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Review Article

Wrong use of SMCP in marine communication: A review study

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ABSTRACT

The Standard Marine Communication Phrases (SMCP) are largely used on commerce ships to ensure safe navigation and to standardize communication between ships and between ships and shorelines. Therefore, it is crucial to raise training standards among important players in the sector: institutions for maritime education and training. This review study uses a theoretical and comprehensive systematic methodology and gathers data through analyzing SMCP previous papers in the context of onboard and external communication. The main objective of this research is to examine the improper usage of the SMCP, and marine safety to determine the needs and prospects for future study. According to this analysis of the literature, intercultural collaboration, communication and a seafarer's language proficiency are the most significant factors that affect maritime safety on an individual level. Additionally, SMCP use for external communication is 9% optional, 26% recommended, and 65% required. There are ways that English is used in crew radio communication, particularly for onboard communication. 41% of respondents selected recommended, 48% selected mandatory, and 11% selected optional. This paper serves as a thorough literature source pinpointing major issues in the use of SMCP to be touched in future studies.

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1. INTRODUCTION

Persistent communication issues have been linked to several maritime accidents that resulted in the loss of people, property, and goods (James et al., 2018). The safety of seafarers, cargoes, and ships is of the utmost importance to the shipping industry because marine transportation is one of the most important and dangerous sectors of the global economy (Sarkodie et al., 2018). The term "Maritime English" refers to a dialect of English that is used in the maritime sector and has a vocabulary significantly distinct from General English. It may be treated as English for some purposes (Sar and Aprizawati, 2019). The maritime sector uses English as its primary language. The Standard Marine Communication Phrases (SMCP) are largely used on board commercial ships for safe navigation and standardizing communication between ships as well as among ships and shorelines. There are numerous seafarers from various countries that speak various languages throughout the globe, who are in need to have training of Maritime English (Demydenko, 2013; Vidhiasi and Syihabuddin, 2022). To cope with the demands of the modern global economic and political system as well as technical advancements, seafarers must possess a high degree of training. Due to the requirement for seafarers to be globally minded, they must be proficient in English to communicate effectively for both personal and professional reasons while at sea. Therefore, it is crucial to raise training standards among key

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players in the sector, including Maritime Educational and Training institutes (METs) and global merchant shipping corporations. A practical option is to review and integrate the SMCP training requirements for cadet navigation officers (Rosedi et al., 2015).

The International Maritime Organization (IMO) developed the Standard Marine Communication Phrases (SMCP), a set of core English terms that have acquired general acceptability for use at sea (Sukomardojo, 2022). According to John et al. (2017), the SMCP has terms which encompass the verbal shore-to-ship (and vice versa) and boat communications sectors that are crucial for safety. It is impossible to overstate the significance of marine transport to the global economy given that more than 90% of all international trade is carried out by sea. As a result, the prosperity of the marine industry is crucial to the interdependence of national economies around the world (Anurag et al., 2014). In contrast to other forms of transportation, maritime transportation has proven to be the most economical method of moving containerized cargo, petroleum products, food supplies, manufactured goods, bulk items, and other goods over vast distances. Maritime boats can be generically categorized as tankers, general cargo ships, bulk carriers, passenger ships, containerships, and fishing vessels, according to an IMO document (Boris, 2004).

Despite the significant advancements in E-navigation and the use of related infrastructures, ships of all sizes, even the smallest coastal vessels, from gigantic ocean-going vessels, have limited internet connectivity (Sari and Aprizawati, 2019). As a result, when a ship departs from a port or from a coast, it is unable to connect to large data portals. In 68th session, the Maritime Safety Committee (MSC) at the IMO asserted that numerous issues, including alcohol abuse, inadequate technical knowledge or language skills, fatigue, low morale, injury, staffing levels, work environment, and company management, could affect seafarers' ability to perform their jobs and, as a result, contribute to accidents. Later, under the following definition, the phrase "inadequate language skills" was defined in depth and added to the list of human element common terms: a lack of the basic linguistic abilities essential for communication and doing tasks. To understand all shipboard commands, instructions, procedures, labels, warnings, and rules, one must be completely or partially able to speak, read, or comprehend the primary language and/or additional needed languages (Seor & Park, 2020). The foundational communicative abilities of the SMCP are based on a basic comprehension of the English language. With its specific terminology, English has long been a widely used language in all industries, from maritime law to shipyard management, maritime transportation to ship management, and maritime education to ship management (John et al., 2017). Ships, port authorities, and pilots must use marine English accurately for the safety of navigation. The reasons why SMCP is misused in marine communication are thoroughly examined in this paper.

1.1. International Regulations and Guidelines Established by Maritime English Education Standards

English is the official language on a global scale and is used in varying sectors. English for Marine, which appears to be taught and learned in the marine business, is one of them. Maritime English is a specific form of English spoken by people working in the shipping and marine industries as well as by mariners (Dirgeyasa, 2018). The number of marine casualties (MC) is significantly influenced by human error (HE), according to studies from the U.S. Coast Guard and development center. Human mistake is the reason for between 75 and 96 percent of marine casualties. Therefore, International Maritime Organization (IMO) has developed the Maritime English Model Course 3.17, which establishes guidelines for teaching Maritime English to marine college students. Every country's educational system is based on this model coursework, which is regarded to be the syllabus. SMCP, along with the Maritime English Model Course 3.17, is well recognized for its importance to Maritime English (ME) education. If the IMO model curriculum or course is the prospectus utilized by the course developers and lecturers, the SMCP is more like study guides; it outlines a variety of communication skill sets that are employed onboard vessels (Seor and Park, 2020).

In industrial revolution, the entire world has been changing dramatically. Since then, radio wave technology has given the maritime shipping industry the advantage of adopting this type of communication. The ability to communicate effectively depends on both parties using the same language; on commerce ships, this language is typically English (Ziarati et al. 2012). With more advanced technology and global human resources operating in different places around the world, the marine industry has expanded more quickly recently than it did in the 1920s and 1930s. The marine system is a social system, as demonstrated by Papastergiou et al. in 2021. Technology, the environment, and organizational variables all interact with people. Although there is a weak link between the way organizational, environmental, or technical elements determine the role that human mistake plays in marine accidents, human mistake or error is a factor in 84 to 88% of tanker accidents, 79% of towing vessel groundings, 89–96% of collisions, and 75% of fires and explosions, according to United States Coast Guard (USCG) studies. HE that is classified as being under this category includes decisions that were made incorrectly, actions that were carried out improperly, and lack of proper communication (Ahmed, 2013).

USCG studies have been conducted in the country to examine the most prevalent HE in the maritime industry. The results indicate that there are many regions in which the industry can improve performance and safety by applying human factor principles (Barsan et al., 2012). Many regulations and conventions have referred to maritime English as a crucial element. "IMO has obviously set out the English Language Competence Requirements as for Working Language," claims Velikova (2009). According to the latter document, Officers of the navigational watch

are required to have a satisfactory understanding of both written and spoken English to comprehend charts, maritime publications, meteorological information, and messages pertaining to the vessel's safety and operation, as well as the requirement to communicate with other vessels, Vessel Traffic Service (VTS) stations, multinational seafarers crew, and to use the IMO SMCP. (Bleor and Sampson, 2009; Ding and Liang,2005; Velikova, 2009).

At the twenty-seventh session, it was established in 1973 by the Maritime Safety Committee (MSC) that English should be the standard language of instruction for navigation. At its sixty-eighth session in 1997, the IMO Maritime Safety Committee approved the new SMCP, which was developed by the IMO Sub-Committee on Safety of Navigation. In November 2001, the IMO Assembly adopted the SMCP as resolution A.918 (22). The capability to comprehend and use of the SMCP is required for authorization of the navigational watch officers who manages the vessels of 500 gross tonnage or more under the International Convention on Standards of Training, watchkeeping and Certification for Seafarers (STCW), 1978 and its amendments. SMCP should be used, together with written and spoken English (John et al., 2017; Trenkner, 2005). Table 1 indicates the IMO Assembly adopted the SMCP as resolution in 2010.

2. LITERATURE REVIEW

Previous studies about the SMCP had been the subject of research. Mujiyanto et al. (2023) discussed some research on SMCP-related onboard vessel communication. He contends that it is impossible to teach SMCP by means of conventional language instruction. Commonly, an unlimited number of new structures will be created using the components of language and the rules of grammar. He also warns about the limited ability of marine college students to remember the extensive marine vocabulary in SMCP.

Takagi, (2015) has conducted additional research in this area. He reported about a workshop that was designed to teach SMCP-based marine communication using computer dialogue systems, sometimes known as Chabot. The exercise that will be presented at the workshop will focus on the SMCP's mandatory component when used for Very High Frequency (VHF) communication. Participants are given the task of coming up with an effective communication plan during a simulated phone call to learn relevant information about a navigational disaster. In preliminary research on the SMCP conducted by Rosedi (2015), 110 navigation cadets from the leading maritime training academy in Malaysia named ALAM were involved. His research had the intended effect of assisting concerned parties in further enhancing SMCP training to adhere to the standards established by the STCW Codes.

According to evaluation of Frolova (2020) that most cadets find it difficult to become proficient in SMCP, even though using SMCP is one of the primary prerequisites for seafarers. He advised using SMCP as a strategy to reinforce both vocabulary and grammatical understanding in the

Table 1. Showing the IMO Assembly adopted the SMCP as resolution (IMO, 2010)

Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
Use the IMO Standard Marine Communication Phrases and use English in written and oral form	Adequate knowledge of English language to enable the officers to use charts and nautical publications to understand meteorological information and messages concerning ship's safety and operations to communicate with other ships, coasts stations and VTS centers and to perform the officer's duties along with the multilingual crew including ability to use and understand the IMO Standard Marine Communication Phrases	Examination and assessment of investigation obtained from practical instructions	English language nautical publication and messages relevant to safety of the ship are correctly interpreted and drafted. Communications are clear and understood.

IMO: International Maritime Organization; SMCP: Standard Marine Communication Phrases; VTS: Vessel Traffic Service
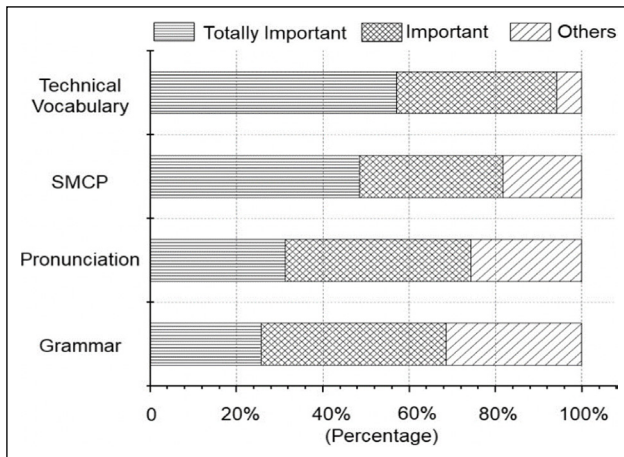
Figure 1. Showing the important elements for communication onboard (Seor and Park, 2020).

SMCP: Standard Marine Communication Phrases.

Figure 2. Showing the past 5 years Education experience of seafarers (Seor and Park, 2020).

SMCP: Standard Marine Communication Phrases.

marine English course. For instance, he suggested using SMCP to attach grammatical patterns. It is not sufficient to concentrate solely on the appropriate application of SMCP patterns because SMCP encompass and provide instructions on both routine and emergency on-board operations. Every seafarer must be proficient in the usage of SMCP to be prepared for the challenges that the modern, global shipping business faces (Schriever, 2018; Valle, 2011). Researchers have decided to analyze the detailed syllabus of the IMO Model course 3.17 "Maritime English" (IMO Model Course 3.17. (International Maritime Organization (IMO, 2010) due to the various situations that necessitate the use of SMCP (shore-to-ship, from ship-to-ship, and on-board communications), it is essential to identify the suitable topics and skills which can be used for incorporating SMCP into Maritime English courses.

Additionally, SMCP and maritime technical terminology education is required. Vangehuchten, (2010) carried out study to determine how well English is utilized in the workplace and what more development is required for improved communication onboard. 127 members of the maritime workforce, including seagoing navigation officers and engineers, participated in the study. The SMCP is thought to be relevant by 81% of respondents, and nearly 93 percent of members considered that technical Maritime English vocabulary is necessary. Figure 1 shows the important elements for communication onboard (Seor and Park, 2020).

Furthermore, according to the same study, 90% as well as 100% of respondents, respectively, claimed that technical ME vocabulary and the SMCP are significant for hiring and promoting. But as shown in Figure 2, 54% and 60% of respondents, respectively, said they had only occasionally or never received such instruction when asked if they had received any kind of instruction in SMCP and technological ME vocabulary over the previous five years, which emphasizes the significance of studying and analyzing content developed in English for specific purposes. Figure 2 portrays the past 5 years Education experience of seafarers (Seor and Park, 2020).
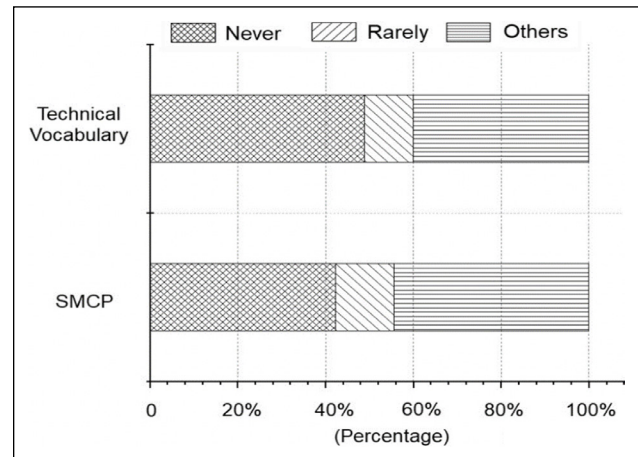
Education in SMCP and technical terminology used on board ships is necessary, according to Improving Onboard English Communication in the Republic of Korea (Hoel and Mason, 2018; Korea Institute of Maritime and Fisheries Technology, 2018). With this, we could acknowledge that the maritime sector needs and requires two components, SMCP and technical terms associated educations.

Pyne and Koester, (2005) highlighted several instances of poor communication in their study. These instances are stated as issues with the crew and the pilot's diverse cultures and languages, the crew and passengers aboard, passenger ships as well as problems with VHF connections with other vessels and problems with external communication. They argued that it is possible to decrease most occurrences that are specifically related to poor communication. They concluded that significant percentage of accidents occur when the level of English comprehension is unsatisfactory. Other aspects that need to be addressed include communication protocols, employee selection, and the design of maritime technology and equipment, including communication channels.

According to Pyne & Koester (2005), crew communication is a key contributing element in marine accidents. Misunderstandings are possible when crew members speak the same language. Miscommunication becomes far more likely when English language learners and potential cultural factors are included. English is crucial in social settings, according to Sampson and Zhao (2003), which will result in a more uniform workforce with an improved safety culture.

According to Cole and Trenkner (2009), "there is a practical and globally recognized assessment measuring tool, namely a yardstick that determines the Maritime English communication performance particularly set out in the STCW Convention Operational, Management Levels along with the SOLAS Convention." The Standard Marine Communication Phrases (SMCP) and the Maritime English model course 3.17 have both been adopted by the IMO and made available to MET institutes as a guide, respectively.

Table 2. Selected publications by year and the Journal/study design

No	Author's name	Publication year	Journal/study design
1	Acar and Varsami	2021	International Journal on Marine Navigation and Safety of Sea Transportation
2	Mates & Barbu	2015	Retrospective study
3	Haryani et al.	2022	Qualitative Research approach
4	Sarkodie et al.	2018	International Journal in Africa
5	Valle	2011	International Journal of English Studies
6	Boström	2020	Quantitative Research
7	Ahmed	2013	Literature Review
8	John et al.	2017	Quantitative research
9	James et al.	2018	WMU Journal of Maritime Affairs
10	Frolova	2020	Review

This yardstick, shown in Table 2, is what the author believes to be the most accurate and useful tool for evaluating how well seafarers at operational and managerial levels communicate in English in accordance with the standards of the STCW and SOLAS Conventions.

Ships using international transportation logistics carried out by more than 80% of global trade, according to data collected by the International Marine Organization (Haralambides, 2019; Jacks and Pendakur, 2010; and Rodrigue, 2010). According to the United Nations Conference on Trade and Development (UNCTAD), seaborne trade developed by 2.7% in 2018, which was less than the 3.0% annually average growth rate. The UN Conference on Trade has forecast a 3.4% annual average growth rate for 2019–2024 (Michail, 2020). Even though the shipping sector is constantly growing, human factors are major contributors to maritime accident. The negligence of humans is accountable for between 75–96% of marine casualties (Berg, 2013). The main factor that requires attention in maritime accidents is human error. According to USCG research, human error is a factor in 89 to 96% of collisions, 79% of grounded towing vessels, 84 to 88% of tanker incidents, and 75% of explosions and fires (Rothblum, 2000). On trade ships, 80% of the crew communicates through multiple languages and from various ethnic backgrounds (Hetherington et al., 2006; Valle, 2010).

The main human errors that have been linked to ship collisions (Sotiralis et al., 2016; Ung, 2019; Weng et al., 2019; Yıldırım et al., 2019) include oversight mistakes (not keeping the proper lookout, failing to take early actions). Ineffective communications are typically caused by ambiguities, misinterpretations, inappropriate technology, and a lack of closed-loop communication to provide feedback on messages (Boström, 2020). For a long time, only very high frequency of radio (VHF) had been accessible for communication and its improper use is a major cause of casualties (León, 2000; MCA, 2016).

According to the report of United Nations Conference on Trade and Development (UNCTAD), Asia will supply most of the world's seafaring labor in 2021, with Indonesia, Philippines, China, Russia and India, making up the top five suppliers of seafarers. None of these nations speak English as their mother tongue. The Standard Marine Communication Phrases (SMCP) was created to help crew members who are multilingual and non-native speakers communicate while on board ships (Trenkner, 2005).

3. METHODOLOGY AND SEARCHING STRATEGY

This study has theoretical and comprehensive systematic design. A literature review and qualitative research methods were deemed necessary for the study to be as successful as possible. The selection was impacted by some of the previous research and publications.

3.1. Searching terms

In this section difficulties in maintaining efficient communication as well as the requirements and difficulties associated with SMCP use will be reviewed. The focus of this study is on proceedings and journal articles that have been written about the improper usage of SMCP in marine communication. The number of databases that could be used was unlimited. To find articles written in English, the following keywords were used: Maritime English OR Marine Communication, SMCP and marine system. However, it should be noted that the phrase Standard Marine Communication Phrase, or SMCP, also well-known to maritime workers with employment involving sailing onboard ships, whether they are ocean-going or domestic.

3.2. Data collection

Numerous systematic evaluations involve using search engines and specific websites' content for analysis. Search engines like Google Scholar, PubMed, and Science-Direct were used to find the approved, peer-reviewed content, which includes reviews. Additionally, a secondary review of all the publications' links was accomplished and contacted renowned academics. Figure 3 illustrates the study selection process:

As indicated in the above flowchart diagram, 288 different studies were produced using this methodology. The various databases used slightly different in-depth search techniques. Studies that did not include data on marine communication (n=199), studies that were not about SMCP (n=33), studies that used evaluations of specific areas of research as their main source of data on maritime English (n=12), and studies that had no connection to English in
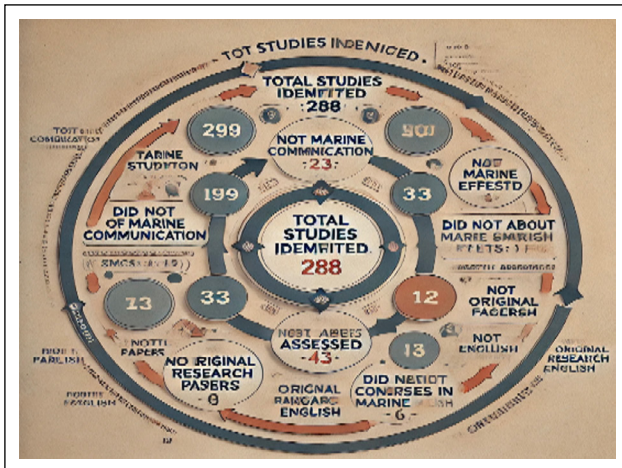
Figure 3. Showing the study selection process.

Marine (n=1) were all eliminated from consideration. The full papers for the other abstracts (n=43) were obtained and assessed. Studies that did not address lack of marine English (n=1), did not address SMCP effects (n=4), did not address original research papers (n=3), and studies that did not address courses maritime English (n=6) were excluded.

3.3. Inclusion or exclusion criteria
To ensure the research's high quality, broad applicability, and accuracy, inclusion and exclusion criteria must be established. These are helpful in narrowing down the study articles that appear in search results and helping to collect precise information that is crucial to the investigation's goals. Articles that did not specifically address the improper usage of SMCP in marine communication, were eliminated from the narrative and theme analysis synthesis. The data did not include any English-language articles that might have contained discrepancies, mistakes, or misrepresentations.

3.4. Method of analysis
The remaining 29 study articles go into SMCP's wrong use in maritime communication. Most of this research (n=10) use various disease-specific descriptive approaches to evaluate the lack of marine English in the maritime environment. By categorizing and organizing acceptable data using qualitative content analysis, it was possible to determine the Marine's lack of proficiency in maritime English.

4. RESULT

By examining relevant literature, this research attempted to highlight issues related to the lack of marine English in the marine environment. It is more challenging for seafarers to learn effective communication skills due to practical problems with intercultural communication and educational institutions. It also highlights issues with the curriculum's design, the learners' prior knowledge, the teachers' lack of experience, and the course materials (James et al., 2018; Ahmed, 2013; John et al., 2017; Acar and Varsami, 2021). Table 2 shows the selected publications by year and the Journal/study design.

Table 3 is an indication of selected publications' objectives and conclusions.

5. DISCUSSION

The SMCP was approved by 22nd Assembly of the IMO in November 2001. The Standard Marine Communication Phrasebook (SMCP) provides sailors with instructions for communicating on board ships with one another or with shore on international (oceangoing) or local lines. The jargon and predetermined statements or phrases in the SMCP book have become the norm for sailors in communicating with internal and external vessels, while the crew is composed of people of various linguistic and national backgrounds.

Numerous previous studies suggested that inadequate communication played a role in maritime accidents. The cause of this communication issue is the absence of a common language among maritime professionals. Human factors account for 80% of marine accidents, with poor communication accounting for a third of these (Ahmed, 2013).

Information is transmitted from one crew to another on a different board vessel during communication on the bridge, which uses the radio as the main tool. The captain, second officer, or third officer typically conducts the communication in the bridge room. Additionally, in the marine environment, verbal routine communication and external distress information are discussed. To prevent misunderstandings and ambiguity in meaning, the form of the language should be standardized with SMCP. The regular operations of the crew are carried out on ships via onboard communication. Only the internal crew, including those working in the deck, engines, galley, and radio departments, can communicate among different grades, roles, and job sectors. Usually, walkie talkies are used for communicating messages.

On the other hand, external communication differs slightly from onboard communication in the previous sentence. All departments of the ship's crew use this communication to carry out their daily tasks. Communication takes place from one ship to another ship, a ship to land, and in both directions. Typically, radio or walkie-talkies are used to transmit communications, particularly distress calls for help in the event of a disaster (accident or incident at sea).

There have been numerous maritime mishaps that have resulted in the loss of people, commodities, and property, and which have been partially caused by recurrent communication errors or wrong use of standard marine communication phrases. The safety of seafarers, cargoes, and vessels is of the utmost importance to the shipping industry as maritime transportation is one of the most important and dangerous sectors of the global economy. English for Specific Purposes is an acknowledged approach to satisfying the needs of the worldwide industry, while English is accepted as a common communication language in the marine industry. Seafarers are expected to complete the marine English learning phase.

Table 3. Selected publications' objectives and conclusions

No	Objective	Conclusion
1	To determine the primary causes of frequent communication issues at sea.	This systematic review showed many accidents taking place due to miscommunication or wrong use of standard marine communication phrases.
2	To evaluate the problems associated with communication failure.	Results revealed that lack of communication on board due to different international languages are more likely to cause accidents.
3	To highlight the language recommendations of radio communication in English from a maritime perspective.	To prevent miscommunication and avoid maritime accidents and incidents, English language users and skilled communicators need to know how to convey their messages accurately.
4	To determine how formation is used in marine communication and navigation in the maritime environment.	People aboard a ship or vessel can travel safely and securely thanks to technology for marine communication and navigation.
5	To evaluate the significance of a common coded language, such as the Standard Maritime Communication Phrases (SMCP), and to learn more about instances in which misunderstandings played a factor.	The investigation's findings demonstrate the widespread acceptance of English as a universal language, identify numerous language groups that are seen to be difficult to connect with using maritime English, and uncover some indications of linguistic hostility. It also shows how underutilized the SMCP is and how frequent misunderstandings brought on by linguistic and cultural differences.
6	To showcase correct or incorrect implementation of SMCP	Due to the high rate of human error that results from poor communication and poor assessments made while navigating in pilot seas, it may be concluded that bridge crew coordination might be enhanced. On tugboats, however, crew error is greater than 50%. This growth appears to be a result of the challenges presented by navigating through narrow waterways.
7	To improve maritime communication based on Maritime English by providing instruction in a variety of efficient methods.	The absence of an effective and up-to-date regulatory framework is one of the primary barriers to develop a standard for Maritime English communication skills training.
8	To highlight the distinctive structural features of maritime English for its use in discourse that takes place outside of a nautical environment. To improve the effectiveness of team communication in Maritime English.	Benchmarking can improve the effectiveness of team communication in Maritime English. It is also concluded that fatal accidents in shipping can be prevented by improving education and training in bridge team communication.
9	To analyze the potential for enhanced marine communication with real-world training.	Maritime English has modified, or developed words and phrases from other languages, which is only used in the IMI being classified as a particular form of English.
10	To evaluate the needs and challenges of SMCP use by seafarers	The findings of papers under evaluation demonstrated that the major purpose of learning SMCP in a maritime English course is to simulate a ship's setting in the classroom and to provide some realistic examples of maritime on-board communication in foreign crews.

Table 4. Showing the part A and part B of SMCP (IMO, 2002) (SMCP Book, 1995)

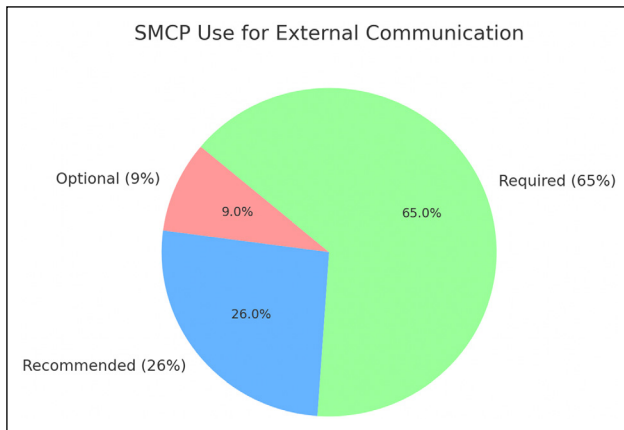| Part A: IMO standard marine communication phrases	Part B: IMO standard marine communication phrases
External communication phrase	On-board communication phrases
A1/1: Distress traffic	B1/1: Handling over the watch
A1/1.1 Distress communication: Fire, explosion, flooding, collision, grounding, sinking, disabled and adrift, equipped/attack/ piracy, list-danger of capsizing Unplanned distress, an adrift ship, and someone overboard.	B1/1 Brief description of position, motion, and draught.
A1/1.2 Search and Rescue Communication (SAR); SAR Communication, Acknowledge and/or relaying SAR messages, carrying out or organizing SAR operations, and wrapping up SAR operations	B1/1.2 a description of the neighborhood traffic scenario. Briefing on radio communication (B1/1.4).
	B1/1.5 Providing an overview of the weather.
A1/1.3 Requesting for medical help.	B1/1.6 Briefing on bridge organization and standing orders.
	B1/1.7 Special navigational event briefing.
A1/2 Traffic in an emergency: technical malfunction, ice damage, and cargo.	B1/1.8 Temperature, pressure, and soundings briefing.
A1/3 Safety Communications: Winds, storms, tropical storms, sea state, limited visibility, ice, navigational warnings and other hydrological and meteorological situations.	B1/1.9 Briefing on main engine's operating. B1/1.13 Taking control and managing the watch.

Figure 4. The Usage of SMCP for the External Communication (Mujiyanto et al., 2023).

SMCP: Standard Marine Communication Phrases.

Figure 5. The usage of SMCP for on-board communication (Mujiyanto et al., 2023).

SMCP: Standard Marine Communication Phrases.

5.1. The less awareness of using Standard Marine Communication Phrases (SMCP)

According to the respondents' responses in a previous interview, most of them claimed that they utilized the Standard Marine Communication Phrase (SMCP) infrequently while working on the bridge while at sea (Şihmantepe et al., 2019). Since the crew was entirely made up of Indonesian seafarers, they were unwilling to speak the language because there was no incentive or penalty for following the rule or disobeying it. In addition, memorizing every term in the SMCP book and its standard phrase becomes a significant burden for them. As a result, the researcher offers a table that divides the IMO Standard Marine Communication Phrase (SMCP) into parts A and B, which serves as a representative from the hefty book. The information can be in the form of a subject matter:

International sailors must be able to understand Standard Marine Communication Phrases (SMCP) to serve on ships in places like Europe, America, or Australia. Poor coastal technical knowledge causes many tragic events that harm the ecosystem and the victims (Ahmed, 2018), including fires on the ship named "MS Scandinavian Star", originally named MS Massalia, that killed 158 people and sank the empress' "tanker sea" to the coast and marine environment in Wales (England) (Yurzhenko, 2019). The investigation into the accident concluded that the crew's insufficient knowledge of the English language had a substantial impact on their ability to communicate with the passengers. The ability of the passengers to leave is hampered by this. The "sea empress" cases, which at first only lost 2500 tons of crude oil, are reduceable. China's true "de yue" empress" caused 71.800 tons more oil to explode into the sea than what was required for mariners due to incorrect communication by a cook on a tugboat (Davy and Noh, 2010). Table 4 shows the split of Standard Maritime Phrases into Part A and Part B (IMO, 2002) (SMCP Book, 1995).

As seen in the table above, the IMO SMCP book's material is split into two halves, designated as part A and part B. In-depth discus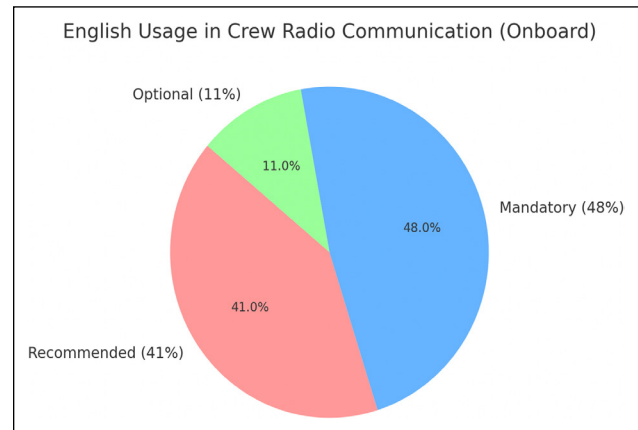sion of external communication terms such as "distress communication," "search and rescue (SAR), "request for medical assistance," "urgent traffic," "safety communication," "meteorological and hydrological conditions," and "navigational warnings involving environmental protection communications" is provided in part A of the International Maritime Organization's Standard Marine Communication Phrases (Park and Choe, 2015) which transfer from vessel traffic service (VTS) to another vessel traffic service. Part B of IMO Standard Marine Communication Phrases also focuses on onboard communication, including operational ship handling, handling over the watch, safety onboard, operational safety, damage control, SAR onboard activities, cargo handling, cargo care, and passenger care (Wójcik et al., 2016).

5.2. The essential of using SMCP for internal and external communication

In the workplace, especially onboard ships or on land, communication between internal and external interests becomes essential. English is utilized since it is a universally recognized official and legal language. Achieving effective radio communication becomes the top objective to prevent maritime mishaps and disasters. Based on the results of the surveys, it is possible to determine the type of SMCP on actual ships. Based on the reviewed papers, it was discovered that there were differences in the percentages of onboard and external communication settings that used SMCP as optional, recommended, and obligatory. The information about the use of SMCP in external communication is shown in Figure 4 below (Mujiyanto et al., 2023).

According to the diagram, using SMCP for external communication is 9% optional, 26% recommended, and 65% required. As a result, because a seafarer's work is associated with foreign crew and vessels, English must be spoken whenever there is radio transmission on board a ship. Plotting the navigational route and performing berthing and un-berthing, anchorage, docking, bunkering, etc. are all part of the task at hand. The information about the use of SMCP for on-board communication is shown in Figure 5 below (Mujiyanto et al., 2023).

The graph above demonstrates the variations in English usage in crew radio communication, particularly for onboard communication. 41% of respondents selected recommended, 48% selected mandatory, and 11% selected optional. In comparison to the data on external communication above, this percentage is very different. In other words, each vessel has a unique set of call signs, a Maritime Mobile Service Identity (MMSI) number unique to that vessel, and a seaworthy document.

5.3. Language barriers and cultural differences
Additionally, these communication problems are brought on by linguistic and cultural limitations. In addition to "human obstacles," there are regional variations in the English language and word meanings (Sukomardojo, 2022). Most of these expressions have to do with berthing and emergencies. The mariners can improve their foundational English skills by learning these expressions. Therefore, these words and phrases used at work and in practical sectors must be familiar to mariners. The truth is that seafarers require a common vocabulary for usage in the workplace (John, Brooks and Schriever, 2017; Haryani et al., 2022). Seafaring is a profession connected to a global maritime career. As a matter of fact, international and multicultural crews are a staple of contemporary nautical and shipping activities. To bridge amicable gaps and reduce disputes at work through efficient communication, the Marine and shipping industries require professionals with intercultural communicative competence (ICC) (Ahmed, 2013; Acar and Varsami, 2021).

For a safe evacuation, the seamen must be able to communicate with the terrified passengers. The seafarers will not be aware of the areas where they should not discard non-biodegradable items, oil, or plastic if the IMO convention on reducing marine pollution is not translated into all languages (Sarkodie et al., 2018). Top management should maintain constant communication with lower-level seafarers and employees, holding regular meetings to discuss English maritime communication and closely monitoring any problems that arise (Haryani et al., 2022).

5.4. Education system and status
The ME has not been fully incorporated into school and technical education due to flaws in the system. Various institutes produce different ME levels and attitudes. Additionally, trainees are trained by personnel who are lacking in practical experience. Because of this, Maritime English communication in daily life receives little widespread societal attention (Sarkodie et al., 2018).

In the past, ME had little success in getting the public's attention, and families also have little impact on interpersonal interactions. MEC receives little media coverage as a result (Ahmed, 2013). People are less concerned about MEC in their surroundings due to these considerations (in school and at home). People are, however, very focused on money because of their heavy familial responsibilities and the social pressure to maintain high standards of life (Haryani et al., 2022). Marine workers earn fairly high salaries; thus, they are hesitant to take

responsibility for things like maritime mishaps brought on by poor communication out of fear of losing their employment in the event of carelessness (John, Brooks and Schriever, 2017). Finally, most Iraqis Iraqis avoid talking in English because they feel embarrassed when they make mistakes in other languages (Acar and Varsami, 2021).

6. CONCLUSION

Several important findings in the use of SMCP are underscored through this literature analysis in this research. The study indicates that application of SMCP in real setting is inconsistent and sometimes inadequate despite the establishment of SMCP as a standardized communication tool by the International Maritime Organization (IMO). The gaps in SMCP usage and training are found and analyzed. The findings reinforce the significant need for improved training programs that are in line with the realities of modern maritime operations. Current study offers precious guidance for policymakers, educators, and industry stakeholders by revealing practical solutions to promote SMCP adherence. Moreover, the study adds a new dimension to the research by insisting on the intersection of language proficiency, intercultural communication, and maritime safety. There is an emphasis on holistic approach of maritime education to address technical and human factors.

The insights provided in the current study can affect future training programs and education policies by identifying the key factors that contribute to the improper use of SMCP. The challenges identified in the literature are directly addressed by expressing the significance of practical, simulation-based training and the urgent need for intercultural communication. The present study extends the goal of improving maritime safety by advancing communication practices. It provides a clear path for future studies to better the communication standards in the maritime industry by highlighting the areas where there is a lack of SMCP use. The recommendations in this study can serve as a basis for further research and development in this area, ultimately contributing to safer and more efficient maritime operations.

6.1. Misuse and non-compliance with SMCP
Misuse and non-compliance with SMCP among seafarers, especially in onboard communication was indicated in the literature review. The survey results showed that while a majority of respondents (48%) recognize the mandatory nature of SMCP, a substantial portion (41%) view its use as recommended, and a small percentage (11%) consider it optional. Varying understanding and application cause a gap in training and enforcement, which could lead to serious implications for maritime safety.

There are numerous reasons beyond misuse of SMCP such as insufficient training, lack of awareness, and the impact of intercultural communication barriers. The literature review supports these findings, with multiple studies showcasing human error, communication breakdowns, and cultural differences as major contributors to maritime accidents. For

instance, the work of Mujiyanto et al. (2023) indicates the challenges of teaching SMCP through conventional language instruction, which may not properly prepare seafarers for the complex communication scenarios they encounter at sea.

6.2. Implications for maritime training institutions

Maritime Educational and Training (MET) institutions are committed to ensure that seafarers are well-prepared to use SMCP properly. Findings of this literature study warn MET institutions to reevaluate their current training curricula and take more practical, hands-on training opportunities into consideration. Collaborations with shipping companies to provide real-life training experiences and feedback mechanisms could be an effective way to bridge the gap between classroom learning and real-world practice.

Additionally, these institutions must draw their attention to cultural diversity of trainees and revise the modules to lessen the intercultural communication challenges. This can aid seafarers to easier develop and apply the skills required to navigate the complexities of multilingual and multicultural environments at sea.

6.3. Recommendations for future studies

Developing and testing innovative training methodologies that go beyond traditional classroom instruction must be the core focus of future studies. More importantly, expanding and evaluating the integration of simulation-based training, as highlighted in the conclusion, is extremely crucial. The effectiveness of virtual reality (VR) and augmented reality (AR) environments in enhancing SMCP competency among seafarers is another critical area for future researchers. These technologies offer immersive, realistic training scenarios that can better prepare trainees for real-world communication challenges.

Based on the findings of the current study, investigating the influence of intercultural communication training on the effective use of SMCP can be another future research challenge. Multinational maritime industry can improve the effectiveness of their programs by considering how cultural factors influence communication. Lastly, comparative studies across different regions and maritime institutions could bring about insights leading to best practices for SMCP education.

NOTE

The author initiated this review study while holding the position of Assistant Professor at Piri Reis University, Istanbul. The study is completed under the author's current affiliation with Istanbul Nişantaşı University.

DATA AVAILABILITY STATEMENT

The published publication includes all graphics and data collected or developed during the study.

CONFLICT OF INTEREST

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

ETHICS

There are no ethical issues with the publication of this manuscript.

USE OF AI FOR WRITING ASSISTANCE

No AI technologies utilized.

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REFERENCES

Acar, U. and Varsami, C. (2021). Practical Communication Approach in Maritime English. TransNav. *International Journal on Marine Navigation and Safety of Sea Transportation, 15*(3), 601–604. [CrossRef]

Ahmed, H. J. (2013). *The impact of maritime English communication training for non-native English language speakers concerning the competency of seafarers: Iraqi maritime sector case study* [Dissertation]. World Maritime University.

Anurag, C., A. Gaurav, and J. Meghna (2014). A review on applications of smart class and e-learning. *International Journal of Scientific Engineering and Research, 2*, 79–80. [CrossRef]

Ahmmed, R. (2018). The Difficulties of Maritime Communication and the Roles of English Teachers. https://www.researchgate.net/publication/327890958_The_Difficulties_of_Maritime_Communication_ nd_the_Roles_of_English_Teachers.

Apostol-Mates, R., & Barbu, A. (2015). *Is maritime english the key in solving communication problems within multinational crews?*. In International Conference Knowledge-based Organization (Vol. 21, No. 2, pp. 541–544). [CrossRef]

Barsan, E., Surugiu, F. and Dragomir, C. (2012). Factors of human resources competitiveness in maritime transport. *International Journal on Marine Navigation and Safety of Sea Transportation, 6*(1), pp.89-92.

Berg, H. P. (2013). Human factors and safety culture in maritime safety. *International Journal on Marine Navigation and Safety Culture in Maritime Safety, 107*, 107–115. [CrossRef]

Bin Mohd Rosedi, S. R., Sap, M. A. B. M., & Oommen, C. P. G. (2015). *Aligning occupational, national and global standards in maritime english competency: a preliminary study on standard marine communication phrases (smcp)*. International Maritime English Conference 2015 (IMEC 27)At: Johor Bharu, Johor Darul Takzim, Malaysia.

Bloor, M. and Sampson, H. (2009). Regulatory enforcement of labour standards in an outsourcing globalized industry: the case of the shipping industry. *Work, Employment and Society, 23*(4), 711–726. [CrossRef]

Bocanegra-Valle, A. (2010). *Global markets, global challenges: The position of maritime English in today's shipping industry*. English in the European context: The EHEA challenge, 151–174.

Boris, P. (2004). *A databank of maritime english resources*, 16th International Maritime English Conference, 26–27.

Boström, M. (2020). Mind the Gap! A quantitative comparison between ship-to-ship communication and intended communication protocol. *Safety Science, 123*, Article 104567. [CrossRef]

Chauvin, C., Lardjane, S., Morel, G., Clostermann, J. P. and Langard, B. (2013). Human and organizational factors in maritime accidents: Analysis of collisions at sea using the HFACS. *Accident Analysis & Prevention, 59*, 26–37. [CrossRef]

Cole, C., & Trenkner, P. (2008). *The yardstick for maritime English STCW assessment purposes*. In Proceedings of IMLA 16th Conference (pp. 163–173).

Demydenko, N. (2012). Teaching maritime English: A linguistic approach. *Journal of Shipping and Ocean Engineering, 2*(4), Article 249.

Ding, J., & Liang, G. (2005). The choices of employing seafarers for the national shipowners in Taiwan: an empirical study. *Maritime Policy & Management 32*(2), 123–137. [CrossRef]

Dirgeyasa, I. W. (2018). The need analysis of maritime english learning materials for nautical students of maritime academy in indonesia based on STCW'2010 curriculum. *English Language Teaching, 11*(9), Article 41. [CrossRef]

Davy, J. G., & Noh, C.-K. (2010). A basic study on maritime english education and the need for raising the instructor profile. *Journal of Navigation and Port Research, 34*(7), 533–538. [CrossRef]

Frolova, O. O. (2020). Integrating standard marine communication phrases into maritime english Course. *Pedagogy of the Formation of a Creative Person in Higher and Secondary Schools, 2*(68), 212–215. [CrossRef]

Haralambides, H. E. (2019). Gigantism in container shipping, ports and global logistics: a time-lapse into the future. *Maritime Economics & Logistics, 21*(1), 1–60. [CrossRef]

Haryani, H., Mujiyanto, J., Hartono, R., & Yuliasri, I. (2022). *English communication skill used by indonesian seafarer on radio communication*. In English Language and Literature International Conference (ELLiC) Proceedings (Vol. 5, pp. 627–634).

Hoel, T., & Mason, J. (2018). Standards for smart education– towards a development framework. *Smart Learning Environments, 5*, 1–25. [CrossRef]

Hetherington, C., Flin, R., & Mearns, K. (2006). Safety in shipping: The human element. *Journal of Safety Research, 37*(4), 401–411. [CrossRef]

International Maritime Organization. (2010). *IMO Model Course 3.17. Maritime English*. International Maritime Organization (IMO), Article 138.

International Maritime Organization. (2010). *ISM Code*. International Maritime Organization.

Jacks, D. S., & Pendakur, K. (2010). Global trade and the maritime transport revolution. *The Review of Economics and Statistics, 92*(4), 745–755. [CrossRef]

John, P., Brooks, B., & Schriever, U. (2017). Profiling maritime communication by non-native speakers: A quantitative comparison between the baseline and standard marine communication phraseology. *English for Specific Purposes, 47,* 1–14. [CrossRef]

Losey-León, M. A. (2000). *Facing new changes in the maritime English curriculum: tasks' design towards the acquisition of the standard marine communication phrases*. 2nd International Congress on Maritime Technological Innovations and Research, Cádiz, Spain.

MCA. (2016). Navigation: Watchkeeping Safety–Use of VHF Radio and AIS. Maritime and Coastguard Agency. https://www. gov.uk/government/publications/ mgn-324-mf-navigation-watchkeeping-safety-use-of-vhf-radio

Michail, N. A. (2020). World economic growth and seaborne trade volume: quantifying the relationship. *Transportation Research Interdisciplinary Perspectives, 4*, Article 100108. [CrossRef]

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

Mujiyanto, J., Hartono, R., & Yuliasri, I. (2023). The essential of using standard marine communication phrases in avoiding accidents at sea for indonesian seafarers. *International Journal of Education, Vocational and Social Science, 2*(02), 51–67.

James, A. J., Schriever, U. G., Jahangiri, S., & Girgin, S. C. (2018). Improving maritime English competence as the cornerstone of safety at sea: a focus on teaching practices to improve maritime communication. *WMU Journal of Maritime Affairs, 17*(2), 293–310. [CrossRef]

Kovacevic, S. (2014). Maritime English Language Restrictedness. *European Journal of Social Sciences Education and Research, 2*(1), Article 89. [CrossRef]

Papastergiou, S., Kalogeraki, E. M., Polemi, N., & Douligeris, C. (2021). *Challenges and issues in risk assessment in modern maritime systems. Advances in Core Computer Science-Based Technologies*. Papers in Honor of Professor Nikolaos Alexandris, 129–156. [CrossRef]

Park, J. S., & Choe, S. H. (2015). *Workshop: IMEC and computer dialogue teaching approach in VHF communication*. In Proceedings of the Korean Institute of Navigation and Port Research Conference (pp. 233-236). Korean Institute of Navigation and Port Research.

Pyne, R., & Koester, T. (2005). Methods and means for analysis of crew communication in the maritime domain. *Archives of Transport, 17*(3-4), 193–208.

Rodrigue, J. P. (2010). *Maritime transportation: drivers for the shipping and port industries* (No. Forum Paper 2). ITF.

Rosedi, S. R. B. H. M., bin Dahari, C. M., & bin Mohd Said, K. (2015). The need to incorporate inaesthetic learning as one of primary methods in maritime English/communication classes. *Asian TEFL International Conference, 4*, 181–202.

Rothblum, A. (2000). *Human Error and Marine Safety, US Coast Guard research& Development Center*. In Maritime Human Factors Conference.

Sampson, H., & Zhao, M. (2003). Multilingual crews: communication and the operation of ships. *World Englishes, 22*(1), 31–43. [CrossRef]

Seor, J. K., & Park, Y. S. (2020). A study on the educational efficacy of a maritime English learning and testing platform. *Journal of the Korean Society of Marine Environment & Safety, 26*(4), 374–381. [CrossRef]

Sotiralis, P., Ventikos, N.P., Hamann, R., Golyshev, P. and Teixeira, A. P. (2016). Incorporation of human factors into ship collision risk models focusing on human centred design aspects. *Reliability Engineering & System Safety, 156*, 210–227. [CrossRef]

Sari, D. P., & Aprizawati, A. (2019). The effect of standard marine communication phrases application through english for maritime ability. *Inovish Journal, 4*(2), 119–130. [CrossRef]

Şihmantepe, A., Beşikçi, E. B., & Özsever, E. (2019). Efficiency of IMO SMCP for safe navigation at sea: needs and challenges. *Young Scientist, 71*(2), Article 25.

Sarkodie, P. A., Zhang, Z. K., Benuwa, B. B., Ghansah, B., & Ansah, E. (2018). A survey of advanced marine communication and navigation technologies: Developments and strategies. *International Journal of Engineering Research in Africa, 34*, 102–115. [CrossRef]

Sukomardojo, T. (2022). The using of media games to improve smcp (standard marine communication phrases) vocabulary in maritime English. *International Journal of Entrepreneurship and Business Development, 5*(6), 1056–1064. [CrossRef]

Takagi, N., & Björkroth, P. (2015). *Using Computer Dialogue Systems for Providing a Student-Centred Teaching Approach in SMCP-Based Maritime Communication (workshop)*. Hochschule Flensburg University of Applied Sciences.

Trenkner, P. (2005). *The IMO Standard Marine Communication Phrases–refreshing memories to refresh motivation*. In Proceedings of the IMLA 17th International Maritime English Conference (pp. 1–17).

Ung, S. T. (2019). Evaluation of human error contribution to oil tanker collision using fault tree analysis and modified fuzzy Bayesian Network based CREAM. *Ocean Engineering, 179*, 159–172. [CrossRef]

Vangehuchten, L. (2010). *Communication for maritime purposes: a research project focusing on linguistic and intercultural features*. In Proceedings of the 22nd International Maritime English Conference (pp. 122–140).

Velikova, G. V. (2009). *Maritime English testing current state of affairs*. Vaptsarov Naval Academy Proceedings.

Vidhiasi, D. M., & Syihabuddin, S. (2022.) Maritime English: Teaching English for Maritime Sciences or Teaching Maritime Sciences in English?. *Saintara: Jurnal Ilmiah Ilmu-Ilmu Maritim, 6*(1), 71–77. [CrossRef]

Valle, A. B. (2011). The language of seafaring: Standardized conventions and discursive features in speech communications. *International Journal of English Studies, 11*(1), 35–53. [CrossRef]

Weng, J., Yang, D., Chai, T., & Fu S. (2019). Investigation of occurrence likelihood of human errors in shipping operations. *Ocean Engineering, 182*, 28–37. [CrossRef]

Wójcik, A., Hatłas, P., & Pietrzykowski, Z. (2016). Modeling communication processes in maritime transport using computing with words. *Archives of Transport System Telematics, 9*(4), 47–51.

Yıldırım, U., Başar, E., & Uğurlu, Ö. (2019). Assessment of collisions and grounding accidents with human factors analysis and classification system (HFACS) and statistical methods. *Safety Science, 119*, 412–425. [CrossRef]

Yurzhenko, A. Y. (2019). An e-course based on the LMS moodle to teach "Maritime English for professional purpose", *Information Technologies and Learning Tools, 71*(3), Article 92. [CrossRef]

Ziarati, M., Ziarati, R., Bigland, O. & Acar, U. (2012). *Communication and practical training applied in nautical studies*. Coventry: Coventry University Technology Park.