



MISCOMMUNICATION IS ONE OF THE MAJOR CAUSES OF MARITIME ACCIDENTS: THE IMPORTANCE OF MARITIME ENGLISH TEACHING IN THE MARINE ACADEMIES

Eirini Nektaria Trikoili¹ⁱ,

Dimitrios Papazoglou²

¹Maritime English Language Teacher,
Merchant Marine Academy of Kalymnos,
Greece

²Merchant Marine Engineer Teacher,
School of Higher Vocational Training,
Kalymnos, Greece

Abstract:

Language constitutes a fundamental component in ensuring maritime safety. Despite the fact that maritime English is the lingua franca onboard, misunderstandings still occur very often, posing significant risks to nautical safety. Miscommunication has been widely recognized as one of the major causes of maritime accidents, often leading to collisions, grounding and loss of life. The multinational nature of crews with diverse linguistic backgrounds further exacerbates communication challenges onboard vessels. Although International Maritime Organization (IMO) conventions require seafarers to possess very good English skills, inappropriate communication among them leads to marine accidents. This article explores the role of miscommunication in such accidents and highlights the importance of Maritime English Education in marine academies. Through a review of relevant literature and analysis of three major real accident causes, this paper aims to demonstrate that ineffective communication -especially via VHF radio and onboard coordination- remains a persistent safety issue. The maritime accident investigation reports reveal that ambiguous communication and insufficient English language proficiency remain significant contributing factors to maritime incidents. Taking into consideration the fact that Maritime English is a mandatory part of the education of officers in all training institutions worldwide, this paper concludes with pedagogical recommendations for improving communication competence among seafarers, especially during emergency situations, so as to mitigate accidents. Ultimately, the main goal of maritime English must be to reduce significantly communication-related maritime accidents through concrete and pedagogically grounded recommendations, thereby contributing to enhanced safety of life at sea. The study contributes to understanding the interconnection between Maritime English language training and

ⁱ Correspondence: trikoili.irene@gmail.com

maritime safety, proposing the development of more effective training programs to address the linguistically complex demands of maritime environments.

Keywords: miscommunication, maritime accidents, maritime safety, Maritime English pedagogical recommendations

1. Introduction

The maritime industry is one of the most multinationalised sectors in the world, employing seafarers from diverse linguistic and cultural backgrounds. Within this context, effective communication is a prerequisite for safe navigation and operation. Communication at sea entails complex interactions, such as bridge team coordination, pilot-master exchanges, reporting malfunctions and VHF radio communications with other vessels and shore authorities. When these interactions are ambiguous and, thus, misunderstood, the consequences can be catastrophic. In order to address this issue, the following frameworks and conventions emphasize the importance of Maritime English as a mandatory requirement for ensuring crew and vessel safety. International Maritime Organization (IMO), Standards of Training, Certification and Watch-keeping for Seafarers (STCW), Safety of Life at Sea (SOLAS) and International Safety Management (ISM) code. *“This means that the English of engineers is just as important as the English of navigation officers in preventing accidents”* (Jeon *et al.*, 2022). Despite the mandatory teaching of Maritime English in the Maritime Academies worldwide, real-world accidents continue to happen, often linked to human error and miscommunication due to inadequate training. The persistent presence of recurrent communication failures in real-accident investigation reports reveals the practical insufficiency of seafarers’ language training. Nautical communication risks can be caused by a variety of reasons (such as ambiguous orders, cognitive differences and cultural diversities) and can lead to various devastating results (such as vessel casualties and personnel casualties).

2. Literature Review

2.1 English as a Safety Instrument in the Maritime Industry

SOLAS, IMO, SMCP and STCW have designated English as the official language of maritime communication. These regulations require seafarers of all ranks (ratings, officers keeping navigational or engineering watch, senior officers) to communicate clearly and precisely in various shipping situations, including routine operations, emergencies and ship-to-shore communications. What is more, adequate knowledge and accurate use of Standard Marine Communication Phrases is a mandatory requirement for the certification of all officers of 500 gross tonnage vessels and above (International Maritime Organization, 2001). All the aforementioned regulations establish the importance of Maritime English as a prerequisite in ship-to-ship and ship-to-shore safety communications. As Dominiguez-Pery *et al.* (2023) put it, these requirements accentuate

the pivotal role of Maritime English as a safety instrument in the maritime industry. English is far more than a practical working language of seafarers; it facilitates smooth shipping operations, thus safeguarding the safety of vessels and human lives.

2.2 Statistics Show that Miscommunication is the Major Cause of Maritime Accidents

Despite the technological advances in shipping and the worldwide emphasis given on the importance of Maritime English, communication failures remain one of the leading factors of maritime accidents. According to Gbedava & Hu (2025), a significant proportion of maritime accidents are linked to misunderstandings and inadequate language proficiency. Those communication breakdowns are exacerbated in high-stress situations, where accurate and precise communication is essential. Moreover, Ziarati *et al.* (2011) conducted research which established that the competency of the English language among crew members is very low, resulting in ineffective communication, which has been identified as the major cause of many maritime accidents.

The significance of miscommunication as the number one contributor to maritime accidents is further underscored by numerous alarming statistics. To begin with, based on IMO data, approximately 80% of maritime incidents relate to communication failures (Sanchez- Beaskoetxea *et al.*, 2021). According to this research, language barriers and misunderstanding of orders represent a systematic problem in maritime safety. What is more, reports from national maritime investigation bodies demonstrate that inadequate use of maritime English in emergency situations can lead to serious accidents (Gbedava & Hu, 2025). Furthermore, studies conducted by the United States Coast Guard reveal that human error contributes to 84-88% of tanker accidents, 79% of towing vessel groundings, 89-96% of collisions, 75% of allisions and 75% of fire and explosions (Hasanspahić *et al.*, 2021). Last but not least, according to accident reports for the period 2011-2021, miscommunication was the most significant factor of maritime accidents (Dominguez- Pery *et al.*, 2023). The following section analyses reports of three well-known accidents due to miscommunication that happened during the aforementioned decade.

3. Material and Methods

The aim of this paper is twofold: firstly, to analyze the extent to which miscommunication is regarded as one of the main causes of maritime accidents and secondly, to value the importance of Maritime English teaching in mitigating such accidents. Thus, first, this paper starts by describing the paramount importance of English in ensuring safety on board. Next, we present a literature review of research statistics which demonstrate that miscommunication is indeed one of the most common reasons for maritime accidents. After that, we review three major well-known vessel accidents caused by communication errors. By closely examining these three cases, this article seeks to extract valuable insights into the nature of communication risks in maritime discourse and identify pedagogical strategies for improvement, which is basically the final part of this paper.

4. Results and Discussion

Throughout the last two decades, numerous accidents have been recorded; in most cases, the main reason was communication failure. This paper analyses three such cases. These accidents illustrate how even minor misunderstandings can escalate into major nautical disasters.

4.1 Collision of MV Stena Feronia with MV Union Moon

On the 7th of March 2012 at 18:58, the inbound ferry Stena Feronia collided with the outbound general cargo vessel Union Moon at Belfast Harbour fairway. *“In the Stena Feronia collision, communication failures accounted for approximately 60% of the contributing factors, with unclear VHF communications and delayed response times being primary issues”* (Gabedava & Hu, 2025). The VHF information transmission was inaccurate. Also, the emergency instructions and the risk warnings were inconsistent. Lastly, the potential risk for collision lacked clear wording.

4.2 Grounding of the Cruise Ship Hamburg

On the 11th of March 2015 at 13:28, the Bahamas-registered cruise ship Hamburg ran aground on rocks in Scotland. *“In the Hamburg grounding incident, communication-related problems constituted roughly 45% of the contributing factors, primarily stemming from inadequate bridge team communication and failure to convey critical information to the captain”* (Gabedava & Hu, 2025). The language barriers among the bridge team, together with the confusion in dialogue with neighbouring ships, led to an agreement to follow an unsafe passage plan that deviated from the International Regulations for Preventing Collisions at Sea.

4.3 Fatal Collision of Cruise-ship Costa Concordia

On the 13th of January 2012 at 21:45, the cruise vessel Costa Concordia struck rocks at Isola del Giglio in the Tyrrhenian Sea. According to the official report by the Italian Ministry of Infrastructure and Transport (2013), communication failure was the most critical collision factor. Although the majority of the passengers spoke English fluently, most of the crew members were unable to express themselves effectively in English, thus giving unclear instructions, creating additional obstacles during the evacuation of 4.229 persons (3.206 passengers and 1.023 crew members) and resulting in 32 fatalities and 157 injuries.

5. Recommendations

Based on the aforementioned analysis of real marine accidents and the literature research results, it becomes clear that communication difficulties can lead to significant marine accidents that can threaten lives onboard. Therefore, there is an urgent need to train seafarers to meet the complex communication requirements to avoid such incidents. The

aim of this section is to propose pedagogically grounded approaches to teaching Maritime English in the Academies worldwide, with emphasis on communicative competence in emergency situations. In the subsections that follow, those pedagogical propositions are analyzed thoroughly.

5.1 Teaching Maritime English Applicable to Real-Life Situations

The role of Maritime English must go beyond basic maritime language skills and focus on practical communication, situational awareness and decision making, thus, bridging the gap between theoretical linguistic knowledge and practical application in real-life onboard situations, especially under pressure. Maritime English curricula should integrate SMCP phraseology in a realistic context with emphasis on the practical application of the taught terminology in realistic scenarios. The integration of simulation-based training can also help towards this direction. As Chauvin *et al.* (2009) pointed out in pedagogical research they conducted, cadets' competence improved by 30% to 40% after attending simulated-based training programs which incorporated realistic emergency scenarios. Moreover, Virtual Reality (VR) and Augmented Reality (AR) maritime training can also effectively prepare seafarers for the real onboard challenges. Based on a research study performed by Mallam *et al.* (2019), integration of VR and AR technological applications in maritime education create valuable, applicable opportunities for language practice in controlled, yet highly realistic working conditions. Lastly, the use of authentic technical texts in the curriculum can decrease the potential of miscommunication during operational errors (Sari *et al.*, 2026).

5.2 Restructuring Maritime English Curriculum with Focus on Functional Competence

Maritime English is usually taught with the traditional approach, which basically means relying heavily on grammatical accuracy and mechanical learning of SMCP. According to research carried out by Hetherington *et al.* (2006), the primary cause of misunderstandings in maritime accidents is functional- communicative failures, not grammatical errors. In other words, functional communicative effectiveness should be given more emphasis rather than grammatical perfection. The maritime English curriculum should enhance cadets' confidence to communicate, even with a few errors, without fear of making mistakes. Rote knowledge of maritime terminology is insufficient if it is not combined with the ability and confidence to employ it effectively in dynamic problem-solving contexts. Also, it will be useful to give emphasis on teaching strategic skills, such as asking for repetition, paraphrasing and confirming instructions to ensure understanding.

5.3 Integration of Intercultural Communicative Competence

The multicultural nature of marine crews calls for intercultural competence. Simply sharing a common working language, Maritime English, is not enough. Research has revealed that cross-cultural differences can create additional communication barriers (beyond linguistic ones), which can lead to marine accidents (Dominguez-Pery *et al.*,

2023). Inter-cultural differences in issues of directness, politeness, respect and body-language can easily cause great misunderstanding, jeopardizing safety if not taken into consideration. Integrating cross-cultural scenario-based simulations of potential misunderstandings, due to cultural communication conflicts, could enhance seafarers' interpersonal skills.

5.4 Maritime English Instructors Lifelong Training

Simply restructuring the Maritime English curricula in the aforementioned ways will not be effective if it is not also accompanied by lifelong training of the Maritime English instructors. Apart from possessing maritime linguistic proficiency, Maritime English teachers must be continuously trained on the following aspects: seafaring simulation, intercultural communication theories and practices, understanding of basic maritime operations, emergency work specifics and stress performance under pressure. Being competent with all this knowledge, the instructors will be more effective in teaching all the valuable skills to their students.

5.5 Limitations of this Study and Future Research Perspectives

Based on real maritime accidents, this study recognizes the importance of Maritime English and proposes linguistic-concrete strategies to mitigate these risks. Of course, it is acknowledged that, due to the word limitation of this paper, it was inevitable to analyze all historical accidents as they are unfortunately numerous. It is expected that this study will not only deepen the importance of Maritime English but also exhort future research on this matter in order to provide valuable information for improving seafarer training courses. Future research perspectives could also include surveys and follow-up performance evaluations of seafarers a few years after completing their academic training. The authors of this paper advocate for a paradigm shift in worldwide Maritime English training curricula that shall embrace language-focused skills as integral components of risk mitigation strategies. This calls for concerted efforts from educators, maritime practitioners, ministries and policy-makers to invest in targeted linguistic training and conduct life-long research to stay up to date with the continuous changing of the global maritime field. By acting together, we can utilize the power of language to support maritime safety and safeguard both people and vessels.

6. Conclusion

Taking all the above into consideration, one can conclude that miscommunication remains one of the most significant causes of maritime accidents, posing severe threats to safety at sea. The analysis of real accident cases demonstrates that communication breakdowns can be devastating and life-threatening even when operational systems are functioning properly. The importance of Maritime English education in marine academies worldwide cannot be overstated. As Trenkner (2013) stresses, Maritime English is not only a professional prerequisite for seafarers; it is also a vital safety tool in

preventing accidents at sea. Safe navigation, coordination and emergency response depend on effective communication skills. Although standard regulations and frameworks exist and are systematically applied, there is a clear need for improved training and implementation. Ultimately, this paper reinforces the notion that Maritime English is not only a terminology-based subject, but a dynamic set of communicative practices demanded for the operational safety of the maritime industry. Thus, enhancing Maritime English education is essential not only for seafarers' academic success but also for significantly reducing the risk of accidents and improving marine safety on a global scale. We cannot change maritime history and revive the numerous fatalities, but we can definitely learn from history and use these accidents as a stepping stone for avoiding future catastrophic accidents and make life onboard a safer place.

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Conflict of Interest Statement

The authors declare no conflicts of interest.

About the Authors

Eirini Nektaria Trikoili is an English language teacher. She received her Bachelor's degree in English Language and Literature from the University of Portsmouth, UK and her Master's degree in Applied Linguistics and Teaching English as a Foreign Language from the same university. She also holds a Certificate of Teaching English as a Foreign Language to Adults from the same University. She was active in teaching English as a foreign language in the private sector from 2005 to 2013. From 2014 to 2017 she taught at public high schools. Since 2018, she has been teaching Maritime English at the Marine Academy of Kalymnos, Greece.

Dimitrios Papazoglou is a Merchant Marine Engineer Teacher. He graduated from the Merchant Marine Academy of Macedonia. He has a Teaching Certificate from the School of Pedagogical and Technological Education (ASPETE) of the University of Ioannina and a Master's degree in Energy Investments and Environment from the University of Western Macedonia. From 2013 to 2024, he taught Merchant Marine Engineering in Technical and Vocational High Schools. Since 2024, he has been working at the School of Higher Vocational Training (SAEK) in Kalymnos.

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