

The Role of Maritime English in Enhancing Teamwork and Collaboration among Malaysian Seafarers

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ABSTRACT

Effective communication is a cornerstone of safe and efficient maritime operations, especially in the context of multinational crews working in dynamic and often high-pressure environments. Maritime English, as the standardised language used onboard ships, plays a pivotal role in fostering both teamwork and collaboration among seafarers. This study explores the impact of Maritime English proficiency on teamwork and collaboration among Malaysian seafarers. Through a mixed-methods approach that integrates survey data and semi-structured interviews, the research examines how Maritime English proficiency influences interpersonal communication, task coordination, and team cohesion in multicultural maritime settings. The findings reveal that higher levels of Maritime English proficiency directly contribute to more effective collaboration, particularly during critical operations and emergency scenarios where clarity and precision in communication are crucial. In contrast, language barriers often impede team coordination and may compromise operational safety. This study contributes to the growing body of literature on language proficiency in maritime settings, providing valuable insights into the role of Maritime English in team dynamics and safety. By focusing on Malaysian seafarers, the study offers context-specific insights into the linguistic and cultural dimensions of teamwork at sea. These insights carry important implications for maritime education and training institutions, underscoring the need for specialised language training that prepares seafarers to operate confidently and cooperatively in diverse, multilingual environments.

Keywords: Maritime English, language proficiency, Malaysian seafarers, communication, collaboration, teamwork

INTRODUCTION

Background of the Study

The maritime sector operates on a global scale, with crews often comprising individuals from diverse linguistic and cultural backgrounds. In such environments, effective communication is essential for ensuring operational efficiency, maintaining safety, and fostering strong working relationships. Maritime English, the standardised language used at sea, plays a vital role in enabling clear and accurate communication among multinational crew members (Saridaki, 2023).

The International Maritime Organisation (IMO) has officially designated English as the primary language for maritime communication and developed the Standard Marine Communication Phrases (SMCP) to eliminate ambiguity and improve clarity during shipboard operations. These standardised phrases are intended to be easily understood by all crew members, particularly in high-stress scenarios such as emergencies or complex navigational tasks (Giovanoglou, 2025). By ensuring uniformity in language use, SMCP not only enhances operational safety but also supports effective coordination among multinational teams working in dynamic maritime environments.

The safety-critical nature of Maritime English is further reinforced by James et al. (2018), who cite incidents such as the Scandinavian Star and Matilda Bay, where miscommunication led to tragic outcomes. These cases highlight the urgent need for a common language on board to ensure clarity, coordination, and effective teamwork. Additionally, Saridaki (2023) notes that poor communication accounts for nearly half of maritime accidents, often due to language comprehension difficulties and cultural barriers. With over 86% of SOLAS vessels crewed by multilingual personnel, Maritime English is vital not only for safety but also for intercultural harmony and emergency preparedness.

In Malaysia, seafarers frequently operate in multilingual settings, where English proficiency varies significantly. While Maritime English is taught during pre-sea training, its practical application onboard can be challenging. Language barriers may lead to misunderstandings, reduced team cohesion, and compromised safety. Recent studies have emphasised the importance of integrating intercultural competence into Maritime English instruction to address these challenges and improve communication effectiveness (Giovanoglou, 2025).

Moreover, Hynnekleiv et al. (2020) emphasise the evolving skill requirements for maritime professionals in response to increasing automation and digitalisation. Among the most critical competencies identified are communication and teamwork, which are essential for seafarers operating in complex, multicultural environments. These insights align with the current study's focus on Maritime English as a foundational tool for fostering team cohesion and operational clarity among Malaysian seafarers.

As Malaysia expands its maritime footprint, clear and confident English communication becomes increasingly important. Language competence directly influences interpersonal dynamics, task coordination, and emergency response (Kilpi et al., 2021), while digitalisation adds further complexity to shipboard communication (Narayanan et al., 2023). These developments underscore the need for targeted research into how Maritime English proficiency supports teamwork and collaboration in Malaysian maritime contexts.

Statement of Problem

Despite the inclusion of Maritime English in pre-sea training programs, Malaysian seafarers continue to face challenges in its real-world application. These include difficulties in understanding diverse accents, using department-specific technical vocabulary, and maintaining fluency under pressure. Such barriers can hinder teamwork, reduce operational efficiency, and compromise safety (Brenker et al., 2016). While Maritime English is introduced during cadetship, its practical use onboard is often limited by a lack of continuous reinforcement and contextual training.

Communication failures remain a leading cause of maritime accidents. According to Saridaki (2023), poor communication accounts for nearly half of all maritime incidents, often stemming from language comprehension difficulties and cultural misunderstandings. James et al. (2018) highlight the safety-critical nature of Maritime English by referencing tragic incidents such as the Scandinavian Star and Matilda Bay, where miscommunication played a central role in the escalation of emergencies. Evangelos (2002) and Narayanan et al. (2023) further emphasise that breakdowns in communication, whether due to dialect differences, lack of shared language, or technological complexity, can lead to serious operational failures.

The IMO estimates that approximately 80% of maritime incidents stem from human error, with nearly half directly linked to communication failures (Ziarati, 2006; Gabedava & Hu, 2025). These findings underscore the critical role of language clarity and communication protocols in maritime safety. Maternová et al. (2023) reinforce this by revealing that 70–85% of maritime accidents are attributable to human error, despite advancements in ship design, automation, and regulatory frameworks. Their analysis suggests that technical reliability alone cannot ensure safety; human factors, particularly failures in communication, supervision, and decision-making, remain dominant contributors to accidents.

In the Malaysian context, seafarers often operate in multilingual crews where English proficiency varies significantly. Although global standards like STCW have emphasised communication skills and cultural awareness (IMO, 2011), there is limited empirical research focusing on how Maritime English proficiency specifically affects teamwork and collaboration among Malaysian seafarers. This gap in the literature highlights

the need for context-specific studies that address the linguistic realities of Malaysian crews operating in multicultural environments.

Objectives of the Study

Given these challenges and the centrality of communication to maritime safety, this study investigates the role of Maritime English in enhancing operational effectiveness among Malaysian seafarers. It aims to explore how language proficiency influences interpersonal communication, task coordination, and team cohesion onboard, with the goal of informing more targeted and practical language training strategies. Specifically, it seeks to:

- Assess the level of Maritime English proficiency among Malaysian seafarers.
- Investigate the relationship between Maritime English proficiency and effective communication during shipboard operations.
- Examine how Maritime English influences teamwork, coordination, and safety in multicultural maritime environments.
- Identify challenges and support mechanisms related to Maritime English usage onboard.

Research Questions

- RQ 1: What is the current level of Maritime English proficiency among Malaysian seafarers across different ranks and vessel types?
- RQ2: How does Maritime English proficiency influence the effectiveness of communication during routine and emergency operations onboard?
- RQ3: In what ways does Maritime English proficiency affect teamwork, task coordination, and operational safety among multicultural crews?
- RQ4: What challenges do Malaysian seafarers face in using Maritime English, and what support mechanisms are currently available or needed to improve communication onboard?

LITERATURE REVIEW

Theoretical Framework of the Study

This study is guided by the social constructivist perspectives of Vygotsky, Piaget, and Bruner, which emphasise the importance of social interaction in learning and development and knowledge construction within dynamic, multicultural, and operationally demanding maritime contexts. These theories help explain how Maritime English proficiency influences teamwork and collaboration among Malaysian seafarers, especially in multicultural and high-pressure maritime environments.

Vygotsky (1978) introduced the concepts of the More Knowledgeable Other (MKO) and the Zone of Proximal Development (ZPD), which highlight how learning occurs through guided interaction and collaborative problem-solving in real-world operational contexts. In maritime settings, experienced crew members often support others during complex operations, and language, particularly Maritime English, serves as the essential communicative medium for effective knowledge transfer and situational awareness.

Piaget (1964) emphasised that learning is an active process shaped by interaction with the environment and others. Seafarers continuously engage in problem-solving and coordination, and language facilitates these exchanges by enabling clarity, shared understanding, adaptive responses, and effective communication in dynamic maritime operational scenarios.

Bruner (1966) argued that learning is socially mediated and that individuals build new knowledge by connecting it to prior experiences. Maritime English enables seafarers to negotiate meaning and collaborate effectively, especially in linguistically diverse crews facing complex, time-sensitive, and safety-critical maritime tasks and challenges.

Together, these theories complement one another in framing the cognitive and social dimensions of learning. Vygotsky's emphasis on social mediation aligns with Bruner's concept of scaffolding, where learners build upon prior knowledge through guided support. Meanwhile, Piaget's constructivist view reinforces the importance of experiential learning and active engagement with the environment. Collectively, they support the idea that language is not just a tool for communication but a critical cognitive foundation for learning, teamwork, and safety. In the context of Malaysian seafarers, proficiency in Maritime English enhances interpersonal understanding, team cohesion, and operational effectiveness in high-stakes maritime environments.

Past Studies

A growing body of research has emphasised the importance of Maritime English in ensuring safe and efficient shipboard operations, particularly in multicultural crew environments. Miscommunication has been identified as a contributing factor in numerous maritime incidents, underscoring the need for standardised language use and targeted training (Schriever, 2008; Trenkner & Cole, 2012). Maritime English, especially through the use of Standard Marine Communication Phrases (SMCP), is designed to reduce ambiguity and enhance clarity in both routine and emergency contexts (IMO, 2001). SMCP provides a structured set of phrases that promote consistency and reduce the risk of misinterpretation during critical operations.

Building on this foundation, Hetherington et al. (2006) identified communication breakdowns as one of the most frequent causes of human error in maritime accidents. Their findings support the view that language proficiency is not merely a technical requirement but a safety-critical competency. Similarly, Ziarati et al. (2012) found that inadequate English language skills among seafarers often result in misunderstandings, delays, and compromised safety during operations, reinforcing the need for language-focused training interventions.

Extending the discussion to soft skills, Bouzón et al. (2023) conducted a comprehensive study involving Spanish vessel crewmembers. Their research highlighted the critical role of communication and team effectiveness in maritime operations. Teamwork emerged as the most highly valued skill, followed closely by effective communication and decision-making. Interestingly, the study revealed that perceptions of these skills varied significantly by crew position and vessel type, with deck cadets and Ro-Ro vessel crews assigning the highest importance. Notably, female crewmembers rated teamwork significantly higher than their male counterparts, suggesting a heightened sensitivity to group cohesion. The authors advocate for position-specific training programs that address the unique communicative and collaborative demands of different maritime roles.

More recent studies have expanded the focus to include the role of language in team dynamics. Ghosh and Emad (2024), in a systematic review of non-technical skills in maritime education, identified communication as a core competency for future seafarers. Their findings suggest that Maritime English proficiency supports leadership, decision-making, and conflict resolution in multicultural crews, further reinforcing its role beyond operational exchanges.

Heslop (2023) found that Filipino seafarers perceive Maritime English as crucial for avoiding miscommunication and ensuring safety. High-ranking officers particularly emphasised its role in operational clarity and accident prevention. These findings reinforce the importance of language proficiency not only for technical exchanges but also for leadership and trust-building in multicultural maritime environments.

Complementing this, Heikal et al. (2024) identified psychological, technical, and cultural barriers to effective communication among non-native English-speaking seafarers. These include fear of criticism, difficulty understanding accents, and limited cultural awareness. The study recommends integrating interactive learning methods and broader English usage across maritime curricula to improve both employability and safety outcomes.

Earlier ethnographic research by Sampson and Zhao (2003) emphasised that multilingual crews often experience communication challenges that affect both operational and social interactions onboard. They advocate for “bottom-up” immersion-based learning approaches, which they found to be more effective than traditional “top-down” methods in developing Maritime English proficiency, especially in real-world settings.

Collectively, these studies underscore the central role of Maritime English and soft skills in promoting safety, efficiency, and cohesion onboard. However, despite growing international attention, there remains a notable gap in empirical research focused on Malaysian seafarers. Future studies should explore how language proficiency and communicative competence are developed, perceived, and applied within Malaysia’s unique maritime training and operational contexts.

Conceptual Framework of the Study

The conceptual framework for this study is grounded in the Input–Throughput–Output (ITO) Model, which offers a structured approach for examining how Maritime English proficiency influences teamwork and collaboration among Malaysian seafarers. This model aligns with the study’s theoretical foundation, emphasising the role of language in shaping social interaction and operational effectiveness.

- **Input:** The primary input is Maritime English proficiency, encompassing formal training, onboard language exposure, and individual confidence in using English for both operational and interpersonal communication. This input is influenced by variables such as educational background, crew rank, and years of sea service, which collectively shape a seafarer’s communicative competence.
- **Throughput:** This stage represents the interactional processes among crew members, including communication clarity, task coordination, conflict resolution, and mutual understanding. Maritime English functions as a mediating tool that either facilitates or constrains these interactions, particularly within multicultural and multilingual crews. The quality of communication during this phase directly affects team dynamics and decision-making.
- **Output:** The expected outcomes include enhanced teamwork, improved collaboration, and increased safety performance. When Maritime English is used effectively, it contributes to role clarity, operational efficiency, and team cohesion. These outputs reflect the cumulative impact of language proficiency on both technical and non-technical aspects of maritime operations.

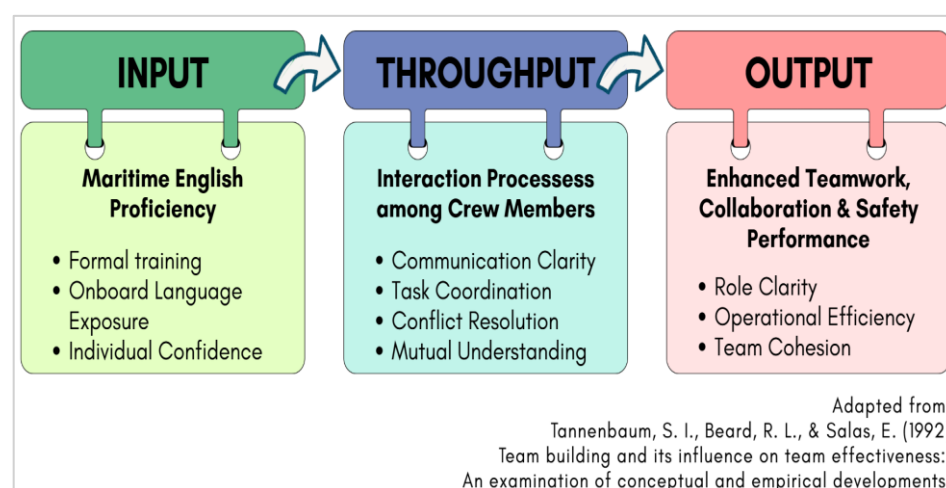


Fig. 1: The Input-Throughput-Output Model

The ITO model has been widely applied in organisational and systems theory to explain how inputs are transformed into outcomes through structured processes. Zwikaël and Smyrk (2019) formalised the ITO model in project management, emphasising its utility in analysing complex systems and team dynamics. This framework aligns with previous applications of the ITO model in organisational and team research (Ilgen et al., 2005; Salas et al., 2008) and is adapted here to reflect the unique linguistic and operational context of shipboard

environments. It also integrates insights from past studies that emphasise the role of language in shaping team dynamics and safety outcomes (Ziarati et al., 2012; Ghosh & Emad, 2024).

Furthermore, the framework guides the study's mixed-methods design by linking quantitative measures of language proficiency and teamwork with qualitative insights into communication experiences and challenges. It provides a basis for analysing how language functions as both a resource and a barrier in maritime collaboration, offering a comprehensive view of its impact on operational and interpersonal effectiveness.

METHODOLOGY

Research Design

This study employed a mixed-methods research design to investigate the role of Maritime English in enhancing teamwork and collaboration among Malaysian seafarers. Specifically, a convergent parallel design was adopted, wherein quantitative data (collected through structured surveys) and qualitative data (gathered via semi-structured interviews) were collected concurrently. Each dataset was analysed independently using appropriate analytical techniques, and the findings were subsequently integrated to provide a comprehensive understanding of the relationship between English language proficiency and team effectiveness on board ships.

The convergent parallel approach is particularly effective when researchers aim to give equal weight to both qualitative and quantitative data, and when there is no conceptual or practical need to sequence the methods. It allows for the triangulation of findings and supports a richer interpretation of the research problem (Creswell & Plano Clark, 2017; Katz-Buonincontro, 2024).

Participants

The study sample consisted of Malaysian seafarers currently serving on various types of merchant vessels. A total of 153 individuals completed the online survey, while 11 participants volunteered for in-depth, semi-structured interviews. The target population included deck and engine officers, ratings, and cadets, representing a diverse range of ranks, vessel types, and sea service experiences.

Participants were recruited using a non-probability purposive sampling strategy, selected based on their direct experience working in multinational shipboard teams and varying levels of Maritime English proficiency. This approach was deemed appropriate for identifying individuals who could provide rich, context-specific insights into language use and team dynamics in operational maritime settings.

The survey was administered via Google Forms, with access facilitated through a QR code distributed across maritime-focused social media platforms and alumni networks. This digital outreach strategy enabled broad access to relevant participants while maintaining the study's focus on real-world communication practices and collaborative experiences at sea.

Data Collection

Data collection was conducted over a one-month period, utilising both quantitative and qualitative methods to ensure comprehensive coverage of the research objectives. Quantitative data were obtained through an online survey hosted on Google Forms, with the survey link distributed via a QR code shared across multiple digital platforms, including WhatsApp, Telegram, Facebook, Instagram, and targeted email groups. This multi-channel approach was designed to reach maritime professionals actively engaged in shipboard operations, ensuring broad accessibility and relevance.

Qualitative data were gathered through semi-structured interviews, conducted virtually via Microsoft Teams, depending on each participant's availability and preference. Each interview lasted approximately 30 to 45 minutes and was video recorded with the participants' informed consent. All respondents were assured of anonymity and confidentiality, in accordance with the ethical standards and institutional guidelines of the research. This flexible and ethically grounded approach enabled the collection of rich, context-specific insights into communication practices and challenges in maritime environments.

Research Instruments

1) **Survey Questionnaire:** The structured questionnaire was developed to collect demographic information and assess participants' perceptions related to Maritime English proficiency, shipboard communication, and teamwork. The instrument comprised five sections, each designed to address a specific aspect of the research focus:

Part A: Demographic Data

Part B: Maritime English Proficiency

Part C: Communication and Interpersonal Interactions

Part D: Teamwork and Collaboration

Part E: Challenges and Recommendations

All closed-ended items were rated using a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). To ensure the reliability of the instrument, Cronbach's alpha was calculated for each section. The results are presented in Table 1.

Table 1: Distribution of Items in the Survey

Part		Items	Cronbach Alpha
B	Maritime English Proficiency	10	.924
C	Communication and Interpersonal Interactions	10	.953
D	Teamwork and Collaboration	10	.973
E	Challenges and Recommendations	10	.745
TOTAL ITEMS		40	.969

The high reliability coefficients across all sections indicate strong internal consistency, suggesting that the items effectively measure the intended constructs. According to Streiner (2003), Cronbach's alpha values above .80 are generally considered to reflect good internal consistency, while values above .90 may indicate excellent reliability. These results affirm the robustness of the instrument for capturing perceptions related to Maritime English and teamwork in shipboard environments.

2) **Semi-Structured Interview:** The interview protocol was designed to elicit deeper insights into participants' communication experiences and perceptions of teamwork in maritime contexts. Key areas of inquiry included:

- Situations requiring effective use of Maritime English
- Language barriers and coping strategies
- Team dynamics within multicultural crews
- Training and professional development needs
- Suggestions for improving communication at sea

The semi-structured interview format allowed for flexibility in questioning and probing, enabling participants to elaborate on their experiences and perspectives while maintaining a structured focus. This approach facilitated a rich, contextual exploration of themes that complemented the quantitative survey findings, particularly in

understanding the nuances of language use and interpersonal dynamics onboard. Semi-structured interviews are widely recognised for their ability to generate in-depth qualitative data while maintaining a structured focus, making them particularly effective for exploring complex social phenomena (Ruslin et al., 2022; Newton, 2010) such as communication and collaboration in multicultural maritime environments.

Data Analysis

1) **Quantitative Data:** Quantitative data were analysed using SPSS Version 29. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarise demographic characteristics and responses to survey items. To assess the internal consistency of the survey instrument, Cronbach's alpha was calculated for each section, with results indicating strong reliability across all constructs (Streiner, 2003). These findings support the validity of the instrument in measuring language competence, communication practices, and collaborative dynamics.

To explore the relationships between Maritime English proficiency and key indicators of teamwork and collaboration, correlation analyses were conducted. These tests provided insights into how language competence may influence interpersonal dynamics, coordination, and operational effectiveness within shipboard teams, particularly in multicultural environments.

2) **Qualitative Data:** Qualitative data from the semi-structured interviews were transcribed and thematically analysed using Braun and Clarke's (2006) six-phase framework, which offers a flexible yet rigorous approach to identifying patterns within qualitative data. The six phases followed in this study were:

- Familiarisation with the data
- Generating initial codes
- Searching for themes
- Reviewing themes
- Defining and naming themes
- Producing the report

This systematic process enabled the identification of recurring ideas and experiences related to Maritime English use, communication challenges, and teamwork dynamics. Thematic analysis was conducted manually, with careful attention to semantic and underlying content across transcripts.

To enhance the credibility and depth of interpretation, themes were validated through peer debriefing and triangulated with quantitative findings from the survey. This integrative approach supported a nuanced understanding of participants' lived experiences and perceptions, aligning with best practices in qualitative research and reinforcing the study's mixed-methods design (Braun & Clarke, 2006).

FINDINGS

Demographic Analysis

A total of 153 Malaysian seafarers participated in this study. Their demographic characteristics are summarised in Table 2, offering essential context for interpreting communication practices and teamwork dynamics in maritime operations.

Table 2: Percentage for Demographic Profile

Demographic Profile	Category	Percentage (%)
Gender	Male	94.8%

	Female	5.2%
Age	20–29	39.9%
	30–39	53.5%
	40–49	5.9%
	≥ 50	0.7%
Highest Level of Education	SPM	6.5%
	STPM	0.7%
	Certificate	3.3%
	Diploma	83.6%
	Degree	3.9%
	Master	2.0%
	PhD	0.0%
COC Class	Class 1	13.1%
	Class 2	7.2%
	Class 3	43.8%
	Class 4	15.0%
	None	20.9%
Years of Sea Service	< 1 year	7.2%
	1–5 years	29.4%
	6–10 years	39.2%
	> 10 years	24.2%
Main Working Language Onboard	English	60.1%
	Malay	37.3%
	Mixed	2.6%

Quantitative and Qualitative Findings on Maritime English Use Among Malaysian Seafarers

1) *Findings for Maritime English Proficiency:* To address Research Question 1, which explores the current level of Maritime English proficiency among Malaysian seafarers across different ranks and vessel types, descriptive statistics from ten survey items (Figure 2) indicate that Malaysian seafarers generally possess strong Maritime English proficiency. The highest mean score was recorded for Item B3 ($M = 4.588$, $SD = 0.873$), reflecting high confidence in writing logbook entries and technical documentation. Items B1, B2, B5, B6, B8, B9, and B10 also scored above 4.45, suggesting readiness to communicate effectively in operational, emergency, and collaborative contexts. Notably, Item B6 ($M = 4.510$) shows that seafarers actively continue developing their Maritime English skills while onboard. Item B7 ($M = 2.020$, $SD = 0.825$) had the lowest score, indicating that Malaysian seafarers have a strong command of technical Maritime English vocabulary and rarely require assistance. Meanwhile, Item B4 ($M = 4.092$, $SD = 0.985$) was slightly lower than the others, suggesting some

difficulty in understanding English spoken with varied accents. Overall, the findings affirm the effectiveness of Maritime English training and onboard language development, while highlighting technical vocabulary and accent comprehension as potential areas for improvement.

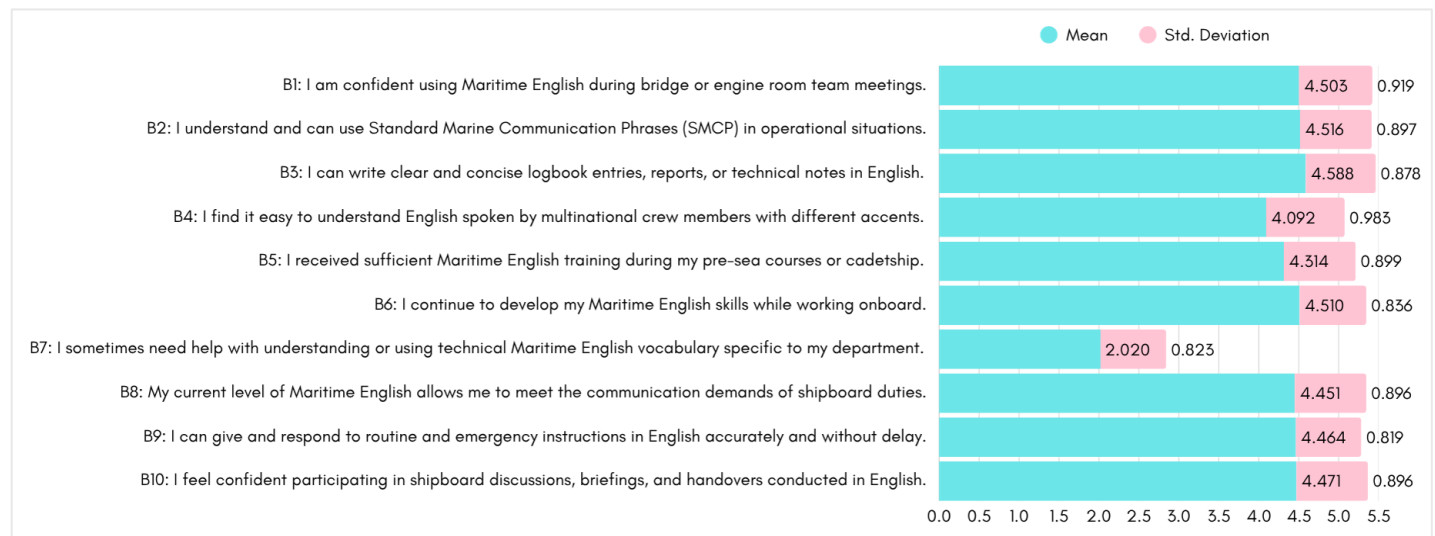


Figure 2: Mean Scores & Standard Deviations for Maritime English Proficiency Items

Interviews showed that people generally feel comfortable using Maritime English; however, different ranks have different levels of proficiency. Senior officers exhibited fluency and assertiveness, whereas junior seafarers sometimes displayed hesitation in conveying technical instructions or communicating under pressure. One participant remarked, “Junior officers sometimes hesitate to speak because they don’t have the right words, especially for technical instructions” This unequal proficiency corresponds with Bocanegra-Valle’s (2020) concept of a continuum of mastery, indicating that expertise is developed through exposure, accountability, and practical experience rather than solely through formal education. Furthermore, participants highlighted that initial unfamiliarity with marine terms (e.g., “bridge,” “astern”) gradually lessens via sustained aboard experience. Nonetheless, understanding foreign accents and specialised terminology continues to be a concealed deficiency, especially among novices. These findings underscore the necessity of including more contextualised and experiential Maritime English training for inexperienced mariners.

2) *Findings on the Influence of Maritime English Proficiency on Communication Effectiveness During Routine and Emergency Operations:* To address Research Question 2, which investigates how Maritime English proficiency influences the effectiveness of communication during routine and emergency operations onboard, a Pearson correlation analysis was conducted. The results, as reflected in Table 3, show a very strong positive correlation ($r = 0.916$) between Maritime English proficiency and communication and interpersonal interactions, with a p-value of 0.000, confirming the statistical significance and reliability of the relationship. This indicates that as seafarers’ Maritime English proficiency increases, their ability to communicate effectively also improves significantly. Maritime English proficiency significantly enhances communication effectiveness during both routine and emergency operations onboard. Key benefits include the accurate and timely exchange of instructions, clear participation in briefings and handovers, minimised misunderstandings in multinational crew interactions, and improved safety and coordination during emergencies. These findings underscore the critical role of language competence in fostering operational clarity and team cohesion in diverse maritime environments.

Table 3: Pearson Correlation Between Maritime English Proficiency and Communication and Interpersonal Interactions

	Maritime English Proficiency	Communication and Interpersonal Interactions
Pearson Correlation	1	.916**

Maritime English Proficiency	Sig. (2-tailed)		.000
	N	153	153
Communication and Interpersonal Interactions	Pearson Correlation	.916**	1
	Sig. (2-tailed)	.000	
	N	153	153

The interview data suggested that being able to speak clearly in English has a significant impact on how well operations run, especially in high-risk or time-sensitive scenarios. Seafarers always believed that being able to speak English well made you a good leader and earned you respect. One officer said, *“If an officer speaks clearly, the crew respects him more. If not, they doubt him.”* This is in line with Bourdieu's idea of linguistic authority, which posits that proficiency cultivates trust and enhances command presence (Bourdieu, 1991). Participants also said that clear language is essential to ensuring that information is shared correctly during drills, briefings, and emergency calls. On the other hand, bad communication can slow down reaction times and cause confusion. These insights add to the quantitative findings by emphasising that competency is not just about language, but also about confidence, authority, and the interpersonal relationships that keep everyone secure and coordinated on board.

3) *Findings on the Impact of Maritime English Proficiency on Teamwork, Task Coordination, and Operational Safety Among Multicultural Crews:* To explore how Maritime English proficiency influences teamwork, task coordination, and operational safety among multicultural crews, a Pearson correlation analysis was performed in response to Research Question 3. The results, as shown in Table 4, revealed a very strong positive correlation ($r = 0.888$) between Maritime English proficiency and teamwork and collaboration, with a p-value of 0.000, indicating high statistical significance and reliability. This suggests that as seafarers' proficiency in Maritime English improves, so does their ability to collaborate effectively, coordinate tasks accurately, and maintain safety standards in diverse crew environments. Maritime English proficiency plays a vital role in ensuring clear role understanding, smooth execution of tasks, effective coordination during complex operations, and enhanced interpersonal relationships among crew members. These findings highlight the importance of language competence in promoting operational efficiency, safety, and cohesion onboard multicultural vessels.

Table 4: Pearson Correlation Between Maritime English Proficiency and Teamwork and Collaboration

		Maritime English Proficiency	Teamwork and Collaboration
Maritime English Proficiency	Pearson Correlation	1	.888**
	Sig. (2-tailed)		.000
	N	153	153
Teamwork and Collaboration	Pearson Correlation	.888**	1
	Sig. (2-tailed)	.000	
	N	153	153

Qualitative findings indicated that Maritime English serves as both a technical and social instrument that improves teamwork, trust, and operational efficiency. Participants consistently said that clear English instructions during complicated operations like bunkering, cargo handling, and manoeuvring help to prevent errors and promote synchronisation. One respondent explained, *“During drills, if one person doesn't understand, the whole team slows down. It affects timing and coordination.”* Another participant remarked, *“Good English*

helps build stronger teamwork.” These data correspond with Reason’s (1997) Swiss Cheese Model, indicating that communication failures cause potential safety hazards. Seafarers also talked about adopting adaptive strategies like repetition, rephrasing, and gestures to make sure everyone understood each other. This shows that pragmatic competence is an important part of working together on multicultural crews.

4) *Findings on Challenges Faced by Malaysian Seafarers in Using Maritime English and Support Mechanisms for Enhancing Onboard Communication:* To address Research Question 4, which examines the challenges Malaysian seafarers face in using Maritime English and the support mechanisms currently available or needed to improve onboard communication, descriptive statistics from selected survey items were analysed. The findings presented in Figure 3 reveal several key challenges. Item E3 (Mean = 3.098) indicates moderate difficulty in understanding orders given in English, while Item E9 (Mean = 3.000) highlights limited time or opportunities to practice Maritime English at sea. These suggest that comprehension and consistent usage remain areas of concern.

In terms of support mechanisms, Item E6 (Mean = 3.980) shows that company support is perceived as generally adequate, yet there is a strong desire for improvement. Item E5 (Mean = 4.340) reflects a clear preference for training based on real-life scenarios, and Item E7 (Mean = 3.680) indicates interest in more frequent refresher courses. Additionally, Item E8 (Mean = 4.477) underscores the belief that improving English proficiency directly enhances teamwork and safety, while Item E10 (Mean = 4.039) shows a preference for interactive or digital learning tools. Overall, the findings suggest that while some support mechanisms are in place, Malaysian seafarers would benefit from more immersive, practical, and technology-enhanced Maritime English training to overcome communication challenges and strengthen operational effectiveness.

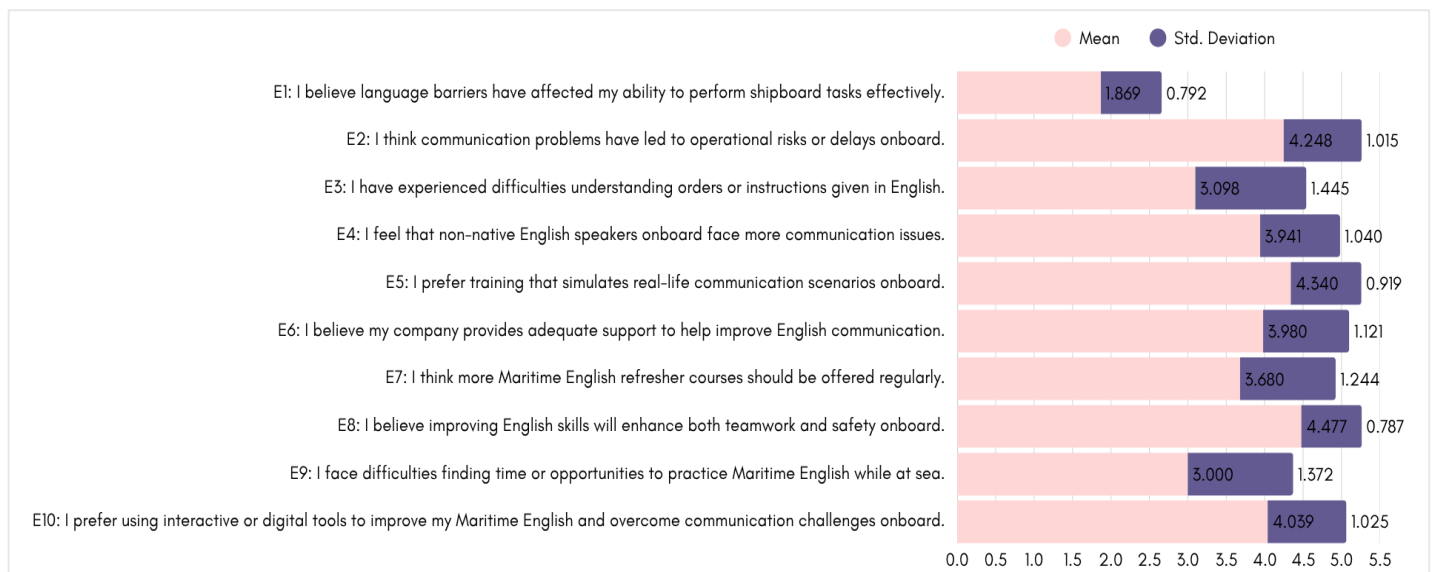


Figure 3: Mean Scores Mean Scores & Standard Deviations

for Challenges and Recommendations Items

The most common problems with communication during the interviews were different accents, technical jargon, and code-switching. As one captain shared, “*Filipinos, Indians, Malaysians—our accents are different, so sometimes we repeat many times.*” Junior seafarers struggled with specialised terms, creating temporary in-group versus out-group dynamics until they developed a sufficient vocabulary. While switching between English and Malay fostered solidarity, it also led to occasional misunderstandings. To overcome these challenges, seafarers relied on adaptive coping strategies—simplifying messages, repeating commands, and using gestures to confirm understanding. Senior officers also acted as informal mentors, aligning with Lave and Wenger’s (1991) Situated Learning Theory, where newer crews gain communicative competence through guided participation. Many participants recommended scenario-based drills, continuous SMCP practice, and digital tools (e.g., e-learning or mobile apps) as sustainable solutions to strengthen Maritime English proficiency and bridge generational skill gaps.

CONCLUSION

Summary of Findings and Discussions

This study examined the role of Maritime English in enhancing teamwork and collaboration among Malaysian seafarers, employing a mixed-methods approach that integrated quantitative survey data and qualitative interview insights. The findings consistently affirm that Maritime English proficiency is a critical enabler of effective communication, task coordination, and team cohesion in multicultural maritime environments.

Quantitative findings demonstrated a very strong positive correlation between Maritime English proficiency and communication effectiveness ($r = 0.916$, $p < 0.001$), as well as between language proficiency and teamwork and collaboration ($r = 0.888$, $p < 0.001$). These results underscore the pivotal role of language competence in facilitating clear instructions, reducing misunderstandings, and enhancing operational safety. High mean scores across survey items reflected strong confidence in using Maritime English for routine tasks, emergency communication, and technical documentation. However, lower scores related to accent comprehension and limited opportunities for language practice suggest areas for pedagogical improvement.

Qualitative data enriched these findings by revealing nuanced experiences of language use onboard. Interviewees described Maritime English as both a technical and social tool that fosters trust, leadership, and synchronisation during complex operations. Senior officers were perceived as more fluent and authoritative, while junior crew members often hesitated due to limited vocabulary or fear of miscommunication. These dynamics align with Bourdieu's concept of linguistic authority (Bourdieu, 1991) and Vygotsky's theory of guided learning, where experienced crew members serve as mentors in developing communicative competence.

Challenges identified included difficulties in understanding diverse accents, technical jargon, and inconsistent reinforcement of language. Code-switching between English and Malay, while fostering solidarity, occasionally led to confusion. Participants emphasised the need for scenario-based training, continuous SMCP practice, and digital learning tools to address these gaps. Thematic analysis also highlighted adaptive strategies such as repetition, rephrasing, and gesture use, reflecting pragmatic coping mechanisms in multilingual crews.

Overall, the study validates the Input–Throughput–Output (ITO) model as an effective framework for understanding how Maritime English proficiency (input) influences interaction processes (throughput) and leads to improved teamwork and safety outcomes (output). The findings contribute to both theoretical and practical understandings of language use in maritime contexts, emphasising that Maritime English is not merely a technical requirement but a strategic competency essential for safe and efficient operations.

In conclusion, enhancing Maritime English proficiency among Malaysian seafarers is vital for fostering cohesive teamwork, reducing operational risks, and preparing crews for the linguistic demands of global maritime environments. Targeted, experiential, and context-sensitive language training is recommended to bridge existing gaps and support continuous professional development.

Implications and Suggestions for Future Research

The findings of this study carry significant implications for maritime education, operational safety, and future research. As global shipping increasingly depends on multicultural crews, the strategic importance of Maritime English proficiency becomes more pronounced, not merely as a technical skill but as a foundational element of teamwork, leadership, and safety. The strong correlations identified between language proficiency and team effectiveness underscore that Maritime English should be regarded not only as a communication tool but as a strategic competency essential for fostering collaboration, ensuring operational clarity, and enhancing safety in diverse maritime environments.

1) *Theoretical and Conceptual Implications:* This study contributes meaningfully to the theoretical understanding of team dynamics in maritime contexts by applying the Input–Throughput–Output (ITO) model. The model effectively illustrates how Maritime English proficiency (input) influences interaction processes such as communication clarity, task coordination, and conflict resolution (throughput), ultimately leading to enhanced

teamwork, collaboration, and safety outcomes (output). These findings validate the ITO framework as a robust lens for examining non-technical skills in high-stakes, multicultural maritime environments, where language serves as both a cognitive and operational tool.

Building on this foundation, future research could expand the ITO model by integrating additional variables such as leadership style, cultural intelligence, and emotional resilience, which increasingly shape crew performance in dynamic and digitally evolving maritime workplaces. Longitudinal studies are also recommended to explore how Maritime English proficiency develops over time and interacts with other competencies to influence team cohesion and operational effectiveness. By deepening the theoretical framework and broadening its application, future investigations can offer richer insights into the interplay between language, learning, and collaboration at sea.

2) *Pedagogical Implications:* The strong correlations between Maritime English proficiency and both communication effectiveness and teamwork suggest that language training should be more deeply embedded within maritime education curricula. Traditional classroom-based instruction may not sufficiently prepare seafarers for the linguistic demands of real-world operations, particularly in high-pressure or emergency contexts. Therefore, pedagogical approaches should prioritise experiential learning through scenario-based simulations, role-play exercises, and onboard communication drills. These methods bridge the gap between theoretical knowledge and practical application, enabling seafarers to develop confidence and fluency in operational settings.

Moreover, the study highlights the need for continuous language reinforcement beyond pre-sea training. Maritime institutions should implement regular refresher courses, digital learning platforms, and mobile applications that allow seafarers to practice Standard Marine Communication Phrases (SMCP) and technical vocabulary in realistic scenarios. Embedding language instruction within broader competency-based frameworks, such as teamwork, conflict resolution, and intercultural communication, can further enhance the holistic development of seafarers. Onboard language support systems and mentorship from senior officers can also reinforce learning and foster a collaborative environment, ensuring that communication skills evolve alongside operational experience.

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