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Enhancing Communicative Competence in Maritime English: A Critical Pedagogical Evaluation of *English Language in Use for Navy Students*

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Abstract. In naval education, English should not be considered simply as one of the foreign languages taught in an academic context, which remains unused until final exams or presentations. The facts remain that English language is a working language through which future officers and personnel convey situations, report events, obtain information, and cooperate with international partners. Considering the practice-serving-purpose role English Language plays in naval education, the present paper critically discusses the *coursebook English Language in Use for Navy Students*, paying particular attention to the way in which it develops communicative competence in Maritime English. Since two of the most relevant language functions in military and maritime contexts are narrative and descriptive competences, these will be the priority of the analysis. Naval students should be able to explain, describe people and places, report past events or present future plans, or clearly state something in professional situations. The study uses qualitative analysis of the book to focus on its structure, chapter sequence, integration of listening, grammar, vocabulary, and speaking activities, and, finally, the extent to which the book reflects the use of maritime language in practice in terms of the proposed tasks. This coursebook appears to be strongest in addressing structures of a general kind and linking them to professional use of communication. It does not restrict itself to teaching vocabulary specific to naval structures, but at times the learning activities ask the students to use their language skills against the backgrounds of relevant contexts, by listening and responding, describing, narrating, or interacting. It is thus valuable from the point of view of English for Specific Purposes and CLT teaching. The evaluation also hints at areas that could be built on more, especially writing practice, digital learning resources, and tasks focusing on intercultural communication. The SWAT analysis offers a general perspective on the coursebook's pedagogical strengths, limitations, opportunities, and probable challenges. From all this follows an idea that it is a valuable coursebook for naval education, which appears as a useful and coherent document when teachers choose to support their EFL/CLP lessons with extra activities adapted to the needs of each learning group.

Keywords: Maritime English; English for Specific Purposes; communicative competence; naval education; military language training; coursebook evaluation.

1. Introduction

In the Navy and Military training academies, English is one of the compulsory foreign language courses, but outside an ordinary language classroom, the real importance of English is highlighted. A student at a military academy may also need to understand orders, provide the information required when needed to describe a situation, or participate in discussions when working in an international setting. It is here when English becomes a functional language tool playing an important role, not a decorative component. Such an additional facet gets all the way into sight when one considers the field of military as a

multidisciplinary profession related to cooperation within the scope of NATO or within other international formations within the maritime area. A commonly used language here is often English, which serves as a connecting tool between those speaking diverse languages. Not only should such communication be accurate, but it must also be fast, coherent, and relevant according to the requirement. It is a possibility that misunderstanding may arise if information concerning any occurrence is vague, as well as if an account given by the personnel is in a poorly organized manner or an explanation presented to them is unclear, it could potentially affect safety and working effectiveness too. When being a subject on its own, Maritime English education should lead in developing the learner's professional English by implementing role-playing to act in realistic simulations of professional exchanges rather than relying only on teaching special terminology or language grammar exercises.

The textbook fulfills a specific role because, rather than attempting to provide an education in English for students in general, removed from their future working environment, *English Language in Use for Navy Students* tries to integrate maritime and military contexts into general communicative functions. In doing this, students begin to extend their use of language from interpersonal communication to communication in a narrative or descriptive mode, as well as conversational interaction. This movement from basic communication to narration, description, and conversation is a logical one. One cannot ask a student to report an event or describe a situation or involve themselves in extended interaction without having learned the more basic forms of communication first. The textbook acknowledges this process and attempts to guide the learner from straightforward communicative tasks towards the more complex communicative tasks that a naval student will face when working. This is the strength of the textbook's structure: it does not seek to push the student too quickly towards extended communication, but provides a gradual lead-in. Students are challenged, taught and given opportunity to practise language in ways both conventional and personal.

The English language-teaching book that is described fits, in theory, within the English for Specific Purposes (ESP) field. According to Hutchinson and Waters (1987), ESP "is above all concerned with the needs of the learner and the uses to which he or she will put the language." This statement implies that the typical English class cannot serve as a basis for the textbook for navy students with some ESP vocabulary added. What ESP should actually do is reflect on the communicative realities of naval education and military life. English for future navy specialists follows more or less this general direction, being organized around the language functions and contexts that form an element in career building at sea.

Authentic contexts for language learning, relevant tasks, and developing skills in an integrated way should be included in ESP materials, according to Dudley-Evans and St John (1998). The mentioned criteria are useful for the present evaluation since attention is drawn to things learners actually can do using learning materials. Exercise focusing only on the vocabulary is of little value if there is no later encouragement for using the given vocabulary in communication. Grammar structure seems to be of greater value in helping the students describe, explain, or interact. The relation between usage and the form used represents one of the major questions of the evaluation of the textbook.

Equally significant is the notion of communicative competence. Canale and Swain (1980) discuss how language competence cannot simply be boiled down to grammatical accuracy. Also, discourse competence, sociolinguistic appropriateness, and strategic competence need to be mentioned. All these three are especially important in the reality of the Navy. Namely, a cadet or officer must be able to organize the conveyed information logically, select the language appropriate for the situation, and manage the conversation when a misunderstanding emerges. Speaking of the professional environment, correctness is essential; however, correctness alone is not enough. Communicative Language Teaching (CLT) is yet another theory relevant to language learning. Richards and Rodgers (2001) stress interaction as both the means and the achievement of English language learning, whereas task-based language Teaching (TBLT) is the elaboration of the ideas CLT presented, but tasks, as Ellis (2003) discusses, are key to the TBLT approach. The most productive are accordingly tasks that provide clear examples of communication goals rather than mechanical reproduction of the language. In the

coursebook under analysis, there were just these activities, especially in the listening sections or speaking tasks too.

More emphasis should be placed on these skills: narrative competence and descriptive competence. Speaking, says Thornbury (2005), involves both fluency and accuracy, and both need practicing. In the navy, narrative is called forth, e.g., when trainees are telling about incidents, describing training, explaining the sequence of actions undertaken, or reporting situations in the past. Descriptive competence is involved when they mention people, places, equipment, ceremonies, routines, and conditions in which operations are to be conducted. Such everyday tasks may seem trivial, but they take a large amount of vocational communication space. Clarity of description or of exposition can make a dividing line between effective communication and obfuscation. Authenticity is another issue with Maritime English. Authentic texts and situations will motivate students to learn and will provide them with realistic communicative practice, as assured by Gilmore (2007). Authenticity in maritime environment training implies that not only specialist vocabulary, but also students should face communication situations similar to their professional environment. Maritime language, stresses Trenkner (2010), should combine all general language competencies together with the relevant use of specialist terminology and communication strategies designed for maritime environment usage.

Moreover, newer perspectives of ESP development and pedagogy as part of maritime English become more relevant. After 2020, more attention is dedicated to digital literacy, learner autonomy, simulation training, instruction, and more multimodal instruction techniques. It is emphasized by Basturkmen (2020) (2006) for ESP modern age materials, they should be aligned not only to the typical work situations mentioned at the planning stage of ESP courses, but also with attention paid for the need for flexibility and adapting the tasks for changing contexts like the recent changes introduced by technology (Basturkmen 2006, 9-10). It is also highlighted by Kırkgöz and Dikilitaş (2021) that interactive learner-centered interaction and task authenticity in higher education are part of the ESP context. Bocanegra-Valle (2021) states clearly that for Maritime English teaching to go beyond the acquisition of terminologies, it should incorporate strategic communication, awareness of intercultural differences, collaborative teamwork, and problem-solving. Basturkmen (2006) points out fie key elements of ESP curricula design: assessment, material, task-design/instruction, learners, and contextual and linguistic issues (Basturkmen 2006, 52-66). Taking the above circumstances, there is a strong communicative and professionally oriented coursebook, *English Language in Use for Navy Students*, being analyzed. There are some limitations in relation to it, however, it makes a coherent base to be able to improve maritime English competence later on. Moreover, there is a close relation between listening input, contextualized grammar, and oral production in their coursebook, which is indeed the core of communicative language approaches, with the greatest benefit being derived. In the meantime, however, more developed countries would benefit the material in terms of writing development, introduction of skills connected with the notion of e-learning, and the awareness about intercultural communication required by Basturkmen discussed before, too.

2. Materials and methods

The teaching material, *English Language in Use for Navy Students*, was examined through qualitative content analysis (Cizer & Eftimescu, 2025). This coursebook is designed around eight theme units dealing with different situations experienced by students in naval and military education. These units focus on the gradual accumulation of communicative competence, including speaking skills supported by practice in vocabulary and grammar.

Qualitative content analysis was selected because it enabled the researcher to examine the teaching material and not only analyze its content, but also interpret its pedagogical logic (how units are sequenced; how skills are integrated; and when language forms connect to functions). The researcher tried not only to describe the material, but also to attempt to interpret whether it is a good course material in terms of teaching it in the contexts associated with maritime English.

The following criteria guided the evaluation: I) professional relevance (whether the topics, language functions and activities relate to the communicative needs of naval students), ii) authenticity (whether

the tasks reflect plausible military/maritime communication situations), iii) skill integration (whether listening, speaking, vocabulary and grammar support one another within the unit), iv) the contextualization of grammar, v) progression from controlled to freer practice and vi) the degree to which learners are encouraged to interact meaningfully.

Special attention was paid to the development of narrative and descriptive competence. These two functions were selected because they have a central role in naval communication. Learners may need to describe routines, ceremonies, locations, colleagues, and other events or professional situations as well as narrate past experiences, sequences of events, or propose future plans. The analysis investigated, therefore, whether the coursebook provided learners with sufficient linguistic support to carry out these functions clearly and coherently.

Several other theories and models served as reference points in this study. Canale and Swain's model of communicative competence (1980) was useful for estimating the proportions of grammatical accuracy, discourse organization, sociolinguistic appropriateness, and communication strategies. Ellis's studies on task-based language teaching (2003) helped test whether the scenario-based tasks and communicative activities used in the coursebook fulfilled their potential. Lastly, Nation's four-strands model (2007 - input, output, language-focused learning, fluency) was used to assess whether the balance of learning was well maintained across these features. The analysis procedure was carried out through close reading of the units. Recurring activity types received special attention, as did the order of linguistic objectives, the link between listening and speaking, and the extent to which grammar and vocabulary were used communicatively. Furthermore, attention was paid to the overall coursebook structure, reflecting the transition from general English to specialized Maritime English: this is one of the most important issues to be addressed properly when adopting ESP materials.

A limitation of this study is that there is no classroom observation or interview with the teachers or students, or there is no test on tracking of learner progress quantitatively. The findings are intended to be limited to the evaluation of the coursebook as a written teaching tool used in pedagogy. Thus, they cannot reflect the actual in-class impact. Nonetheless, the analysis can still be helpful to teachers, curriculum designers, and researchers in maritime English/military language, as it provides food for thought.

3. Results and discussions

One structural point is about the general organization of the coursebook. The units show a general progression from the simple everyday communicative exchanges to more complex functions of the language, which is one of the strengths, as it does not ask learners to jump immediately to the specialist level of professional discourse; instead, it slowly builds on the routine general and semi-professional communication needs. As far as the naval students are concerned, it makes sense as having no stable grounds in general communication, students cannot achieve fluency in the former. The coursebook successfully deals especially well with narrative competence; students are slowly introduced to the language of relating stories of routines and of past experienced events and future arrangements to follow. It has bigger merits than what might first appear. A skill to put the events in the time frame becomes a necessity in military and naval environments. Therefore, a student capable of this is better prepared to report exactly what happened, how the actions unfolded in time, and thus to present information in a sequence that other individuals can understand.

Description is also a key feature. The coursebook provides learners with activities describing people/places/events/situations. Such things are close to naval communication. Learners may be asked to describe a location, identify a person, refer to conditions on board, provide details of a ceremony, or describe matters of training activities. These all require descriptive functions. Thus, they bring benefits for successful and accurate communication. Such activities lead to improving the mutual awareness among individuals and professional and effective co-ordination for the mission during operations and all communication situations. Among the most persuasive matters of the coursebook was the linking between listening and their speaking output. The aim of listening should provide a kind of language to speak. While listening, the learners can acquire the suitable language to use in similar communication

situations during their speaking studies related to listening activities. Listening makes the acquisition possible, and speaking makes the acquisition productive. In this flow, a description was provided. This relation brings the teaching in its real conditions, then separately as a language element, and leads to achieving real communication. They hear and respond accordingly. This provides learners with realistic communication conditions during the communication process. To be sure of its achievement, using personalized communication activities at this point could be more efficient. Therefore, speaking activity can achieve its goal in producing what they have gained through listening. This flow makes the coursebook persuasive. This flow can be better ensured if, during speaking, learners are led beyond what was given in listening.

The grammar is generally functional as opposed to purely formal. This again adds to its value. Grammar rules, instead of being introduced as abstract constructs that simply have to be memorized, are introduced as tools that can be used to communicate. Tenses, for instance, are useful because they enable students to talk about routines, recount events, or discuss future actions. In this respect, the more sense the grammar makes, the higher the possibility of its actual transfer to communication. On the other hand, linking it to the expectations of ESP, which requires students' correctness to be linked to their professional performance. As far as the vocabulary aspect is concerned, it is clearly linked to context. The coursebook does not limit itself merely to listing separate items, important though specialized vocabulary certainly is. A more perceptive reader might be led to attribute a different merit, namely that the book places words and phrases in communicative situations. There is a subtle difference at play here. A student might be able to give an English equivalent of a maritime-related item without being able to fit it into a sentence or use it in the process of a description or professional exchange. When connected to listening practice, speaking, or performing a task, the book's value in this respect increases.

In addition to the previous two advantages, the material could also be seen as having a strong motivational one. It gives a connection with a naval/military field-related activity, and for this reason, learners can see why the language is useful/worth learning. This interest in connection could possibly arise in case a learner thought that an English course should help them with their professional careers. Moreover, in the case of ESP courses, the relevance of the materials is not a insignificant topic, as it can be a determining factor in whether students view the subject of the courses as a helpful or useless part of academics. Again, one area that could be explored more in the coursebook is writing skills, though this does not detract from its general merit; it only restricts its scope to communication, where speaking is the main domain. It has to be recalled here that naval and military personnel communicate not only through speaking. They fill in different forms and reports, formal messages, and are involved in writing summaries of incidents and in other forms of writing documentation of their operations, etc. Hence, the inclusion of writing activities in relation to the aforementioned genres could be a helpful addition to the course. Even a relatively short piece of writing, if chosen carefully, could extend the usefulness of the existing units.

Limitations also emerge in relation to the digital dimension. Offering QR-code resources to listen at home is useful and certainly a step in helping learners find easier access to audio input for instance. However, ESP instruction more and more often requires the use of more complex digital tools such as online exercises and virtual simulations, pronunciation tasks, virtual role-plays, and self-assessments. It would have been useful if the book offered more along those lines, so it could have suited blended learning as well as distance self-study. As naval learners later might become part of teams consisting of several people of different nationalities, intercultural communication can play an important part in the way meaning is derived and negotiated. In such a setup, communication between people is not about using the right grammar or vocabulary; it is something more than that. Learners should be able to ask for clarification, reformulate, and be polite and unambiguous, etc. More tasks of that kind would have enabled the author to write an even more relevant ESP book for NATO-related and international maritime cooperation.

The pedagogical implication is therefore mixed, but generally positive. It provides a strong foundation for maritime English in the form of oral communication. The book helps learners gain confidence in speaking, supports them with listening input, and combines grammar & vocabulary with professions.

Yet it strongly depends on the use by teachers: if rigidly and mechanistically used, it may remain a structured and limited textbook; if a flexible approach can be found, the course book can be converted to the starting point of richer communicative experience. Teachers can add a short written report to a speaking task. A listening dialogue may serve as a basis for role plays or briefings. A comparative or descriptive task may be turned into a collaborative problem-solving activity. Thus, the book could help not only practice language, but also develop professional thinking, teamwork, and communicative decision-making.

The impression is that the book is strongest whenever it takes the English language as a tool for action: Most of the activities that require the student to actually use English rather than to know it are useful. This is just the direction that Maritime English needs to step into.

4. SWOT Analysis of *English Language in Use for Navy Students*

The pedagogical value of the coursebook can also be summarized as a helpful SWOT analysis in a way to combine both the advantages and the weaknesses of the material being discussed in a balance scale.

4.1. Strengths

The strength of the coursebook in relation to ESP. The material is well-aimed for a well-defined group of learners: naval students. It lends the book one purpose and makes the coursebook different from general English textbooks. Such content, vocabulary and exercises are relatable to the maritime/military life. The second strength lies in skills integration. There are all components embedded together in the units - grammar, vocabulary and other exercises. Thus, for instance, listening leads to grammar and vocabulary and then to speaking. It reflects communication competence in the progression from simple to complex models. It provides enough time for the learners to obtain some confidence.

Further strength: authenticity. Many activities relate to situations that the learners may associate with themes connected with naval education or military life. The activities do not all involve every aspect of real situations, but the general direction is accurate. A link is created between the language classroom and a working environment.

4.2. Weaknesses

The number one weakness of the coursebook is limited importance placed on writing. Clearly, oral communications are paramount for this coursebook which is understandable to a certain extent. Written communication also takes a significant place in the military and, more importantly, in the naval service. Military reports, formal messages, descriptions of events and administrative papers and documents still need specific preparation not to be seen as the work of illiterates. A weak section of the writing makes the coursebook lack completeness.

The second weakness of the coursebook in question is a relatively limited number of digital components. Having digital audio based on QR codes is certainly a good solution, but still not really sufficient to explore technological opportunities which are abundant in contemporary language learning. Students may easily play with interactive exercises on tablets or learn the proper pronunciation with a microphone and relevant program, or again use some dedicated programs for online role-playing or scenario-based tasks, even with a remote partner. They are all components which may simplify the work of an eager student outside the main classroom learning.

The third weakness on my list concerns intercultural communication. The coursebook offers a decent and credible preparation for professional English in use. But could it offer a more specific preparation for communication in multinational teams, too? This is the obvious question, since navies operate closely internationally. Sailors need to learn how to deal with explanations and clarifications of meaning, as well as dealing with the differences in cultural approaches to communication directly.

4.3. Opportunities

The possibilities for growing a coursebook are abundant. One could decide to pursue the mixed learning version with online listening tasks, vocabulary, grammar interactive exercises and even speaking tasks

thanks to various platforms. It might help to broaden the offer of flexible and attractive possibilities when teaching English for maritime professionals.

The other option could be to develop writing modules where learners practise how to write naval reports, official emails, summaries of events, or simply descriptions of ongoing operations. They do not have to replace the oral focus, but supplement it and make the coursebook more balanced.

Another coursebook option would be to develop exercises about crisis management communication or intercultural aspects within the realm of navy students. These aspects can be useful should they take part in multilingual missions or exercises and activities of misunderstanding and clarification, or emergency calls and teamwork with people from the other country will help them increase the practical uses of the materials.

Also, coursebook modification within the realm of the army educational offers will present various exciting developmental challenges or opportunities. Whilst originally created for a distinct education establishment, it has a sound basic structure and can be adjusted from military vocabulary to the type of school or student it is aimed at, allowing development of Maritime English across national borders.

4.4. Threats

The rapid development of military languages, procedures and communication technologies is possible threat. ESP material must be updated almost constantly. A new coursebook may be suitable at present and cease to be suitable if, for example, current professional language and methods change noticeably.

Digital ESP platforms and commercially downloadable language learning applications providing interactive, often addictive and individualized experience. Traditional coursebooks are needed and useful; however, if they want to retain their competitive and attractive pedagogical power, they need to undergo further development.

Due to the diversity problem among learners, a coursebook alone cannot cater to all students. There may be learners of various levels of English, habits, and confidence during ESP classes. Teachers have to adapt activities, provide additional materials and tasks especially for advanced students.

5. Conclusions

What should this evaluation lead the teacher/lecturer to think about *English Language in Use for Navy Students*? The coursebook has proved to be a coherent and useful book for teaching Maritime English in the context of training naval forces. Its greatest contribution certainly rests on the connection drawn between general English content and professional communicative needs. Not only does the coursebook allow the student to concentrate on the practice of speaking and listening, but it also helps them to use grammar and vocabulary in meaningful contexts.

The focus on narrative and descriptive competence of the student is a relevant outcome from the course. Naval students have to both learn to describe clearly and to narrate in a coherent way, first in the academic setting and secondly during their future missions. This coursebook gives a progressive working model and encourages the learner to go from controlled practice to free communication, an essential shift when teaching ESP students.

However, it should not be considered to be the complete teaching package for Maritime English. The coursebook is severely limited when it comes to writing, and it must, of course, be of concern that military communication involves not only talk, but also written reports, contracts, orders, and other messages. The teaching of writing would have to be stressed to make the material more complete.

Also, on a digital level, additions could be made. The available audio files are valuable, but future editions could include interactive tasks, simulations, or pronunciation practice online, which would enable learners to practice more independently and would render the resource more adaptable within a blended learning environment. An area where possible developments could be made lies in intercultural communication. Intercultural communication is important. In today's naval cooperation, English is a lingua franca between speakers of different cultures and institutional backgrounds. Learners thus need strategies for clarification, reformulation, politeness, and collaborative problem solving. A more explicit

focus on these aspects would promote an even greater relevance to multinational constellations. The *English Language in Use for Navy Students* should be seen as a useful foundation for Maritime English Language Teaching. The professional orientation, the consistent structure, as well as the focus on communication render this resource most useful for naval institutions or paramilitary language institutions. The effectiveness of the resource is heavily dependent on the way it is used. Applied creatively and supplemented accordingly, it cannot only support language learning, but also encourage confidence in the use within professional settings.

Future research could be undertaken on the way in which the coursebook works out in practice in the classroom. Feedback research from the learners, teacher interviews, classroom observation, and product-oriented research can form a complete picture of the effect of the use. Such research will be useful in finding communication tasks aimed at the material reflected in the learners' progress. Use of the book gives a strong contribution to the Maritime English education and ESP education since it works out and encourages the navy students to use English as an effective communicator in the professional and global arena; more for use of communication than as an abstract subject of the academia.

References

1. Anthony, L. (2022). *Introducing English for Specific Purposes*. Routledge.
2. Basturkmen, H. (2010). *Developing Courses in English for Specific Purposes*. Palgrave Macmillan.
3. Basturkmen, H. (2020). *Developing Courses in English for Specific Purposes* (2nd ed.). Palgrave Macmillan.
4. Belcher, D. (2020). *English for Specific Purposes in Theory and Practice*. University of Michigan Press.
5. Bocanegra-Valle, A. (2021). Maritime English. In *The Routledge Handbook of English for Specific Purposes*. Routledge.
6. Canale, M., & Swain, M. (1980). Theoretical bases of communicative approaches to second language teaching and testing. *Applied Linguistics, 1*(1), 1–47.
7. Cizer, L., & Eftimescu, G. (2025). *English Language in Use for Navy Students*. Naval Academy Publishing House.
8. Dudley-Evans, T., & St John, M. J. (1998). *Developments in English for Specific Purposes: A Multi-Disciplinary Approach*. Cambridge University Press.
9. Ellis, R. (2003). *Task-Based Language Learning and Teaching*. Oxford University Press.
10. Gilmore, A. (2007). Authentic materials and authenticity in foreign language learning. *Language Teaching, 40*(2), 97–118.
11. Hutchinson, T., & Waters, A. (1987). *English for Specific Purposes: A Learning-Centred Approach*. Cambridge University Press.
12. Hyland, K. (2006). *English for Academic Purposes: An Advanced Resource Book*. Routledge.
13. Kırkgöz, Y., & Dikilitaş, K. (2021). *Key Issues in English for Specific Purposes in Higher Education*. Springer.
14. Nation, I. S. P. (2007). The four strands. *Innovation in Language Learning and Teaching, 1*(1), 2–13.
15. Richards, J. C., & Rodgers, T. S. (2001). *Approaches and Methods in Language Teaching* (2nd ed.). Cambridge University Press.
16. Thornbury, S. (2005). *How to Teach Speaking*. Pearson Longman.
17. Trenkner, P. (2010). Maritime English. *International Journal on Marine Navigation and Safety of Sea Transportation, 4*(2), 163–166.