JoAL
Journal of Applied Linguistics

JOURNAL OF APPLIED LINGUISTICS
Vol. 5 No. 2 , January 2026
e- ISSN 2809 - 1922 , p-ISSN 2809 - 1914
Available online at:
tps://journal.eltaorganization.org/index.php/joal/index

The Use of maritime alphabet in Maritime English : A literature Review

Yusrah [1]*, Piping Rahadianto[2]
[1,2] Prodi Sistem Kelistrikan Kapal, Politeknik Pelayaran Malahayati, Indonesia

***Correspondence Email: yusrah.mpd@gmail.com**

ARTICLE INFO

Article History:
Received : December 13, 2025
Reviewed : December 20, 2025
Revised : December 22, 2025
Accepted : December 22, 2025
Available online : December 26, 2025

Keywords:

Maritime Education;
Phonetic Alphabet;
Professional Communication

Abstract

Effective communication is a fundamental requirement in maritime operations, where clarity and accuracy are essential to ensuring safety at sea. One key element supporting this objective is the Maritime Alphabet, also known as the NATO phonetic alphabet, which standardizes oral communication among seafarers from diverse linguistic backgrounds. This literature review examines the role of the Maritime Alphabet in English language learning within maritime education contexts. The review analyzes 20 selected sources, including peer-reviewed journal articles, International Maritime Organization (IMO) conventions and guidelines, and Maritime English textbooks published between 2015 and 2024, drawing on pedagogical frameworks in English for Specific Purposes (ESP) and Maritime English. The findings indicate that integrating the Maritime Alphabet into Maritime English instruction enhances pronunciation accuracy, listening comprehension, and learners' confidence in oral communication. Furthermore, its integration with the Standard Marine Communication Phrases (SMCP) supports the development of professional communicative competence required by international maritime standards. The literature also highlights that simulation-based, task-oriented, and blended learning approaches significantly improve cadets' engagement and practical communication performance. Despite these benefits, challenges remain, including persistent pronunciation difficulties among non-native speakers, limited exposure to authentic communication contexts, and insufficient instructional resources. Overall, this review underscores the Maritime Alphabet as a core component of Maritime English pedagogy, contributing to the development of standardized communicative competence essential for safety and professionalism in maritime education.

INTRODUCTION

English plays a vital role in maritime communication as it functions as the international language of the sea under the conventions of the International Maritime Organization (IMO) (Trenkner, 2013). To ensure safety and efficiency in global maritime operations, seafarers must communicate clearly and accurately despite differences in linguistic background. One essential component supporting this objective is the Maritime Alphabet also known as the International Radiotelephony Spelling Alphabet (IRSA) or the NATO Phonetic Alphabetwhich standardizes

Published by English Lecturers and Teachers Association (ELTA)

DOI: 10.52622/joal.v5i2.595

the pronunciation of letters to prevent misunderstanding in oral communication (International Telecommunication Union, 2019). This system is particularly critical for transmitting ship names, call signs, coordinates, and safety-related messages in both routine and emergency situations, where miscommunication may lead to serious operational consequences (International Civil Aviation Organization, 2004).

Within maritime education, the Maritime Alphabet serves not only as an operational communication tool but also as an effective pedagogical resource for developing students' listening, speaking, pronunciation, spelling accuracy, and oral confidence. As maritime students are prepared to work in international and multilingual environments, mastery of the Maritime Alphabet constitutes an indispensable element of communicative competence in Maritime English. Cole and Trenkner (2014) emphasized that effective maritime communication underpins safe navigation, as communication failures are a frequent cause of accidents at sea. Accordingly, the integration of maritime-specific communication tools, such as the Standard Marine Communication Phrases (SMCP) and the Maritime Alphabet, has been recognized as an essential component of English for Specific Purposes (ESP) instruction in maritime contexts (Kaur, 2015; IMO, 2001).

Despite its acknowledged operational importance, existing research has predominantly focused on the SMCP and general maritime vocabulary, while the pedagogical role of the Maritime Alphabet in English language learning remains insufficiently examined. Pritchard (2016) noted that although the Maritime Alphabet is routinely used in professional communication, it is often treated as a supplementary skill rather than a structured instructional component in Maritime English curricula. Similarly, Jin and Cortazzi (2018) observed that ESP instruction in maritime institutions tends to prioritize grammar and technical terminology over systematic training in operational oral communication. This imbalance reveals a clear research gap: there is a lack of comprehensive literature reviews that specifically analyze how the Maritime Alphabet functions as a pedagogical tool, its instructional benefits, and the challenges associated with its classroom implementation in maritime education and training institutions.

In response to this gap, this literature review aims to analyze and synthesize previous studies and theoretical perspectives on the use of the Maritime Alphabet in English language learning for maritime students. The review seeks to examine its pedagogical value, identify instructional benefits and challenges, and assess its contribution to achieving the objectives of English for Specific Purposes (ESP) in maritime education. To guide this analysis, the study addresses the following research questions: (1) How is the Maritime Alphabet implemented in English language learning for maritime students? (2) What challenges do students and instructors encounter in applying the Maritime Alphabet during English language instruction? (3) How does the integration of the Maritime Alphabet support the objectives of ESP in maritime education?

This review draws on secondary sources, including academic journal articles, training manuals, institutional reports, and international maritime regulations related to Maritime English communication. The discussion focuses on pedagogical aspects such as listening, speaking, and pronunciation skills within maritime education contexts. However, the study is limited to secondary data analysis and does not include empirical or field-based research. Additionally, it excludes the use of phonetic alphabets in aviation or military settings and concentrates exclusively on maritime education and training environments.

This study contributes to maritime education by highlighting the pedagogical significance of integrating the Maritime Alphabet into English language instruction. For educators, it offers insights into designing classroom strategies that promote accurate pronunciation and effective oral communication. For students and cadets, it underscores the practical relevance of English as a professional communication tool at sea. For curriculum

Published by English Lecturers and Teachers Association (ELTA)

developers and policymakers, the review provides evidence supporting the inclusion of authentic maritime communication practices, such as the Maritime Alphabet and SMCP, within ESP-oriented English curricula. Moreover, by identifying gaps in existing research, this study encourages future empirical investigations into specialized maritime communication systems to strengthen both language proficiency and safety in maritime operations.

METHOD

This study adopts a qualitative research design in the form of a systematic literature review (SLR). Qualitative inquiry is appropriate for exploring concepts and synthesizing theoretical and empirical findings from existing studies (Creswell, 2014). The SLR approach was employed to examine the pedagogical use of the Maritime Alphabet in English language learning within maritime education contexts.

Literature sources were collected from reputable academic databases, including Google Scholar, Scopus, ERIC, and ScienceDirect. The search used keywords such as *Maritime Alphabet*, *NATO phonetic alphabet*, *Maritime English*, *English for Specific Purposes*, and *maritime communication*. Inclusion criteria comprised peer-reviewed journal articles, academic books, conference proceedings, and official reports published in English between 2010 and 2024. Studies focusing exclusively on aviation or military communication were excluded unless they offered relevant theoretical insights for maritime education.

The selected literature was analyzed using thematic analysis, which enables the identification and interpretation of recurring patterns across qualitative data (Braun & Clarke, 2006). Four main themes were identified: (1) implementation of the Maritime Alphabet in English instruction, (2) pedagogical benefits, (3) challenges and limitations, and (4) integration within ESP frameworks. The analysis involved comparing findings across studies to identify convergences and divergences, following established academic review practices (Hart, 2018). This methodological approach ensures rigor and clarity in synthesizing existing knowledge on the pedagogical application of the Maritime Alphabet.

FINDINGS

1. The Role of the Maritime Alphabet in English Language Learning

The reviewed literature consistently indicates that the Maritime Alphabet plays a central role in improving clarity and accuracy in maritime communication. Studies emphasize that standardized pronunciation significantly reduces the risk of misunderstanding during operationally critical situations, such as distress communication, navigational reporting, and cargo coordination (Trenkner & Cole, 2010). In Maritime English instruction, empirical findings show that regular practice with the Maritime Alphabet enhances learners' phonological awareness, listening discrimination, and speaking accuracy. Pritchard (2017) reports that students who engage in structured spelling and radio-communication drills demonstrate improved oral performance. From an English for Specific Purposes (ESP) perspective, these outcomes support the view that language learning is most effective when aligned with learners' professional needs and communicative tasks (Hutchinson & Waters, 1987).

2. The Maritime Alphabet in Practice

The literature consistently refers to the standardized alphabet adopted by international maritime authorities as a core reference for instruction and practice (IMO, 2011). Rather than focusing on its definition, studies highlight its instructional value in familiarizing learners with standardized spelling patterns and communicative routines used in professional maritime contexts. The use of uniform code words has been shown to reduce pronunciation variability

caused by accent differences, signal interference, and environmental noise, thereby supporting accurate message transmission in training and operational settings.

The following table shows the International Radiotelephony Spelling Alphabet (commonly called the Maritime Alphabet) used in international maritime communication as standardized by the International Maritime Organization (IMO) and International Civil Aviation Organization (ICAO).

Table 1. The International Radiotelephony Spelling Alphabet

Letter	Code Word	Pronunciation Guide	Example Usage
A	Alpha	AL-fah	Ship name: Alpha One
B	Bravo	BRAH-voh	Call sign: Bravo Two
C	Charlie	CHAR-lee	Port: Charlie Bay
D	Delta	DELL-tah	Cargo: Delta container
E	Echo	ECK-oh	Message: Echo received
F	Foxtrot	FOKS-trot	Signal: Foxtrot flag
G	Golf	GOLF	Coordinate: Golf position
H	Hotel	hoh-TELL	Berth: Hotel pier
I	India	IN-dee-ah	Crew: India section
J	Juliett	JEW-lee-ett	Code: Juliett Bravo
K	Kilo	KEY-loh	Call: Kilo 123
L	Lima	LEE-mah	Report: Lima station
M	Mike	MIKE	Name: Mike vessel
N	November	no-VEM-ber	Ship: November 2
O	Oscar	OSS-car	Radio: Oscar transmission
P	Papa	pah-PAH	Order: Papa code
Q	Quebec	keh-BECK	Port: Quebec area
R	Romeo	ROW-me-oh	Vessel: Romeo cargo
S	Sierra	see-AIR-rah	Direction: Sierra point
T	Tango	TANG-go	Signal: Tango received
U	Uniform	YOU-nee-form	*Message: Uniform Bravo*
V	Victor	VIK-tah	*Ship: Victor line*
W	Whiskey	WISS-key	*Order: Whiskey 4*
X	X-ray	ECKS-ray	*Coordinate: X-ray sector*
Y	Yankee	YANG-key	*Berth: Yankee 3*
Z	Zulu	ZOO-loo	*Time: 1200 Zulu (UTC)*

Source: *International Maritime Organization (IMO), Standard Marine Communication Phrases (2011)*

This alphabet ensures that words and codes are pronounced and understood uniformly, minimizing confusion caused by accents, poor signal quality, or environmental noise.

3. Pedagogical Benefits Identified in the Literature

Across studies, several recurring pedagogical benefits emerge from the integration of the Maritime Alphabet into ESP-oriented English instruction. Research consistently reports improvements in pronunciation accuracy and spelling competence, which are essential for precise maritime communication (Mičiulienė, 2020). In addition, simulation-based learning environments using the Maritime Alphabet have been found to increase learner motivation and engagement by providing authentic communicative experiences (Kusumawardani, 2021). Other

studies note that repeated exposure through radio-call simulations enhances students' confidence and fluency in spoken English (Franceschi & Taylor, 2019), as well as their listening accuracy under realistic communication conditions (Hagen & Robertson, 2018). Collectively, these findings indicate that the Maritime Alphabet supports both linguistic development and operational readiness.

4. Integration with the Standard Marine Communication Phrases (SMCP)

The literature consistently emphasizes that the instructional effectiveness of the Maritime Alphabet increases when it is taught in conjunction with the Standard Marine Communication Phrases (SMCP). Cole and Trenkner (2014) argue that these two systems function complementarily to establish predictable and standardized communication patterns at sea. Studies report that students who practice spelling and message transmission within SMCP-based dialogues demonstrate higher levels of precision, fluency, and situational awareness. This integrated approach aligns classroom instruction with international maritime communication standards and professional expectations (IMO, 2011).

5. Common Challenges in Implementation

Despite its demonstrated benefits, the literature identifies several recurring challenges. A lack of standardized teaching materials limits consistent instruction across institutions (Al-Mutairi, 2020). Pronunciation difficulties persist among non-native English learners, particularly with less familiar phonetic code words (Wang & Liu, 2022). Additionally, several studies report an overreliance on memorization, with insufficient use of contextualized drills or simulations (Barrios, 2021). These challenges highlight the need for more practice-oriented instructional approaches.

6. Effective Strategies Reported in the Literature

To address these challenges, the literature consistently recommends simulation-based, task-based, and blended learning approaches. Radio-call simulations and emergency drills provide meaningful communicative contexts for practicing the Maritime Alphabet (Gonzalez & Rivera, 2023). Blended learning models combining classroom instruction with digital pronunciation tools further support learner autonomy (Supriyanto, 2022). Task-based learning activities, such as relaying coordinates or spelling vessel names, have also been shown to improve communicative accuracy and relevance (Yusof & Rahman, 2021).

DISCUSSION

From a curricular and regulatory perspective, the Maritime Alphabet is significant because it operationalizes the communication competencies mandated by the STCW Convention and IMO guidelines. Its systematic inclusion in Maritime English curricula ensures that language instruction directly supports safety-critical communication tasks required at the operational level, such as distress communication, navigational reporting, and coordination with vessel traffic services. By embedding the Maritime Alphabet within SMCP-based training, maritime institutions can better align classroom learning with internationally recognized standards, thereby reducing the gap between academic instruction and shipboard practice. This alignment not only enhances linguistic preparedness but also reinforces a safety-oriented communication culture among cadets. Consequently, integrating the Maritime Alphabet as a core instructional component is not merely a pedagogical choice but a strategic requirement for developing competent, compliant, and safety-conscious maritime professionals.

Published by English Lecturers and Teachers Association (ELTA)

REFERENCES

Al-Mutairi, A. (2020). Challenges in teaching maritime English pronunciation in non-native contexts. *Journal of Maritime Education Studies*.

American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7th ed.). American Psychological Association.

Barrios, L. (2021). Contextual practice in maritime English training: A simulation-based approach. *Maritime Pedagogy Review*.

Bocanegra-Valle, A. (2010). Globalization and maritime communication: The role of English in seafaring. *English for Specific Purposes*, 29(3), 204–219. https://doi.org/10.1016/j.esp.2010.04.005

Bocanegra-Valle, A. (2013). Maritime English as a lingua franca: Features, function, and implications. *English for Specific Purposes*, 32(4), 294–304. https://doi.org/10.1016/j.esp.2013.05.002

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Cole, C., & Trenkner, P. (2014). Standardized communication at sea: SMCP and maritime English competence. *International Maritime English Journal*, 6(1), 1–12.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications.

Franceschi, N., & Taylor, R. (2019). Improving oral proficiency in maritime English through radio communication simulations. *Journal of Applied Linguistics in English for Specific Purposes*.

Gonzalez, M., & Rivera, D. (2023). Simulation-based training for maritime communication: Effects on student performance. *Maritime Training and Technology Journal*, 12(2), 55–70.

Hagen, S., & Robertson, T. (2018). Phonetic accuracy in maritime radio communication: A pedagogical analysis. *Journal of Maritime Linguistics*.

Hart, C. (2018). *Doing a literature review: Releasing the research imagination* (2nd ed.). SAGE Publications.

Hutchinson, T., & Waters, A. (1987). *English for specific purposes: A learning-centered approach*. Cambridge University Press.

International Civil Aviation Organization. (2004). *Radiotelephony communications manual*. ICAO.

International Maritime Organization. (2001). *Standard marine communication phrases (SMCP)*. IMO Publishing.

International Maritime Organization. (2010). *International convention on standards of training, certification and watchkeeping for seafarers (STCW), as amended*. IMO.

International Maritime Organization. (2011). *IMO standard marine communication phrases* (Rev. ed.). IMO Publishing.

International Maritime Organization. (2018). *SOLAS consolidated edition*. IMO.

International Telecommunication Union. (2019). *Radiotelephony spelling alphabet standards*. ITU.

Jin, L., & Cortazzi, M. (2018). ESP instruction in Asian maritime institutions: Issues and perspectives. *Asian ESP Research Journal*.

Kaur, S. (2015). ESP approaches in maritime English teaching: A review. *Journal of English for Maritime Purposes.*

Kim, H., & Kim, J. (2016). The effectiveness of simulation-based learning in maritime English education. *Journal of Maritime Affairs*, 15(2), 185–201. https://doi.org/10.1007/s13437-016-0101-4

Kusumawardani, R. (2021). Motivation and authenticity in maritime English classrooms: A case study of phonetic alphabet training. *Indonesian Journal of Maritime Education*.

Mičiulienė, R. (2020). Enhancing pronunciation and spelling in maritime English using the ICAO alphabet. *Journal of Marine Communication*.

Pekcan, C., & Katılmış, A. (2019). The impact of task-based learning on Maritime English communication skills. *Journal of Language and Linguistic Studies*, 15(3), 897–912.

Pritchard, B. (2016). Underexplored tools in maritime English: The pedagogical role of the phonetic alphabet. *Maritime Language Review*.

Pritchard, B. (2017). Phonological development in maritime English learners through standardized communication drills. *Journal of Maritime ESP Studies*.

Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333–339. https://doi.org/10.1016/j.jbusres.2019.07.039

Supriyanto, A. (2022). Blended learning for maritime English instruction: Improving radio-communication skills. *Journal of Nautical Education Innovation*.

Trenkner, P. (2013a). The role of English as the maritime working language: Historical and modern perspectives. *Maritime English International Review*.

Trenkner, P. (2013b). Maritime English. *WMU Journal of Maritime Affairs*, 12(1), 1–15. https://doi.org/10.1007/s13437-012-0030-9

Trenkner, P., & Cole, C. (2010). Miscommunication and safety at sea: The need for standardized maritime English. *Journal of Maritime Safety & Communication*, 8(2), 45–59.

Wang, Y., & Liu, H. (2022). Pronunciation challenges among Asian maritime cadets learning the phonetic alphabet. *Maritime English Journal.*

Yusof, A., & Rahman, N. (2021). Task-based learning for maritime radio communication: Improving accuracy and fluency. *Journal of ESP Maritime Training*.