and their ability to fully benefit from English-medium instruction.

Furthermore, the findings highlight the significant role of exposure and practical experience in improving English proficiency. Cadets who frequently engage with English through simulator training, maritime communication exercises, digital media, and real-life interactions tend to demonstrate greater confidence and stronger language skills. This suggests that regular exposure to authentic English communication is essential for successful language development.

In conclusion, English as the medium of instruction provides substantial benefits for maritime cadets and supports their preparation for the global maritime industry. However, maritime institutions should continue to strengthen English language support through interactive learning methods, practical communication activities, simulator-based training, and increased opportunities for authentic language use. By doing so, cadets will be better equipped to meet the communication demands of modern maritime operations and enhance both their professional competence and career readiness.

## REFERENCES

- Barus, I. R. G., & Simanjuntak, M. B. (2023). Integrating Environmental Education into Maritime English Curriculum for Vocational Learners: Challenges and Opportunities. *BIO Web of Conferences*, 79, 8001. <https://doi.org/10.1051/bioconf/20237908001>
- Istiana, R., Rahmayanti, H., & Sumargo, B. (2021). Marine environmental education learning system recommendation model based on student needs analysis in Indonesian coastal areas. *Cypriot Journal of Educational Sciences*, 16(5), 2236. <https://doi.org/10.18844/cjes.v16i5.6305>.
- Komari, K., Yulianingsih, L., Fitriani, R., Hanum, U. P. & Paranoan, E. (2025). The Impact of English Language Proficiency on Career Opportunities in the Maritime Industry. *EDUCASIA*, 11(1), 13-23. doi: <http://dx.doi.org/10.21462/educasia.v11i1.392>
- Nusantari, E., Utina, R., Katili, A. S., Tamu, Y., & Damopolii, I. (2020). Effectiveness of Environmentally-Based Science Learning towards Environmentally-Friendly Character of Students in Coastal Area. *International Journal of Instruction*, 13(3), 233. <https://doi.org/10.29333/iji.2020.13316a>
- pamela.pdf*. (2023).
- Rajpar, T. A., Abbasi, A. M., & Laghari, A. (2026). Understanding the triggers of English-speaking anxiety among university students: A cross-cultural mixed-methods study. *Journal of Research in Education and Pedagogy*, 3(1), 56-68.
- Selimović-Korjenić, S. (2026). Challenges Faced by high school, University, and Adult Language Learners while Speaking English. *MAP Education and Humanities*, 6, 14-23.
- Shi, Y., & Fan, L. (2024). *Task-Based Maritime English Instruction and Cadet Readiness*.
- Sihombing, R. A., Anwar, S., Liu, S.-Y., Muslim, M., Winarno, N., & Sihombing, P. J. (2025). Integrating Local Wisdom into Environmental Education: A Systematic Review of Ethnoscience Research in Indonesia [Review of *Integrating Local Wisdom into Environmental Education: A Systematic Review of Ethnoscience Research in Indonesia*]. *Journal of Natural Science and Integration*, 8(1), 57. Universitas Islam Negeri Sultan Syarif Kasim Riau. <https://doi.org/10.24014/jnsi.v8i1.35762>.
- Simanjuntak, M. B. (2023). Enhancing Environmental Awareness and Sustainable Communication Skills in Maritime Education. *BIO Web of Conferences*, 79, 1002. <https://doi.org/10.1051/bioconf/20237901002>.
- Sibali, A., Kurniawaty, K., Amran, A., & Misnawati, M. (2026, January). Maritime cadet experiences with bridge simulators in terrestrial navigation education. In *Frontiers in Education* (Vol. 11, p. 1691292). Frontiers Media SA.
- Stroupe, R., & Roosman, L. (2025). *ENGAGING INDONESIA: Critical Dialogues on Culture and Society*.
- Wang, X., & Zhang, Y. (2022). *Challenges in English for Specific Purposes Learning among Technical Students*.