



## Challenges of Maritime English Usage among Ship's Crew and Implications for Operational Safety at Sea

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### Abstract

This research aims to analyze the challenges of using Maritime English by ship crews and its impact on safety at sea. Through a survey approach, data was obtained from several ship crews at ports, especially at Tanjung Perak Port, Surabaya. The results showed variations in the level of Maritime English competency among respondents, with a number of challenges faced, such as difficulties in daily communication, document translation, and interactions with port authorities. These challenges have serious implications for safety at sea, including increased risk of accidents, operational delays, and the inability to respond quickly and appropriately to emergency situations. These safety implications highlight the urgency to improve maritime English competency among ship crews through appropriate training and the development of effective communication strategies. By improving maritime English skills, it can be hoped that safety risks at sea can be significantly reduced. This research provides valuable insights for the shipping industry and authorities to improve communication practices and increase safety at sea.

**Keywords:** Marine English, Ship Crew, Safety at Sea.

### 1. INTRODUCTION

The maritime world in the era of the 4.0 revolution has challenged all components to transform. Likewise, the advancement of the maritime industry has brought significant changes in communication demands among crew members from different countries. According to [1], English has become the lingua franca in international maritime communication. One of the most common languages used in maritime communication is English, this is in line with IMO stating that the standard language used by *seafarers* is English. However, the use of English in a maritime context often poses challenges for crew members, which can ultimately impact safety at sea. Although English has been widely adopted in the maritime industry, various challenges are still faced by crew members in using English. Such challenges can include difficulties in understanding instructions, communication with port authorities and interpretation of important documents. The implications of a lack of English competency in the maritime environment can result in significant safety risks. [2], The urgency of Maritime English skills for smooth radio communication on board is highly expected, the successful use of English in the maritime environment is essential for safety at sea. As the primary language of communication among crew members from different countries, the level of maritime English competency is a decisive factor in ensuring smooth ship operations and responding to emergency situations at sea.

Effective communication plays a crucial role in maintaining safety at sea. English is the primary language used in communication between crew members, port authorities and other vessels around the world. However, barriers to the use of English, especially Maritime English, by crew members are a significant challenge that can affect the safety of ship operations at sea.

Such challenges include differences in English proficiency levels, confusion in articulating instructions and information, and difficulty in understanding technical terms specific to the maritime environment. A lack of maritime English competency can result in misunderstandings, failure to respond quickly and appropriately to orders or emergency situations, and other potential safety risks at sea.

Several previous studies have highlighted the issue of Analyzing the Level of Need for Maritime English Communication Competence in the Activities of Movement and Control of Kapa. [3], highlighted the



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importance of communication competence in maritime English, especially in giving instructions during the movement and implementation of ship control so that there are no safety risks at sea. Communication and maritime English as risk factors in maritime accidents [4]. The implications of these challenges include errors in interpretation of instructions, confusion in emergency situations, and the inability to understand information received or conveyed properly [2]. A number of previous studies have also underscored the important role of ship management and communication in the maritime context in improving safety and operations in ports, [5]. the importance of effective communication in the maritime context and its implications for safety. Smith (2018) highlighted the importance of proper training in maritime English to increase awareness of safety risks at sea. Likewise, research by [6], emphasizes the implications and how important the ability to communicate effectively in Maritime English and the use of International Signage is to the safety of Shipping Vessels at Tanjung Perak Port Surabaya to reduce the potential for accidents on foreign-flagged vessels.

Although there have been efforts to improve English competency among the crew, on Optimizing Performance in the Shipyard environment through English Communication on MT. LG Asphalt 1 and [7] on Optimizing the Application of Maritime English for Ship Crew to Communicate onboard Standard Marine Vessels. But there is still a significant gap between the level of need and the skills possessed. Therefore, an in-depth understanding of the challenges faced by crew members in using Maritime English and its impact on safety at sea is important to develop effective strategies to improve communication and reduce safety risks.

This research aims to further analyze the challenges of maritime English use by crew members and its implications for safety at sea. By understanding these challenges, it is hoped that effective solutions can be identified and steps can be taken to improve maritime English competency and implement solutions that can reduce safety risks at sea [8].

## 2. METHODS

The population of this study was crew members working on different types of vessels and shipping routes in major ports. Meanwhile, the number of respondents is 100 crews, who come from various nationalities, including 20 Chinese crews, 35 Indonesian crews, 15 Filipino crews, 7 Indian crews, 8 Vietnamese crews, 5 Thai crews, and 10 Malaysian crews. The positions on the ship of respondents are deck officers and deck crews, They are 20 captains, 15 Chief Officers, 12 second officers, 12 third officers, and 40 deck ratings as well as petty officers, with an average work experience is more than 3 years. The sample was randomly selected from the population to ensure a balanced representation of different ship types and crew experience and background. The research instrument used was a specially designed questionnaire to collect data on maritime English competence, challenges in the use of English, and perceptions of the implications of English challenges on safety at sea. Then, to avoid any bias in the reported research data, this study is limited to the population at Tanjung Perak Port in Surabaya.

### 2.1. Data Collection

This study used a survey approach to collect data on the challenges of maritime English use by crew members at ports, particularly, at Tanjung Perak Port Surabaya and its implications for safety at sea. The steps taken in this research methodology are. The survey was conducted using a questionnaire that has been specifically designed to reveal the level of maritime English competency, identify the challenges faced, and understand respondents' perceptions of the implications of these challenges for safety at sea [9].

Data Collection Techniques Data was collected through the distribution of questionnaires to selected respondents [10]. The questionnaire contains structured questions covering aspects such as the level of maritime English competency, challenges faced in its use, and perceptions of the implications of these challenges for safety at sea and also through direct interviews with a number of respondents to gain a deeper understanding of the challenges faced.

### 2.2. Data Analysis

The data collected will be analyzed quantitatively and qualitatively. Quantitative analysis will be conducted to identify common patterns in maritime English competency levels and challenges faced. Qualitative analysis will be conducted to gain an in-depth understanding of respondents' perceptions of the implications of these challenges for safety at sea. After that, in analyzing the data, Statistical Tests and Thematic Analysis are conducted. Statistical tests include the t-test and ANOVA (Analysis of Variance). The t-test technique is used to compare 2 samples or population means; this type of test is useful for determining whether the difference



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between the 2 samples or population means is significant or not. Meanwhile, ANOVA (Analysis of Variance) is a statistical method used to compare the means of three or more groups of data to see if there are significant differences among them. Additionally, there is also thematic analysis, which is a method of qualitative data analysis aimed at identifying, analyzing, and reporting patterns or themes within the data. This method is often used to understand the meaning and interpretation of qualitative data such as interviews, surveys, or focus group discussion.

### 3. RESULTS AND DISCUSSION

The results of the research and discussion on the challenges of the crew's use of maritime English and its implications for safety at sea are summarized in a table that illustrates the respondents' level of maritime English competency, the challenges faced, and the implications for safety at sea.

Table 1: Maritime English Competency Levels

No.	Competency Level	Percentage of Respondents
1.	High	35 %
2.	Medium	45 %
3.	Low	20 %

Table 2: Challenges in Maritime English Usage.

No.	Types of Challenges Faced	Percentage of Respondents
1.	Difficulty understanding instructions	40 %
2.	Communication with Port Authority	30 %
3.	Understanding Technical Phrases	25 %
4.	Interacting in Emergency Situations	20 %
5.	Difficulty in interacting with coworkers	25 %
6.	Difficulty articulating information	30 %

Table 3: Implications for safety at sea

No.	Implications for Safety	Percentage of Respondents
1.	Accident	30 %
2.	Operational delays	35 %
3.	Difficulty responding to emergencies	35 %

In the table, it can be seen that respondents have varying levels of maritime English competency, with a high level of maritime English competency (35%), followed by a medium level (45%) and a low level (20%), with some experiencing challenges in communication. Such challenges include Difficulty understanding instructions (40%), difficulty understanding different accents, Communication with Port Authorities (30%), Understanding Technical Phrases (25%), Interacting in emergency Situations (20%), Difficulty in interacting with colleagues (25%), Difficulty articulating information (30%). The implication is that errors in English communication can lead to accidents (30%), operational delays (35%), and difficulties in responding quickly and effectively to emergency situations (35%).

The discussion focuses on the implications of the challenges of maritime English usage on safety at sea. It was found that difficulties in communication can lead to operational delays, accidents and difficulties in responding to emergency situations. Therefore, improving maritime English competency among crew members is necessary to enhance safety at sea [11]. Measures such as the provision of appropriate training and the development of supportive communication systems can help overcome such challenges.

This research highlights the importance of improving maritime English competency among crew members to enhance safety at sea. Improvements in the understanding and use of English can reduce the risk of accidents and enable crew members to respond more effectively to emergency situations. Measures that can be taken to improve maritime English competency include the provision of appropriate training, the establishment of awareness campaigns, and the development of supporting resources such as onboard maritime English dictionaries.



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By understanding these findings, shipping companies and maritime authorities can take the necessary actions to improve maritime English competency among crew members, thereby ensuring that onboard communication is effective and safety at sea is maintained.

#### 4. CONCLUSION

Based on the results of the study, it can be concluded that the challenge of maritime English usage by crew members has a significant impact on safety at sea. Lack of English competency among crew members can result in difficulties in communication, interpretation of instructions and response to emergency situations. The implication is an increased risk of accidents, operational delays and the inability to respond effectively to emergency situations.

To improve safety at sea, efforts need to be made to improve maritime English competency among crew members. This can be achieved through focused training, provision of supporting resources such as maritime English dictionaries, and implementation of effective communication systems on board. In addition, it is important for maritime authorities and shipping companies to pay attention to the communication challenges faced by crew members and provide the necessary to ensure that instructions and information can be conveyed clearly and in a timely manner. This aligns with the challenges of the maritime world in the 4.0 Revolution Era, which demands that all involved components be challenged to undergo transformation.

As such, understanding and addressing the challenges of maritime English usage is an important step in improving safety at sea and operational efficiency in the maritime industry.

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