IMLA International Maritime English Conference 2019 (IMEC31)

30 September - 3 October, 2019
Åland Islands, Finland

PROCEEDINGS

HÖGSKOLAN PÅ ÅLAND
ÅLAND UNIVERSITY OF APPLIED SCIENCES

IMLA - IMEC

ÅLAND UAS

The Åland University of Applied Sciences (Åland UAS) is located in the town of Mariehamn. It is a small university, which allows for close contact between teachers and students. The Åland UAS offers seven degree programmes in Swedish in Business Administration, Electro-technical Engineering, Health and Caring Sciences, Hospitality Management, Information Technology, Marine Engineering and Nautical Science for a total of 600 students.

The programmes offered at Åland UAS:

- provide the theoretical and practical knowledge required to carry out advanced tasks in working life, both independently and in teamwork settings.
- are flexible. Individual study programmes can be composed by selecting courses from other programmes, or from the Open University within the optional units.
- interact with those working in the field means that the curricula are based on the requirements of today's professional life.
- supplies new competence to the professional community through development work and applied research.

The Maritime Academy

Maritime education on the Åland Islands has a proud tradition and includes extensive courses for active sailors and young people who want to enter a maritime profession. The Åland Maritime Academy, a joint effort with other Åland maritime training facilities, offers programmes and courses that lead to the awarding of different certificates of competency required to work on board a ship, as well as refresher courses for working seafarers that are required under international regulations.

WELCOME TO ÅLAND ISLANDS

We are very happy to host the IMEC31 here on the Åland Islands. These islands have always been international and maritime, ever since they emerged above the sea level some 8000 years ago. The Vikings sailed through here and empires have fought about the strategical key points for dominion over the Baltic Sea here. Some 150 years ago a navigation school was founded here as a forerunner of the Åland University of Applied Sciences (ÅUAS).

As Vice Rectors of the ÅUAS we wish all participants of the IMEC31 very welcome. We cherish the fact that the IMEC31 is a global network of professionals in the field of communication at sea. The successful completion of your important tasks bring many positive effects for safety and development of the trade. It also brings people together and friendship among the peoples is more important than ever at this point in the history of this planet.

As a part of the international shipping community we look forward to having you here and to meeting with you, both teachers and other professionals. You will also be able to meet with our students and hear their perspectives. Thank you for coming here!

Sven Schauman
Vice Rector, Åland University of Applied Sciences

Bengt Englund
Vice Rector, Åland University of Applied Sciences

HÖGSKOLAN PÅ ÅLAND
ÅLAND UNIVERSITY OF APPLIED SCIENCES

SCHEDULE OF EVENTS

Sunday September 29 - Turku, Finland

	Take bus no. 1 from the airport or the train/bus station to the Port of Turku.
14:00	Gathering at the Aboa Mare Maritime Academy. Here we can leave our luggage. *Address: Auriga Business Center, Juhana Herttuan Puistokatu 21 (Close to the Port of Turku)*
15:00	We will start to walk to The Wärtsilä Land and Sea Academy.
15:30	Meeting up with the participants gathered at the Alternative Gathering: the "Föri" ferry. We will take the ferry across the river together. *Address: Västra Strandgatan 47*
15:45	Visit to the Wärtsilä Land and Sea Academy: Engines, engine room simulators, LNG as fuel and training.
18:00	Pre-Conference get-together at the Aboa Mare Maritime Academy
20:00	We meet up at the entrance of the ferry harbour *Address: Viking Line terminal, Ensimmäinen linja (Port of Turku)*
20:55	Departure from the Finnish mainland with m/s Viking Grace
21:15	Buffet dinner on board, entertainment, dancing
01:00	Disembarkation and bus transfer to hotels
01:30	Check in at hotels

Monday September 30 - Åland Islands

11:00	We meet in the lobby of the Arkipelag Hotel. Pick up from the other hotels. Walk to the Åland Maritime Academy. View of the harbour and the islands.
12:30	Lunch at restaurant Nautical (in the Maritime Museum) *Address: Hamngatan 2*
13:30	Inauguration ceremony on board s/s Pommern. Hosted by the Town of Mariehamn. Welcome by Prof. **Clive Cole**, Chair of IMLA-IMEC. Time for a closer look at the ship and the Maritime Museum.
15:30	Sessions in the Maritime Museum, Chair **Erik Hemming**

Paper	**Violeta Jurkovič**, University of Ljubljana, Faculty of Maritime Studies and Transport, Slovenia Paper 1: Ship-shore communication upon ships' port entry
Paper	**Anne Pazaver**, World Maritime University, Malmö, Sweden Paper 2: Education for Sustainable Development and the General Maritime English classroom
My Practice	**Alcino Ferreira**, Ecole Navale, Brest, France My practice 1: Maritime English in the Bridge Simulator
My Practice	**Kimberly M. Beckwith**, Royal Netherlands Naval Academy My Practice 2: English at Sea – English at sea: practical, can-do assessment

17:30	A 15 minutes walk to the hotels
20:00	Dinner at the Arkipelag Hotel *Address: Strandgatan 35*

Tuesday October 1 - Åland Islands

All sessions October 1-3 will be held at Alandica Culture & Congress, Strandgatan 33.

09:00	Sessions, Chair **Tiina Mäkinen**	
	Workshop	**Ludwina van Son**, Antwerp Maritime Academy, Belgium Workshop 1: Context awareness helps to make the Maritime English students enhance their discursive proficiency.
	My Practice	**Erik Hemming**, Åland University of Applied Sciences, Finland My practice 3: Formative Assessment with Google's G Suite for Education
10:30	Coffee break (Local students show participants how Chromebooks and the G Suite are used)	
11:00	Sessions, Chair **Catherine Logie**	
	Paper	**Sae Ishida**, Kousen Yuge College, Japan Paper 3: Maritime English Education with collaboration between Maritime Technology and general English teacher in Japan
	Paper	**Bozhena Dokuto** & **Igor O. Smirnov**, Admiral Ushakov Maritime State University, Novorossiysk, Russian Federation Paper 4: A professionally oriented language project as a means of forming trainee seafarer's language competences in the course of maritime English
	Paper	**Caroline W. Dacwag-Balila**, Maritime Academy of Asia and the Pacific, The Philippines Paper 5: Organizational and Sentential Structures of Selected Maritime Students' Essays
12:30	Lunch	
14:00	Sessions, Chair **Annamaria Gabrielli**	
	Paper	**Elena V. Mironenko**, Novorossiysk Branch of Pyatigorsk State University, Russian Federation Paper 6: E-thesaurus design principles on the basis of maritime pseudo-equivalent terminology
	Paper	**Januario L. Lansang, Jr.**, Maritime Academy of Asia and the Pacific, The Philippines Paper 7: Developing a Can-Do Self-Evaluation List for Listening Skills
	Workshop	**Adelija Čulić-Viskota**, University of Split, Croatia Workshop 2: Development of ME Teaching Material for Yacht and Marina Management Students
15:30	Coffee Break	
16:00-17:30	Sessions, Chair **Clive Cole**	
	Paper	**Talib Ibrahim Mohammed**, Technical University of Mombasa, Kenya Paper 8: A Framework for Sustainable Cooperation in Maritime Education and Training: The Case Study of Kenya
	Roundtable	**Kimberly M. Beckwith**, Royal Netherlands Naval Academy Roundtable 1: Naval English Issues
	Paper	**Nermine Galal Ibrahim**, College of Language and Communication, AASTMT, Egypt Paper 9: Marine Talk – English for Marine Engineering Under the Spotlight

Wednesday October 2 - Åland Islands

All sessions October 1-3 will be held at Alandica Culture & Congress, Strandgatan 33.

09:00	Sessions, Chair **Peter van Kluijven** Paper — **Paula Rice & Margrethe Bakke**, Norwegian University of Science and Technology, Trondheim, Norway Paper 10: The use of simulators in ME teaching Paper — **Xin Ran, Derong Liu & Shijun Ying**, Shanghai Maritime University, China Paper 11: Maritime English Teaching with Marine Simulator
10:00	Keynote speech: Sustainability Officer **Dani Lindberg**, Viking Line, Finland - Sustainability in Shipping
10:15	Keynote speech: Development and Sustainability Strategist **Micke Larsson**, Åland Provincial Government, Finland: Development and Sustainability Agenda for Åland
10:30	Coffee break (Local students interview participants)
11:00	Sessions, Chair **Peter Björkroth** My Practice — **Uwe-Michael Witt**, Rostock, Germany My Practice 4: Using Tailor-Made Exercise Sequences Provided Online to Improve, Practice and Consolidate the Use of the SMCP at VTS and MRC Centres Paper — **Pieter Decancq**, Antwerp Maritime Academy, Belgium Paper 12: A semiotic approach to cross-cultural interference in Maritime English Paper — **Alison Noble** & **Roy Peters**, Antwerp Maritime Academy, Belgium Paper 13: Maritime English: a focal point for training in the bridge simulator
12:30	Lunch
13:30	Sessions, Chair **Alcino Ferreira** Paper — **Carmen Chirea-Ungureanu**, Constanta Maritime University, Romania Paper 14: "What's wrong with these folks? Developing intercultural competency as the key to "merge" worlds My Practice — **Catherine Logie**, Marlins, Glasgow, United Kingdom My Practice 5: English e-learning course for engineers at elementary language level
14:30	Coffee break
15:30-23:30	Sightseeing tour and dinner party. 15:30 Gathering outside the conference venue 16:00 Bus leaves from the conference venue 16:00 Sightseeing Tour of the Åland Islands: History, castles, traditions, and scenery 19:00 Dinner at the Käringsund Resort 23:30 Bus returns to town

Thursday October 3 - Åland Islands

All sessions October 1-3 will be held at Alandica Culture & Congress, Strandgatan 33.

09:00	Sessions, Chair **Naoyuki Takagi** Workshop **Tiina Mäkinen**, Åland University of Applied Sciences, Finland Workshop 3: Integrating Maritime English - a good idea, or not? Workshop **Kimberly M. Beckwith**, Royal Netherlands Naval Academy Workshop 4: Save Lives and End the Suffering – Blended Learning and Simulations at the Royal Netherlands Naval College
10:30	Coffee break
11:00	Session Roundtable Roundtable 2: Future of IMEC. Facilitated by the **IMEC Steering Committee**
12:00	Closing Ceremony Next year's venue, IMEC-32: The World Maritime University of Malmö, Sweden
13:30	Meeting up at the ferry terminal *Address: Viking Line Terminal, Hamngatan*
14:00	Departure either eastwards or westwards with the Viking Line. Lunch onboard (at own expense).

Friday October 4 - Stockholm, Sweden

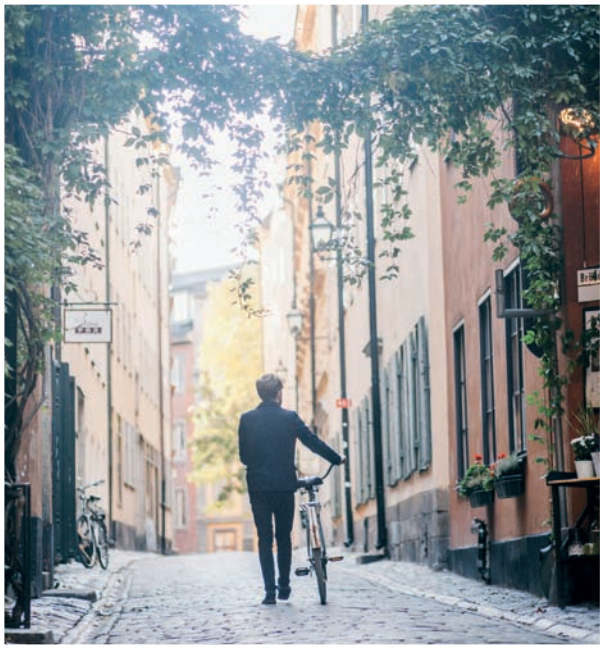
Post-conference programme in Stockholm (optional).

10:00	Gathering at Generator Hotel/Hostel, Torsgatan 10. Walking tour (free of charge): Historical and literary tour of the centre and the Old Town, including a boat trip.

Walk with Erik and Tiina in the legendary and literary central parts of Stockholm. We will start at 10 a.m. local time (CET) and walk until 2 p.m. Afterwards those who want will have lunch together. It will also be possible to go on a boat tour around the islands on which the city is built.

We will walk from the area around the central station, through the Old Town and over to the Södermalm heights - then go by boat to Djurgården (the tickets cost about 4 euros) and further to Skeppsholmen and back to Norrmalm.

Many interesting museums will be open with free entrance, among them especially the Nationalmuseum art and design gallery is recommended.



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Maritime English Teaching with Marine Simulator

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Abstract

As an important navigation simulation training equipment, marine simulator has played an increasingly important role in the teaching and training of navigation. By setting various kinds of ship operation and communication scenes as teaching situations in the simulator, students can carry out maritime English teaching and training on the simulator. Students' attention is shifted from language itself to using language to complete tasks, thus enhancing students' English listening comprehension and oral expression ability, and improving the efficiency and quality of English teaching. In this paper, the necessity and feasibility of maritime English teaching with marine simulator is discussed firstly, then the proposed situational teaching scheme including training contents and methods is described in detail according to the function and characteristics of marine simulator. Finally some suggestions are put forward to give full play to the effectiveness of the maritime English teaching with simulator.

Keywords: *maritime English; marine simulator; English teaching; maritime education*

Introduction

English is the working language of shipping industry and an important part of seafarers' professional competence. The level of English communication is not only related to the smooth development of shipping business, but also to the safety of ships, lives, property and marine environment. In 2010, IMO adopted amendments to the STCW Convention in Manila, Philippines. The amendment puts forward higher requirements for the English competence of ocean-going seafarers, especially for their English competence and communicative competence

(IMO, 2010). In order to perform the convention, Maritime Safety Administration of the People's Republic of China (China MSA) promulgated the "Regulations on Examination and Certification of Competence for Seafarers of the People's Republic of China (Regulations 11)" and "Measures for the Management of Issuing Certificates for Seafarers Training in People's Republic of China (Measures 12)" (China MSA, 2010).

In order to meet the new requirements of the international shipping market for seafarers' language communication ability, the teaching of maritime English in China includes standard marine communication phrases (SMCP), English listening and speaking, English reading and writing, etc.

However, the current teaching of maritime English is guided by the assessment of seafarers of China MSA. The main teaching modes are classroom teaching and listening and speaking training in the speech room, with emphasis on the explanations of knowledge points and conversational materials. Students memorize the answers by rote and try to pass the exam by doing questions constantly, which loses the practical nature of professional English (LUAN, 2013). The reform of maritime English training and testing means is imminent, and the combination of maritime simulator in English teaching has brought a feasible and promising teaching idea.

Feasibility of English Teaching with Marine Simulator

Marine simulator has been widely used in maritime education and seafarer competence examination, which is a modern real ship simulation equipment which integrates reasonable and practical system operation equipment and information display equipment. Its application in teaching will undoubtedly greatly improve students' experience when participating in professional courses, and promote students' understanding and application of professional knowledge from both perceptual and rational aspects.

We have developed a series of marine simulators, for example, the model type SMU-MUSS-V, as Fig.1 shows, which meets the demands about radar simulator and ship handling simulator, conforming to STCW and Regulations 11. SMU-MUSS-V marine simulator consists of one simulated main-owner ship and two simulated vice-owner ships. The simulated main-owner ship is a 7-channels subsystem and can render a 240-degree view, while the simulated vice-owner ship is a 5-channels subsystem and could render a 180-degree view. SMU-MUSS-V can satisfy

the needs of space, equipment, technical standard and teachers to hold ECDIS, BRM and ERM teaching and training, which has the following functions:

(1) renders reasonable visual range. The main-owner ship has a 240-degree view, and the vice-owner ship has a 180-degree view.

(2) provides more than 40 types of simulated ships, and have physical realism. Simulators could simulate virtual equipment operation, like telegraph, rudder, thruster, tug and so on.

(3) could design kinds of navigational environment and show different influence from environmental factors, like water speed, wave direction and interaction force from other objects.

7-channels-main-owner ship (b) 5-channels-vice-owner ship

Figure 1. marine simulator (SMU-MUSS-V)

(4) equips with some real physical instruments and equipment, like radar, VHF, telegraph, depth-measuring apparatus and compass.

(5) integrates radar/ARPA simulator unit that can provide the trainee with all exercises using radar/ARPA, and meet the demand of training and assessment for seafarers. Either real navigational radar/ARPA or PC-based simulated radar/ARPA display can be integrated in the system.

Marine simulator can simulate the outdoor dynamic environment of ship manoeuvring in different sea areas, waterways, port of arrival and different climate and scenarios. It can also provide indoor static environment designed according to the real ship bridge and its basic configuration (including sound). Especially, it can simulate and reproduce rare or dangerous scenes or environments in real environment and navigation manoeuvres such as collision avoidance and grounding in such scenes or environments.

According to the function and configuration of marine simulator and the main content and practical requirements of maritime English course, it is feasible and necessary to combine the two in classroom teaching. The navigation scenes realized by the marine simulator basically cover the main contents of the maritime English course. As long as the content is reasonably analyzed, the situation is divided into modules, and the task of multi-person and multi-batch situation is arranged, the course can be fully integrated with marine simulator to achieve the integrated training of oral English teaching, learning and practice.

Teaching Reform Program and Content

Maritime English teaching with marine simulator can provide an opportunity to create a “real” language context for students and trainees. The teaching program can be designed as Fig.2 shows.

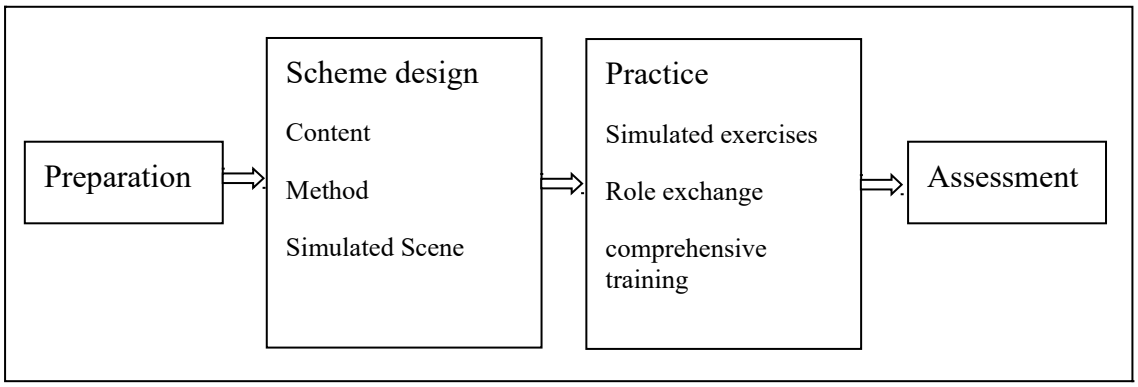

Figure 2. Teaching Program with marine simulator

Step 1: Preparation. In this stage we need to collect teaching material and construct the teaching mode of "typical working situation" based on the marine simulator. Considering the assessment requirements, the actual operation of Ship Simulator and the requirements of seafarers' English application ability, the specific contents of typical working situations can be divided into the following modules referencing to SMCP Part A (External Communication Phrases) and Part B (Onboard Communication Phrases):

AI/1 Distress Communications

AI/2 Urgency Traffic

AI/3 Safety Communications

AI/4 Pilotage

AI/6 Vessel Traffic Service(VTS) Standard Phrases

AII Onboard Communication Phrases(A)

B/B1 Operative Shiphandling

Step 2: Scheme design. According to the teaching purpose and training task, we need to select practice scenarios, prepare conversation content, staffing, cohesion and coordination in the process of practice, etc. Under the guidance of teachers, students are grouped and roles are divided. The number of groups should be consistent with the staffing requirements of training scenarios.

Step 3: Practice. Taking the sailing process of ships entering and leaving the port as an example, the roles of captain, pilot, chief mate, second mate, third mate, intern, steerer, port authority, pilot company, tugboat captain and VTS maritime officer can be set up according to the teaching content, so as to complete the external contact, navigation avoidance and bridge communication during the process. Through virtual event drills and different roles, students can experience a more comprehensive process of berthing and departing. It can not only exercise their spoken English, but also help them understand important professional knowledge such as navigation safety, ship manoeuvring, ship management, ship communication and maritime management, so as to consolidate professional knowledge and practice English listening and speaking skills.

Step 4: Assessment. At the end of the course, make a summary, solicit the opinions of the students, or do a test simulation, let teachers or coaches as examiners to test the effect of the course. According to the results of each test, the content, scheme and teaching situation of the reform should be adjusted in time so as to achieve the goal of English teaching reform. We have developed an automatic assessment system for ship handling based on marine simulator in order to reduce the workload of simulator teachers and examiners, and also to reduce the subjective influence during the examination (CHEN, 2016). Based on the automatic assessment system we can improve the system so that we can assess the maritime English teaching in simulator.

Conclusion

Maritime English teaching can be carried out through marine simulator, which can simulate the actual work of the ship with the help of simulation environment, and students can use it in

the future onboard work after learning. This training method fully stimulates students' interest and enthusiasm in learning, realizes the two-way interactive training of listening and speaking in maritime English, and achieves good training results. In order to give full play to the training effect of marine simulator, we should adjust the original teaching plan and syllabus of maritime English in time, select the typical scenes and enrich the training content. It is also necessary to change the relatively independent teaching methods between maritime English teachers and professional teachers, and establish a team of professional teachers and English teachers to teach together.

References

China MSA, (2010). *Regulations on Examination and Certification of Competence for Seafarers of the People's Republic of China.* Dalian: Dalian Maritime University Press

CHEN Jinbiao, CHEN Tingting (2016). Fuzzy Structured Element Method for Automatic Evaluation of Ship Manoeuvring on Marine simulator. *the 19th International Navigation Simulator Lecturers Conference*, *INSLC19*, Cape Town, South Africa.

IMO (2010). *The Manila amendments to the STCW Convention and Code*. Manila, Philippines.

LUAN Luan (2013). Analysis of SMCP Simulation Teaching Method Based on Navigation Simulator. *Journal of Qingdao Ocean Shipping Mariners College*. Vol. 34, No.2, 64-66.

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Organizational and Sentential Structures of Selected Maritime Students' Essays

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Daniel S. Torres Jr.

Abstract

With the implementation of the k-12 in the Philippines, a number of courses offered in the tertiary level have been reduced and/or moved to the junior and senior high school programs. Assuming that college students have learned the basics in their previous school years, they can focus on the courses that will make them competent in their future field of specialization. One area that was affected by the reduction was the English courses. In the case of the Maritime Academy of Asia and the Pacific, English courses were reduced from four (4) to two (2) only. This reduction motivated the conduct of this research, to check whether the MAAP students have acquired acceptable language competence during their high school and senior high school years. In general, this paper aims to describe the organizational and sentential structures of the essays of selected maritime students in order to have a basis of proposed recommendations for English courses offered in the academy. Using discovery approach, 156 essays of randomly selected first year college students of MAAP were analyzed to address the objective of the study. This research found that students have ideas but most of the essays were composed of one to three paragraphs only. It is also noteworthy that many essays had no thesis statements, no clear introductions and conclusions, few transitions, and very few emphatic devices used. For sentential structure, although the sentences used in the paragraphs were generally comprehensible, students committed mistakes in word forms, and subject- verb agreement among others. Based on these findings, it is recommended that writing skills of the students be enhanced through a separate and additional English course before they take their Research course.

Keywords: *writing practice, English course, Maritime students*

Introduction

With the implementation of the K-12 program that resulted in the reduction of general education courses in the tertiary level, college students are expected to have the necessary competence and skills in the different areas of the said courses.

In maritime education, students are expected to become competent in both the professional and communicative course areas (Dirgeyesa, 2018). In communication, in particular, maritime students are honed to be able to "use the International Maritime Organization (IMO) Standard Marine Communication Phrases (SMCP) and use English in written and oral form" (*Standards of training, certification and watchkeeping for seafarers*, 2017, p. 108, 146) by the time they graduate and become officers or even during the time of their shipboard training. Since the communicative setting is multi-cultural and multilingual, the use of a common language, English, is very important (*International Transport Workers' Federation*, n.d.). In order to be comprehensible to speakers of different languages, maritime students need to produce grammatically correct and well-organized ideas in written and oral form, taking into consideration the other requirements of effective communication like non-verbal communications, culture etc.

To make this communicative goal clearer, a report paper by Zhang and Cole (2018) presented the revised version of IMO Model Course 3.17 which contains two major divisions that address the general maritime English and the specific maritime English needs of the maritime students. Prior to this, Demydenko (2010) already presented a course book used in their school and proposed it to be used for ratings since most of the course books developed were for operational and management level officers. While this is not the focus of the Maritime Academy of Asia and the Pacific (MAAP), the suggestion on the combination of general and maritime English is not very far from the proposal of Zhang and Cole (2018). Fortunately, at the time of this writing, the revisions in the said model course are being adapted by the Academy.

Focusing on the writing skills of the students, this paper aimed to describe the essays of the selected first year students of MAAP in terms of the basic quality and structural requirements of an essay. These students have not yet taken any English course in the Academy. The study was solely based on the background knowledge of the students who were assumed to have acquired the necessary English skills in their high school and senior high school years.

In order to meet the objective of the study, the following questions were raised and answered:

1. How may the organizational structure of the selected students' essays be described in terms of basic elements and basic quality requirements of an essay?
2. How may the sentential structure of the selected students' essays be described?
3. Based on the findings, what writing areas may be focused on to improve the writing proficiency of the MAAP midshipmen?

A basic curricular requirement before finishing the bachelor's degree in engineering or transportation is the conduct and writing of research. In order to produce a good written output, students need to have a good writing foundation. A necessity for this is essay writing. An essay is a written composition that is composed of an introductory paragraph with a thesis statement, body paragraph/s, and a concluding paragraph (Langan, 2014; Shields, 2010; Jones & Jones, 2005). These paragraphs should center on only one idea (thus the need for a thesis statement), transition smoothly from one idea to another and emphasize important ideas if necessary.

When the sentences in a paragraph and the paragraphs in the essay revolve around one topic that is expressed in a thesis statement, then the output is said to be unified. Consequently, these unified ideas achieve coherence when they flow smoothly because of their clear and logical arrangement (Ahmed, 2019; Fengjie, Xiuying, & Chuanze, 2014) to form an "integrated whole" (Garing, 2014) and become meaningful to the reader (Kiliç, Genç, & Bada, 2016). This is achieved in particular by cohesive devices within and between sentences.

Further, as cohesive devices were mentioned, coherence and cohesion should be clarified. Leading to coherence is cohesion (Al-Hindawi & Abu-Krooz, 2017) as it is referred to as the "surface structure relationships" of clauses and/or sentences in a text (Garing, 2014; Mubenga, 2010) so they become meaningfully connected to each other (Bahaziq, 2016).

Several essays were studied in terms of unity and coherence. Abbas and Herdi (2017) analyzed 52 scientific essays of their university students and found that the same studets had a good level of understanding and ensuring unity and coherence. On the contrary, Kiliç, Genç and Bada (2016), and Fengjie, Xiuying and Chuanze (2014) found that their student-participants were questionable in producing coherent essays. Garing (2014), on the other hand, was neutral as he reported that his participants had different levels of displaying features of coherence. Meanwhile, all the three studies showed that the essays they analyzed did not commit serious grammatical mistakes.

In the general area of language, Meniado (2019) determined the level of language proficiency of faculty members and discovered that the subjects got the lowest rating (basic level) in

writing. This is similar to the finding of Compe (2017) when he found that his high school subjects had low proficiency in writing. It can be noted that the participants of the two studies were from different educational levels yet they were in similar levels.

Proceeding to the sentences that compose an essay, some researchers identified the level of writing proficiency of their participants taking into consideration their grammar and mechanics. Cabansag (2013) found that 140 high school students from Northern Luzon were very proficient in structure and grammar. Another study that had high school students as participants and showed a lower rating was conducted by Racca and Lasaten (2016) who discovered that 216 students from a Philippine Science High School had typical skills in grammar. These two studies have bearing on this study since it wants to find out if the foundation of the incoming college students is enough.

For studies conducted with college students, Magbanua (2016) reported that his 305 freshmen respondents were very satisfactory in terms of grammar. On the other contrary, Leyaley (2016) revealed that his 285 first year student-participants had a beginner's level in grammar usage. Similar to these previous research works, the present study also requested the participation of first year students in MAAP to delve into their grammar skills.

As to the grammatical errors committed by university students, similar findings came out. Here in the Philippines, subject-verb agreement (Manzolin, & Gumpal, 2015), tense of the verb, and use of prepositions (Manzolin, & Gumpal, 2015) came out to be very common errors. Overseas, verbs and/or verb tense came out to be the most common error (Sawalmeh, 2013; Tesfaye & Tsadik, 2015; Amoakohene, 2017; Khumphee & Yodkamlue, 2017; Okoro, 2017).

These studies were used in the present undertaking as basis for comparison and contrast in its findings.

Methods

Descriptive-quantitative in design, the study described the organizations of paragraphs and sentential structures of the essays of 156 selected first year engine and deck cadets of the Maritime Academy of Asia and the Pacific. These participants belonged to the first batch of senior high school graduates, and therefore the first batch in the Academy to be in the curriculum with reduced number of English courses. During the conduct of the study, they have not yet taken any English course.

The cadet-participants were asked to write an essay about a given topic in more or less one hour and a half. No organizational nor structural rules were given. After the collection of the written outputs, the number of the essays was reduced to 62 only. The remaining essays were read and evaluated at least twice by the researcher to come up with the final result.

The results of the study were divided into three major categories: organization of paragraphs and sentential structures of the essays. For the first category, the physical appearance of the written output was first considered before the relationship of the paragraphs was taken into consideration. To repeat, an essay should be composed of an introductory paragraph with a thesis statement, body paragraph/s, and concluding paragraph. This entails a minimum number of three paragraphs. This requirement was the reason of the reduction of the essays analyzed. Ninety-four (94) essays did not meet this requirement. Moreover, the basic quality requirements of an essay, which are unity, coherence and emphasis, were used to describe the organizational structure of the students' essays.

The second category looked into how the words worked within the sentences. To make the description and presentation of data easier, the errors in the paragraphs and sentences were focused on. The researcher looked at individual sentences in each essay and coded the errors committed by the students. The errors were coded per essay. This means that the counting of the error was done per essay over the total number of the essays, not the frequency of the error in each essay.

The third category was based on the results of the first two questions raised. The areas to be focused on in the development of the new English course were enumerated as they were revealed by the essays as errors.

Results

This section is sub-divided according to the questions raised in the introduction.

a. Organizational Structures of the Students' Essays

As mentioned in the methodology section, the number of essays went down to 62 because the major outputs submitted were composed of one or two paragraphs. Since an essay has to have introductory, body and concluding paragraphs, there should be at least three paragraphs. With the 62 essays analyzed, 56 composed of three (3) to four (4) paragraphs, four (4) had five (5) to six (6) paragraphs, one had seven (7) and another had nine (9) paragraphs.

In terms of basic quality requirements, 48 essays had no thesis statements, 25 did not observe unity of point of view, while seven (7) had no tense consistency.

An example of an introductory paragraph that had no clear thesis statement is given below:

Recognition was all but worth the wait. An embracing time that defies a commulative designation of what a plebe stands on. It is the best feeling in the year full of sacrifices and misfortune that college life should not even care about my actuations but inside the academy, everything you do sums up your whole personality. A slight inaccuracy and small deficiency states that you must be snappy.

Aside from the structural errors found in the introductory paragraph above, no central or controlling idea was introduced. If one continues to read the whole essay, he or she will observe that the succeeding paragraphs do not support the first paragraph; thus, it violates the requirement of unity or oneness of idea.

Related to oneness of idea is oneness of point of view. Going back to the text above, the paragraph started with the third person point of view. In the third sentence, the point of view shifted to first person point of view then unnecessarily jumped to the second person point of view within the same sentence.

The paragraph below shows another example of unnecessary shift of point of view and tense:

Life in the academy is never easy. Lots of challenges will come your way and you do not have anyone to support you in times of need. I started entering the Maritime Academy of Asia and the Pacific on April 14, 2018. I was culture shocked on my first week here. Everything is on a fast pace. You only have a limited time. Foods are limited, sleep is limited despite the homesickness you feel. Sometimes, I felt like giving up but tears and sweat doesn't become the reason why I will leave. I made tears and sweat as my evidences of my self-worthiness. Tired and hungry is my greatest enemy back then. It all ends when we, class of 2022, became recognized.

The paragraph above does not only have unity of point of view but it also does not have unity of tense. The first sentence made use of the third person point of view and the base form of the verb to describe the reality of life in the academy. The second sentence, however, unnecessarily shifted to the second person point of view and the future tense of the verb. The third sentence started to describe the life of the writer when he became one of the probationary midshipmen (students), so it is noticeably acceptable that there was a shift in point of view and

tense. The fifth sentence posed another problem since it made use of the third person point of view and the present tense of the verb. If it is still a description of academy life, then the sentence was misplaced. It should come after the corrected form of the second sentence. The same is true for the succeeding two sentences. In sentence 8, the word 'doesn't' did not agree with its plural subject. Moreover, the word 'became' should be in its base form and the auxiliary verb 'will' should be 'would.' In sentence 10, the subjects 'tired and hungry' should be in their noun forms 'tiredness and hunger' and the verb should be 'were' and not 'is' to agree with a plural subject. Finally, the verb of the main clause in sentence 10 should be in its past tense form (ended).

In coherence, 50 of the essays did not make use of transitional devices. However, this does not mean that the paragraphs or the sentences were all jumpy. Instead of explicit transitional devices, most of the essays made use of paragraph or sentence divisions to transition their ideas; hence, even without transitional devices, the flow of ideas in general was still smooth. Meanwhile, 55 essays had no explicit emphatic devices used. Again, this does not mean that there was a problem in reading and understanding the essays of the MAAP students. For those who made use of emphatic devices, the most common was repetition of words and/or phrases.

b. Sentential Description of the Students' Essays

The sentences in the essays were analyzed individually but the presentation is by essay. This means that the frequency of each error detected was counted per essay, not per sentence or structure in the essay. The table below shows the common errors detected in the essays of the students.

Table 1. Common Sentential Errors of the Students

Error	Frequency
Word form	53
Fragment	33
Subject-verb agreement	32
Verb tense	28
Use of preposition	26
Word choice	23
Determiner	20
Unnecessary word	17
Missing word	17
Spelling	17
Punctuation	13
Conjunction	5
Pronoun usage	2
Word order	2

As seen in the table, the most common error committed by the students as observed in their written outputs was the use of wrong word form. Fifty-three (53) out of the 62 essays exhibited this error. This error is exemplified by these structures:

Let all your sweats <u>became</u> the fuse of your passion… (The underlined word should be in its base form *become*.)

…while I was still under their <u>caring</u>. (The underlined word should be in its noun form "*care*" to be accepted as the object of the preposition.)

… we become someone whose <u>live</u> here… (The underlined word should be in its noun form "life.")

The second most common error observed in the essays was fragmented structures. Examples of these fragments are given below:

Ready to become part of the "tropa." (This structure lacks a subject and a verb.)

Waking up early in the morning just before the morning sun rises, my feet getting cold from the metaphorical blizzard coming from the sea, physical exercises- which I hated- and rifle carrying blah blah. (This long structure is confusing and incomplete because it does not have a verb. If corrected, a clear agent and a verb [*I felt*] should be supplied after the word 'rises' and the comma to avoid a dangling modifier.)

Although some of them were saying that it was too early for us to be recognized and some were half-heartedly greeting us. (The use of the subordinating conjunction 'although' made the given structure incomplete in meaning and cannot stand alone. If corrected, 'although' may just be omitted.)

Trailing close behind fragments as the most common error was the subject-verb agreement which was detected in 32 outputs. Some examples of erroneous subject-verb agreement are given below:

One of the ceremonies that <u>touches</u> the heart of every cadet is Recognition Day. (The pronoun 'that' takes the place of the plural noun 'ceremonies' so the verb should agree with it, hence 'touch.')

Every one of us <u>deserve</u> to be recognized in many aspects. (The qualifier 'every' denotes a singular number so the verb should be singular [deserves] also.)

There <u>is</u> no limitations on the things that I want to do. (The subject of the sentence is 'limitations,' plural in number; therefore, the verb 'is' should be changed to 'are.')

Below are examples of sentences with problems on verb tense:

As I stand straight from bridging position, it feels like a large load has been lifted from my chest. (This sentence is part of a description of the writer during the Recognition Rites. The preceding and succeeding sentences were in the past tense. Since the writer was relating a past experience, the verbs 'stand' and 'feels' should be in their past tense forms.)

I remember when I was not yet recognized and I am adjusting here in the academy. (The verb 'am' should be consistent with the other verb 'was' because they were both talking about a past experience, so it should be 'was.')

Being recognized midshipmen, we become responsible with every action that we did. (The writer here was describing the present situation so the verbs should be in the present tense form.)

The fifth most common error detected in the essays was the use of prepositions. This is exemplified in the sentences below:

He needs to be more careful to his actuations. (The preposition 'to' may be replaced by 'with.')

We used to live with our comfort zones. (The preposition 'with' may be replaced by 'in.')

Be happy of all the privileges given to you. ('Of' may be replaced by 'for' or 'because of.')

Those were the most common errors committed by the MAAP midshipmen in their sentences. The least number of errors committed was in the arrangement or sequence of words.

c. Writing areas to be focused on

Based on the answers to the previous two questions, the following areas should be given more time and practice in writing topics:

1 Unity, specifically on constructing and developing a thesis statement, and maintaining one point of view and one tense when necessary;

2 The correct forms of words as used in the sentences;

3 Meaningful structures using the correct tense of the verb, the right preposition and other grammatical necessities. Some phrases and even dependent clauses can be used and accepted in essays as emphatic devices. However, when these structures confuse the reader's understanding, they become a problem.

Discussion

Looking back at the results above, it appears that the first year students of the MAAP need to be re-oriented with the basic structural and quality requirements of an essay. Other than being reviewed on the importance of unity, coherence and emphasis, MAAP students need to be reminded by language teachers on the structural elements of an essay. The number of papers rejected implies that students do not have a common understanding of the structural requirements of an essay. A number of them seemed to have equated an essay with a paragraph since they composed one to two paragraphs only. In addition, when the researcher read these paragraphs, they actually had more structural errors than those that were accepted for the actual data of the study. This may imply, too that those who did not have a good essay writing knowledge did not also have a solid background on grammar and mechanics.

The most prevalent error in the essays of the students considering organizational structure was observed in the area of unity. MAAP students did not exhibit good foundational knowledge and skill in unifying ideas through the use of a thesis statement and consistent point of view and tense. This flaw is similar to the findings of Ahmed (2019), who reported that university students in Saudi Arabia committed errors in applying coherence and unity in their paragraph writing. Specifically, he enumerated faulty organization of ideas, and wrong or lack of use of cohesive devices and transitional markers as the problems in the students' essays. In terms of unity, he also observed that the same students were inconsistent in the tenses of their verbs and in their structures.

Organization of ideas seem to be a common problem since Guliman, Timbang and Lagare (2016) had a similar finding. The authors noted that one of the difficulties of criminology students was organization of ideas. The good thing about this study was the positive attitude of the students toward writing. The said students revealed that writing proficiency is important as they would be using this when they write reports in their area of work. In the same way, maritime students will be writing different reports when they become professionals so the importance of writing well cannot be ignored.

Unlike the studies mentioned, this paper did not find much problem on coherence in the essays of first year MAAP students. This implies that even if there were problems on unity and grammar in the submitted essays, most of the intended meanings were still successfully conveyed to the reader.

While there were numerous sentential errors committed by the 56 first year MAAP students, their essays in general were not so bad. On the contrary, the determination of these errors were actually helpful to the language teachers of the academy as they communicated what needs to be reinforced. These errors were given more practice time in the new English course being developed. The findings of this research seem to be in contrast with Gustilo (2016) who was positive and concluded that 112 college freshmen from a private institution in the Philippines did not have much problem in grammar and spelling.

Focusing on the particular errors presented by this paper, it can be noted that the common errors detected by this study did not differ much from the past studies conducted with college students. The errors presented on this paper were also in the list of errors identified by Khumphee and Yodkamlue (2017)- prepositions and verbs; Manzolin and Gumpal (2015)- tense, subject-verb agreement and preposition; Tesfaye and Tsadik (2015)- fragment and verb form; Suarez, Anabieza and Musni-Tagaytay (2014)- sentence structure; and Gustilo and Magno (2012)- word choice, verbs, and sentence structure (fragment or run-ons).

These similar findings seem to show that local or overseas, those studying English as a second or foreign language encounter the same problems in grammar. This could mean that the non-native speakers of English have similar needs in terms of second language learning; thus, similar approaches may also be employed.

Finally, this research did not make use of any rubric or standard since the approach was discovery. However, the maritime students in MAAP are being educated and trained to become maritime officers, so they have to meet certain standards, which are internationally recognized. Cole and Trenkner (2009) proposed a “yardstick” composed of numerical values with corresponding descriptors for areas of competence which were based on the STCW to be used in assessing maritime students. In agreement with this was Noble (2018) who asserted the necessity of global standards for Maritime English. Supporting the propositions of the aforementioned authors, MAAP may adopt the yardstick, together with other Academy assessment criteria and practices, to ensure that no competence is being missed.

Conclusions and Recommendations

The first year students of the Maritime Academy of Asia and the Pacific can express their ideas. However, they seem to need a review on the basic requirements of an essay and how to

make it unified, more coherent and more emphatic. In addition, the same students are not syntactically excellent and are therefore in need of grammar reviews every now and then.

Having stated the conclusions above, this paper recommends an additional English course with grammar focus, which is applied in writing and other macro skills of language. This way, the issues observed in the written outputs of the students can be addressed, while developing their other English skills as well. Following this, an essay standard should be set and implemented by the Department of Academics and the Center for Competency Assessment. This will ensure shared responsibility and accountability by the teachers and assessors. It will also lessen the burden imposed on the English teachers of the Academy.

It is noted also that the essays were not rated to assign the level of writing skills of the students nor were the same outputs evaluated based on a rubric. A clearer picture may be presented if other researchers use a rubric and an internationally recognized standard in determining the level of writing skills of the students. This will give a clearer direction in the planning and preparing a more relevant course or writing topic for the maritime students not only in MAAP but also in other maritime schools in the Philippines. Moreover, the inter-rating should also be done in evaluating the essays to establish stronger and more reliable scores.

For future or related studies, a bigger number of participants is recommended. Moreover, the two programs may be separated for comparison purposes.

References

Abbas, M., & Herdi, H. (2017). Analysis of unity and coherence in writing scientific essay at the fifth semester of English Department FKIP UNILAK 2016/2017 academic year. *J-SHMIC: Journal of English for Academic, 4* (1), 15-21. DOI: https://doi.org/10.25299/jshmic.2017.vol4(1).503

Ahmed, F. (2019). Errors of unity and coherence in Saudi Arabian EFL university students' written paragraph: A case study of College of Science and Arts, Tanumah, King Khalid University, Kingdom of Saudi Arabia. *European Journal of English Language Teaching, 4* (3), 125-155. DOI: 10.5821/zenodo.321555

Al-Hindawi, F., & Abu-Krooz, H. (2017). Cohesion and coherence in English and Arabic: A cross-theoretic study. *British Journal of English Linguistics, 5* (3), 1-19. Retrieved from http://www.eajournals.org/wp-content/uploads/Cohesion-and-Coherence-in-English-and-Arabic-A-Cross-Theoretic-Study.pdf

Amoakohene, B. (2017). Error analysis of students' essays: A case of first year students of the University of Health and Allied Sciences. *International Journal of Higher Education, 6* (4), 54-68. DOI: 10.5430/ijhe.v6n4p54

Bahaziq, A. (2016). Cohesive devices in written discourse: A discourse analysis of a student's essay writing. *English Language Teaching, 9* (7), 112-119. DOI: 10.5539/elt.v9n7p112

Cole, C., & Trenkner, P. (2009). The yardstick for Maritime English STCW Assessment Purposes. Retrieved from http://web.deu.edu.tr/maritime/imla2008/Papers/19.pdf

Compe, A. (2017). English proficiency level of secondary students. *International Journal of Research and Education, 5* (11), 205-214. Retrieved from www.ijern.com

Demydenko, N. (2010). *The need of introductory maritime English course for non-native English speakers*. Paper presented at the International Association of Maritime Universities Annual General Assesmbly 11.

Dirgeyesa, 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), 41-47. DOI: 10.5539/elt.v11n9p41

Fengjie, L., Ziuying, Y., & Chuanze, Z. (2014). Analysis of the problems on coherence in college English writing. *International Journal of Language and Linguistics, 2* (6), 387-390. DOI: 10.11648/j.ijll.20140206.18

Garing, A. (2014). *Coherence in the argumentative essays of first year college of Liberal Arts students at De La Salle University*. Paper presented at the DLSU Research Congress 2014, Manila, Philippines. Retrieved from https://www.dlsu.edu.ph/wp-content/uploads/pdf/conferences/research-congress-proceedings/2014/LLI/LLI-I-001-FT.pdf

Guliman, R., Timbang, B., & Lagare, Y. (2016). Shared experiences of proficient English writers: Criminology students in focus. *International Journal on Studies in English Language and Literature, 4* (4), 63-74. DOI: 10.20431/2347-3134.0404010.

Gustilo, L. (2016). Differences in less proficient and more proficient ESL college writing in Philippine setting. *The Philippine ESL Journal, 16*, 27-45.

Gustilo, G., & Magno, C. (2012). Learners' errors and their evaluation: The case of Filipino ESL writers. *Philippine ESL Journal, 8*, 96-113.

International Transport Workers' Federation (n.d.). *STCW: A guide for seafarers taking into account the 2010 Manila amendments*. Retrieved from https://www.mptusa.com/pdf/STCW_guide_english.pdf

Jones, A., & Jones, L. (2005). *A world of writing*. USA: Pearson Education, Inc.

Kiliç, M., Genç, B., & Bada, E. (2016). Topical structure in argumentative essays of EFL learners and implications for writing classes. *Journal of Language and Linguistic Studies, 12* (2), 107-116. Retrieved from https://files.eric.ed.gov/fulltext/EJ1117965.pdf

Khumphee, S., & Yodkamlue, B. (2017). Grammatical errors in English essays written by Thai EFL undergraduate students. *Journal of Education, Mahasarakham University, 11* (4), 139-154.

Langan, J. (2014). *College writing skills* (9th Ed.). New York: McGraw-Hill.

Leyaley, R. (2016). The English language proficiency of freshmen students in the institute of teacher education, Kalinga Apayao State College. *International Journal of Advanced Research in Management and Social Sciences, 5* (2), 257-278. Retrieved from www.garph.co.uk

Magbanua, V. (2016). English proficiency of college students. *International Journal of Scientific and Research Publications, 6* (11), 548-549. Retrieved from www. ijsrp.org

Manzolim, H., & Gumpal, B. (2015). Isabela State University Rural Campus written composition: An error analysis. *The Countryside Development Research Journal, 3* (1), 64-75.

Meniado, J. (2019). Evaluating the English proficiency of the faculty members of a higher eduvation institution: Using results to develop responsive professional development program. *International Journal of English Linguistics, 9* (2), 52-64. DOI: 10.5539/ijel.v9n2p52

Mubenga, K. (2010). Towards and integrated approach to cohesion and coherence in interlingual subtitling. *Stellenbosch Papers in Linguistics PLUS, 40*, 39-54. DOI: 10.5842/40-0-4

Noble, A. (2017). Maritime English put to the test! The feasibility and desirability of setting global standards for Maritime English: A survey-based study (Doctoral Dissertation, UPA University, Antwerp, Belgium). Retrieved from https://www.researchgate.net

Okoro, G. (2017). Error analysis of the written English essays of junior secondary school two students in Owerri North. *International Journal of Education and Evaluation, 3* (5), 64-74. Retrieved from https://iiardpub.org/get/IJEE/VOL.%203%20NO.%205%202017/ERROR%20ANALYSIS.pdf

Racca, R., & Lasaten, R. (2016). English language proficiency and academic performance of Science high school students. *International Journal of Languages, Literature and Linguistics, 2* (2), 44-49. DOI: 10.18178/ijlll.2016.2.2.65

Sawalmeh, M. (2013). Error analysis of written English essays: The case of students of the preparatory year program in Saudi Arabia. *English for Specific Purposes World, 40* (14), 1-17. Retrieved from https://www.researchgate.net/publication/265210536_Error_Analysis_of_Written_English_Essays_The_case_of_Students_of_the_Preparatory_Year_Program_in_Saudi_Arabia/link/5405709a0cf23d9765a6e6b2/download

Shields, M. (2010). *Essay writing: A student's guide*. Singapore: SAGE Publications Asia-Pacific Pte Ltd.

Suarez, D., Anabieza, K., & Musni-Tagaytay, M. (2014). Predictors of grammar proficiency of students from selected higher educational institutions in Davao City. *UIC Research Journal, 20* (1), 27-37. DOI: 10.17158/542

Tesfaye, D. & Tsadik, D. (2015). Error analysis in essays written by graduating trainees with reference to teacher training colleges in Oromia region: A mixed approach. *International Journal of Educational Research and Technology, 6* (3), 27-40. DOI: 10.15515/ijert.0976-4089.6.3.2740

Zhang, Y., & Cole, C. (2018). Maritime English as a code-tailored ESP: Genre-based curriculum development as a way out. Ibérica, 35, 145-170. Retrieved from http://www.aelfe.org/documents/35_06_IBERICA.pdf

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Maritime English in the Bridge Simulator

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Abstract

Full mission bridge simulators have been used for the teaching of ship handling and other technical skills such as the use of navigation equipment and electronic aids for many years. The paper proposed will explain how this educational technology is used for Maritime English classes, at Ecole Navale, the French Naval Academy.

The theoretical framework is that of game-based learning and simulation, stemming from the psychological theory of "flow" (CSÍKSZENTMIHÁLY, 1990). The paper will explain why simulation can improve learning, and how this can be put in practice in the ME classroom, explain what are its advantages and limits.

At Ecole Navale, simulation sessions usually last two hours, with learners rotating at each function on the bridge. Learners are typically assigned a transit between two points, and must deal with routine conversations over the VHF radio (with port control, VTS, etc.). As unexpected events happen (such as technical problems, ship interrogations, vessels in distress, priority VHF messages, etc), learners must also use their VHF skills (including the SMCP) to solve situations.

Keywords: *ship's bridge simulator, roleplay, game-based learning, flow, simulation*

Introduction

The early 21st century has seen the advent of the action-oriented approach, as advocated by the Common European Framework of Reference for Languages (CEFR, 2001), which has gradually replaced the communicative approach in many maritime teaching institutions. This has fostered the development of simulations and roleplaying games for learning, in particular because some of these have become possible thanks to the use of recently developed educational technologies, previously not available. Such tools, because they are now more realistic, allow

for a more immersive experience for the learner, thus allowing increased levels of engagement. Full-mission bridge simulators, in particular, which were once only used by navigation professionals, are now powerful and easy enough to use to be utilized also in the language class, by teachers who are "marinated" language specialists, and not necessarily former seafarers or specialists of the technologies present on a vessel's bridge.

This paper will first introduce our theoretical framework, which is that of learning artefacts, and explain how these have shifted our perspective from mediation to roleplay. We shall briefly present the psychology theory of "flow" (Csikszentmihalyi, 1990), explain why this phenomenon should be sought and what its benefits are in a learning environment, as well as describe the conditions required for it to happen. Lastly, this paper will describe one possible example of the application of this theoretical framework (the use of full-mission 3D bridge simulators), analyze its implementation, and attempt to identify the advantages and caveats of this approach.

Theoretical framework: mediation, media, roleplay

Mediation

Vygotski (1934), Freinet (1956), and later Bruner (1983), Houssaye (1998) and Larose and Peraya (2001) have defined the theoretical framework of pedagogical mediation. Stemming from socio-constructivism, this theory conceives the teacher not as a mere source of knowledge which should be "imparted" to fairly passive learners, but as a facilitator, a guide, in the discovery and understanding of the learning material, a mediator between the learner and the knowledge.

However, in a teaching/learning situation, the teacher is not the only such mediator. All learning resources used by both teachers and learners in the teaching/learning process (what Rabardel and Verillon (1985) have called "learning artefacts") participate to this role. As Rabardel (1995) has shown, there are profound implications to the use of learning artefacts. Indeed such artefacts modify the number and the nature of the actions conducted by the learners, as they "use the artefacts to alter the real world" (Rabardel, 1992, p. 10). In an instrumented learning situation, interactions are thus more numerous (because adding one element increases the number of possible interactions), but also of a different nature (new interactions appear between the learner and the artefact and between the learner and the knowledge through the artefact).

In Houssaye's model (1998) the teaching/learning situation is triangular (comprising the knowledge, the teacher, and the learner). Interactions are thus of three types: "learning" (between learner and knowledge), "teaching" (between teacher and knowledge), and "training" (between teacher and learner). According to this author, the teaching process (which he understands as, *ex-cathedra* and primarily transmissive), being focused on the teaching material (the knowledge itself), forbids mediation. Thus, less transmissive pedagogies focus on the "training" process, placing the teacher in a middleman role, leaving most of the activity to the learner (Dewey, 1938). Such activities, which focus on the learning process, allow the learner (constructivism) or group (socio-constructivism) to play the mediating role themselves (Houssaye, 1988, p. 178). As Faerber (2004) explains, groups favor socio-cognitive conflicts (Perret-Clermont, 1979), which by definition cannot happen with individuals. These socio-cognitive conflicts are essential to the deconstruction/reconstruction process required for learning (understood as the modification of pre-existing knowledge).

Media, and didactic ergonomics

To Rabardel (1995) and Rézeau (2001, 2002), the didactic work of the teacher adds one node to Houssaye's triangular model, making it a diamond: the learning media. Hence, the teacher is seen a learning mediator and a learning media designer.

It is important to mention that new media, and in particular digital media and learning technology objects, have specific characteristics which make them prone to new types of interactions, in particular in the context of language learning. Bertin (2001, 2003) has proposed the concept of didactic ergonomics, a theoretical approach of teaching/learning technology which aims at better fitting such technology to the teaching/learning goal(s) it seeks. In the context of language learning, didactic ergonomics are defined as an attempt to describe and characterize the observable interactions in a teaching/learning situation which relies on one or several digital media, in order to infer optimal conditions for the integration of such digital tools. At the core of the theory is the fact that 'educational technology is justified only when the teaching/learning material has been (re)designed specifically with the particular nature of the media in mind (…) how it can improve the learning process' (Bertin, 2003). In short, didactic ergonomics look at what the new media *adds* to the teaching/learning process.

As we shall see, 3D simulation has allowed new forms of learning interactions and new class practices to emerge. Chief among those is educational live-action roleplay.

Task-based approach and roleplay

In a formal teaching/learning situation, action and communication go together, because of the social interaction between the nodes of the pedagogical diamond. Indeed as Grobois states: "(…) the social dimension inherent to learning, set it within a theory of social action, and hence of co-action. In other words action and communication are bound in a context of social interaction" (Grobois, 2012, p. 83). It is the task-based approach which most logically stems from this observation. Nunan defines a task as "(…) a piece of classroom work which involves learners in comprehending, manipulating, producing or interacting in the target language while their attention is principally focused on meaning rather than form" (Nunan, 1989, p. 19).

Puren (2004), nonetheless, establishes a clear distinction between *tasks* (designed primarily for learning) and *action* (primarily aimed at social interaction). To him there is indeed a notable difference between a learner and another user of a language. Yet, it seems to us that simulation and roleplay games (frequently used in task-based learning as well as in the communicative approach) tend to blur this difference.

For Narcy-Combes (2005), it is important to distinguish macro-tasks from micro-tasks. To this author, macro-tasks are akin to real-life social practices, potentially prone to causing social interactions between learners, in context. Thus, they should focus on meaning, on goals and ends, rather than form. Later, once learners run into difficulties in accomplishing these macro-tasks, micro (language) tasks will focus on questions of form.

The use of digital technologies has facilitated the implementation of the task-based approach, since the early 2000s. These technologies allow for the learners to be put in a position to be social agents, capable of accomplishing tasks which are not solely language-oriented, of collectively solving problems, through interaction. In doing so, the socio-constructivist constraints of the approach will (more often than not) *increase* the learners' motivation and engagement (Grosbois, 2012, p. 84). Our own research (Ferreira, 2010, 2014) has led us to take this approach further: if the entire learning environment (Legendre,1988 and Germain, 1989) is an integrated immersive learning situation, specifically designed and built within a digital system, by a teacher (thus with a teaching/learning goal), and in which the learner will accomplish tasks that are very similar to those a professional would accomplish on the job, then the media thus created (i.e. the "simulation"), that alternate reality, is a "serious game." The design process that leads to such creation, we have proposed to name "pedagogical playification" or "pedagogical ludification". The theoretical framework of our action is thus that of a particular type of learning artefact: that of serious games, i.e., learning artefacts that are so

immersive that while the learner is in the learning simulation he/she no longer cares about the meaning/form of the words he hears and says, but focuses only on the *action* which they permit. The task-based approach thus focuses on the definition of the macro-tasks, and lets learners define, accomplish and evaluate the required corresponding micro-tasks, even though, as Chini (2010, p. 172-174) warns, a reflection on the rules that govern the language should not be overlooked lest we forget that there is indeed a difference between learning (in which correction exists) and mere practice.

Serious play

Serious play: a long tradition in military history

Play is one of the oldest and most primitive forms of (adaptive) learning, one we share even with some animals (Van Eck, 2006). Surprisingly, the phrases "serious play" and "serious game" are not oxymorons: for Huizinga (1938), the contrary of "game/play" is not "serious" but "reality". In his famous Homo Ludens, he defines play as "a free activity standing quite consciously outside "ordinary" life as being "not serious," but at the same time absorbing the player intensely and utterly. (…) It proceeds within its own proper boundaries of time and space according to fixed rules" (1988, p. 15).

The military in general, and military academies in particular, have long pioneered the field of serious play. The first formal military simulation dates back to the Kriegspiel, in Prussia, in the early 19th century. Since, armies and navies have played for training, in all fields and for all subjects, academic or technical. Communication in general, and naval communication (thus in English) in particular, are no exception. Interestingly, the CEFR (2001) has since sided with this approach, in defining learners as "social agents, i.e. members of society who have tasks (not exclusively language-related) to accomplish in a given set of circumstances, in a specific environment and within a particular field of action." (CEFR, 2001, p. 9). When we use a bridge simulator in a marine communication class, we aim at "going beyond exclusively language-related skills and engage learners in a global task, in order to train not only speakers, but social agents" (Bertin, 2003).

The theory of "flow"

Recent research in neurosciences has shown that play induces a particular state of consciousness in which the subject's ability to rapidly and reliably solve complex situations, to propose relevant solutions to multifactorial problems even when under pressure, and come up

with efficient innovative solutions, is increased (Kounios & Beeman 2009, Carey 2010, Sussan 2011, Guillaud 2013). Czech psychologist M. Csikszentmihalyi (1990) has named this phenomenon "flow", i.e. the particular mental state of a person who is completely immersed in what he/she is doing, in a maximal state of concentration, of focus. The person then experiences total engagement and a feeling of achievement.

1	Reasonable level of difficulty	"We confront a task we have a chance of completing"
2	Concentration	"We must be able to concentrate on what we are doing"
3	Clear objective(s)	"The task has clear goals"
4	Feedback	"The task provides immediate feedback"
5	No distraction	"One acts with a deep but effortless involvement that removes from awareness the worries and frustrations of everyday life"
6	Feeling of control	"People can exercise a sense of control over their actions"
7	No concern for self Yet, increased sense of self	"Concern for the self disappears, yet paradoxically the sense of self emerges stronger after the flow experience is over"
8	Altered perception of time	"The sense of the duration of time is altered ; hours pass by in minutes, and minutes can stretch out to seem like hours"

Table 1 - Characterizing "flow" (Csikszentmihalyi, 1990: 49)

Csikszentmihalyi (Table 1) has defined "flow" with the following eight criteria:

- The goal (or goals) is clearly defined: rules and expectations are well understood.
- The level of difficulty is acceptable: the task at hand is challenging enough to generate interest, and yet within the range of what the learner is capable of accomplishing with his current knowledge and abilities, albeit with the (limited) help of a teacher or a co-learner.

- The task is autotelic: it is satisfactory to achieve in and by itself. It is thus not perceived as a chore, or as work. In simple words, it must be "fun" to do.
- "Flow" demands direct and immediate feedback. In turn, it allows for such feedback to be taken into account immediately. Thus, failure and success are dealt with on the spot. The form of such feedback must not remind the learner that this is a learning task, however, lest flow will never happen.
- "Flow" demands a high level of concentration (engagement) on a limited field of consciousness, known as "hyperfocus". Conversely, it allows such phenomenon. Subjects can be completely oblivious to the world around them.
- "Flow" can cause the subject to lose his sense of self, and in particular to lose track of physical needs (such as food, drink, sleep or visiting the lavatories).
- The phenomenon can dramatically alter the perception of time.
- Subjects often feel empowered. They have a sensation of being in control, of having been in a situation which was in hand, even though challenging.

Not all of the criteria above are necessary for flow to happen. Indeed, while the three/four first ones seem to describe conditions required for the phenomenon to happen, the four/five latter ones seem to describe what it allows (Csikszentmihalyi et.al., 2005). For such a state of consciousness to happen in a teaching/learning situation, a few conditions are required:

- First, a game for learning must be contextualized (Nicholson, 2012). As Van Eck (2006, p. 18) has written : "Learning that occurs in meaningful and relevant contexts is more effective than learning that occurs outside of those contexts, as is the case with most formal instruction. Researchers refer to this principle as situated cognition and have demonstrated its effectiveness in many studies over the last fifteen years".
- Secondly, for a learning game to be efficient, it must take into account the learners' profiles, as well as the context in which they will be working (Deterding, 2011).
- Lastly, the choices which the player/learner makes must be real choices. In other words these choices must have notable effects on the game/scenario, and must be credible. Ideally, there should always be several acceptable ways of achieving the task at hand (the macro-task set by the instructor), and learners should be allowed to choose their own strategy (the micro-tasks to accomplish) to attain the goal (Ferreira, 2014). This will increase their level of engagement, and make the scenario more meaningful by clarifying its objectives in terms of learning outcomes (Rose & Meyer 2002).

The question of motivation

Nicholls (1984) has posited that self-esteem stems from the perception of one's competence. Judgment on oneself derives from the amount of effort a learner puts in the task assigned by the teacher. Thus, in some situations, and in particular if the learner anticipates failure, he/she may be tempted to provide little or no efforts: indeed to preserve self-esteem, a person will prefer to fail in a situation in which he/she did not try hard. As a consequence, when knowledge is hard to acquire (and in particular if the subject is new to a particular domain), learners may minimize their efforts, to preserve self-esteem, should they meet failure (Fenouillet, 2011, p. 37). It is thus important to design learning scenarios which cannot fail (or at least not fail badly), which in turn will have consequences on the implementation of the roleplays used in class (see below).

In the bridge simulator

Description

For reasons of cost (relating to the price of running, maintaining, or indeed repairing ships, in case of a mishap), as well as for ethical reasons (the safety of both learners and instructors), the French naval academy does not wish to train midshipmen solely onboard real vessels. Midshipmen are therefore trained in part on full-mission bridge simulators, before embarking on real ships, at sea. Thus they can safely try their hand at navigation or ship handling in an environment where mistakes, mishaps, errors or lack of judgement have no financial consequences, no other penalty than a bad mark, and cause no risk to their life or that of their shipmates or instructors.

The French naval academy has four full-mission bridge simulators (Figure 1), interconnected over the school's network, which allows midshipmen to interact as if they were on four ships navigating in the same waters. A bridge simulator is a large room, kept in relative darkness, in the middle of which is a full-size copy of a vessel's bridge, with all the instruments that one would find in a real bridge (such as equipment for communications, radars, plotting aids, and all the buttons, control panels and joysticks used for ship handling). All around the bridge, on the outside of the window panes, at a distance of four or five meters is a large panoramic 360-degree screen. As the screen is seen through the windows and it is some distance away, it fills the entire visual field of users, so that it genuinely looks like one is onboard a real ship at sea. What is more, the 3D image which is projected is coherent with the physics of the vessel as she moves through the water, the physics of the sea and the weather effects, so that the users' brains

are fooled into believing they are really onboard a ship, to such a point that first-time users often experience sea sickness, despite the fact that the motion is only apparent.

Figure 1- a bridge simulator, at Ecole Navale (credits: © Marine Nationale, 2014)

This type of equipment has long been used to train learners in ship handling, navigation, close-quarter situations, COLREGS (Collision Regulations) and collision avoidance, as well as tactics (for military personnel). A few years ago, they were introduced in the SMCP (Standard Marine Communication Phrases) English courses as well, to implement realistic roleplay scenarios in real time during which the learners must operate communication equipment (such as VHF radios) together with appropriate language resources in order to interact with coastal stations and/or other vessels, military or civilian, while accomplishing the real-time tasks required to safely steer the ship, for example through the congested waters of a busy port. In so doing, the perspective is resolutely to aim at task-based action-driven learning.

A brief review of the literature

Although the topic of the use of bridge simulators in Maritime Education and Training (MET) has been dealt with in a (small) number of peer-reviewed papers, fewer yet have dealt with such use in Maritime English (ME) classes. We have found no instance of a theoretical framework specific to the teaching of Maritime English or of the SMCP. What we have found deals with MET in general and human factors in particular (Crew Resource Management, Situational

Awareness, bridge communication, intercultural issues). Hanzu-Pazara et al. (2008) indicate that simulator-based training was introduced (in the 1950s) with the primary intent to train learners in navigation skills (such as passage planning), as well as non-technical human factors (such as the pilot/Master relationship). Today, all kinds of simulators are used in all subjects of MET, from engine control to bridge operations, to cargo handling, to interactions with Vessel Traffic Services (VTS). What is more, the use of simulators in MET is regulated in the Standards of Training Certification and Watchkeeping (STCW) Convention which provides specific recommendations for the use of simulators in MET, and for performance-based assessment in competency tests (under sections A-I/6 and A-I/12).

Sellberg (2017) reviewed 34 peer-reviewed papers dealing with simulators in bridge operations training and assessment, published between 2000 and 2016. Of those, only 6 dealt with questions of education specifically. She found that:

> "Maritime professionals are most often positive towards simulators in training, yet remain concerned about (…) the upgrades of the IMO and STCW conventions and the practical impact it will have on MET. (…) The conventions stress that simulators should be used for training and certification of proficiency and non-technical skills. This in turn raises a number of questions (…), most commonly, if simulator-based training works in terms of improving safety at sea (…)".

Pekcan et al., (2005, quoted in Sellberg, 2017) raise questions of a more didactic nature: how do we ensure non-technical skill transfer? How can these skills be effectively assessed on both individual and group level? Which cultural factors need to be identified and taken into account during curricular design and during training? Also, Ali (2008) and Hanzu-Pazara et al. (2010) note that simulator training is often poorly implemented, and call for better trained instructors and more advanced technologies to meet the demands put forth in the Manilla amendments of 2010.

Several papers address the question of the relationship between simulator fidelity and the quality and transferability of learning. As Sellberg (2017) indicates, the prevailing idea in most domains that use simulators in training is that if the simulation is close to the real-world task, the more likely it is that skills transfer from one context to another. Yet, John et al. (2016) showed that "low-fi" bridge simulation can do at least as well (and sometimes better) as full-mission bridge simulation when it comes to promoting best practices in internal bridge team communication, and Dalström et al. (2009) concluded that low-fidelity simulators allow repeated training for unanticipated and escalating situations which often trumps the benefits of

sessions which follow rehearsed roles and procedures, as they are often implemented in high-fidelity simulators.

Saus et al. (2010) contend that it is paramount to design training scenarios that enable learners to perceive the simulation as a *realistic* training event, while being well-adjusted to their level of competence in order for them to benefit from the learning experience.

Chauvin et al. (2009), compared learners trained on-board with learners trained in a simulator and found that those in the on-board program showed significantly better results than the simulator-based training group. This should be taken into account, particularly when considering recent proposals to equate simulator time with onboard training time in MET (Barsan, 2004).

Lastly, Kobayashi (2005) investigated the question of the suitability of simulators for assessing competences involved in safe navigation, and came to the conclusion that simulators are well-suited for both training and assessing such competencies, but only if and when they are properly used, which is often not the case. Indeed, Emad and Roth (2008) have warned that not only the learning objectives may not be fulfilled, but the current assessment system of many MET institutions may have changed the learning objectives of simulator-based training itself: instead of aiming to acquire skills and knowledge required to exert their duties onboard, learners may be training to pass competency tests! Similarly, Sampson et al. (2011) found that MET instructors often do not know how to assess such competencies in a simulator, which is not surprising since, as Sellberg (2017) indicates: “it is far from evident how to conduct assessment based on observation of actions in the simulated environment (…). Consequently, more studies are needed in order to provide guidelines for simulator-based assessments of competency to ensure validity and reliability of the assessment methods or models”.

Implementation and set up

A training session at the bridge simulator is called a “watch”. A watch is a period of duty, which typically lasts four hours at sea. However, for reasons of organization, at school a watch lasts no more than two hours. For learners, a watch will consist of a series of interactions between their vessel and other ships or boats around them (which will be played by the instructors in the control room and/or by other midshipmen in another bridge simulator) and coastal stations (such as signal stations, maritime rescue coordination centers, VTS operators, port control authorities, harbormasters, or pilot stations), in a scenario designed by the instructors. In the control room, there are technical operators responsible for the movements of the scenario’s vessels and aircraft, for causing breakdowns and malfunctions to the learners’

vessels' equipment (such as GPS, radar, rudder or steering engine, etc.), and for adjusting the sea and weather conditions (as per the scenario). There are also language instructors, in charge of impersonating the mariners on surrounding vessels, as well as land stations (over the radio). Scenarios may include events such as collisions, priority (safety) formatted messages to warn others of a danger such as drifting containers or wood logs, or participation to a rescue operation (distress or urgency). They may include missions such as patrolling fisheries and ship interrogation, police operations, but also routine conversations such as a request for pilotage, collision avoidance in a busy fairway, preparation of berthing or getting underway, towing, providing shipping forecast information to a boater, etc. Lastly, let us mention that a language instructor is generally present on each bridge, with the function of assisting learners in real time, as we shall see below.

Analysis

The most important element of a simulation or live-action roleplay is the pedagogical scenario, as it is what guarantees the time-effectiveness and profitability of the exercise, as well as the learners' engagement. This implies that the scenario must be designed (and indeed set up) in advance with the technical and subject matter experts, to place physical objects (such as containers, wood logs, other ships, men overboard, sailing boats involved in a regatta, inbound and outbound commercial traffic) in a position that ensures the scenario remains realistic and coherent. One cannot simply make a ship "appear" on the screen, within detection range, if it was not visible on the radar before, or "teleport" objects to a given position, as this would break the "flow". If the instructors were to say something such as "ok, let's pretend this ship was there since the beginning, all right?", this would make the simulation unrealistic, making it a mere game, leaving out the "serious" part, which would completely annihilate the learners' engagement. Therefore, it is important to seek the expertise of experienced seafarers, for example to place objects and interactions within reasonable and realistic distances, to set coherent speeds, etc. Similarly, you need a coherent "cover story" to make tasks authentic and believable. For example, if a signal station asks the learners' ship to interrogate a vessel in her vicinity, there needs to be a valid reason for them (the signal station) not to do it themselves (such as a technical issue with the ship's radio preventing her to reach the land station).

As we have seen, perceived realism is increased when learners are able to set the tasks to accomplish themselves. One of the main flaws with action-oriented task-based scenarios is that those choices are often made arbitrarily by the teacher: "first you'll do this, then you'll do that" (Nissen, 2011). In a coherent simulation, the situation should determine the nature and order of

the sub-tasks accomplished by the learners (ibid.), which will increase their sensation of control and empower them (Zimmerman, 1990; Eisen, 1994; Gibson, 1991:359), making them more engaged.

Similarly, to increase the perceived realism we have introduced cognitive "noise" in our scenarios. Previously, the only conversations that were broadcast on the VHF were those between the learners and the other "characters" of the scenarios. 100% of the broadcasts were "useful" to the scenarios. This was unrealistic, because VHF channels are public, and the contact channel (16) is the same for everybody. Therefore, we now broadcast "clutter", i.e. transmissions that can be heard by the learners, but are not destined to them (such as conversations between another ship and a port, or a safety message about a hazard located close enough to be heard, but too far to be relevant to them, etc.). Thus, like in real life, learners must pay attention to everything, but only respond or take into account a fraction of what is broadcast, which is much more realistic, and allows us to revise or test a much broader range or vocabulary.

What is more, SMCP is a standardized language, designed for non-native speakers. Therefore, in some of our scenarios, we have now added exotic accents (Italian, Russian, Asian, Hispanic, Arabic) on top of the more classic British and American ones. Our learners are indeed more likely to be deployed off the Somali, Indian or Omani shores than off California of Wales.

Another noteworthy aspect of simulations is the following: while it is easy to include a digital "assistant" or scripted learning agent (in charge of assisting the learner) when designing a piece of learning software, this is not so easy in a bridge simulator. As a consequence, we have found no other solution than to have a teacher present in the bridge simulator, with the learners, in order to help them in situations where they would otherwise be prevented to carry on with the simulation. Indeed, a live action roleplay in a bridge simulator being a learning activity, it would not serve any purpose to have students fail. Bridge-side teachers are thus to let learners try to solve situations themselves, but to assist them if they feel learners are cornered in a problematic situation which cannot be solved without teacher assistance. In doing thus, they act as a teaching agent (Hubbard, 1999, 2000, quoted in Bertin, 2003):

- they are a reassuring physical presence,
- they are held as experts in the studied subject,
- they are able to provide tailor-suited assistance to each learner.

Similarly, some of the poorly-mastered content could be de facto validated by imperfect practice which, although wrong, would reach the desired objective, in part because the teacher (because he designed the scenario for the roleplay with a specific pedagogical intention) knows what the learner is aiming to accomplish, and in part because they often share a common L1 and act in an also common L2. Even if this phenomenon also exists in real life (because SMCP is a standardized professional language, aimed at professional communication tasks), it is important for the instructor present on the bridge to be aware of such a phenomenon, in order to correct (a posteriori) any poorly worded sentence which would nonetheless have succeeded, lest they are consolidated by such faulty practice.

Conclusion

As Demaizière and Grosbois have written:

> "Digital tools have greatly facilitated the implementation of the task-based approach, understood as co-action, which has thus become closer to real-life social practices." (Demaizière and Grosbois, 2014).

We have conducted a survey of various types of learner populations (from young first year midshipmen with no sea-going experience, to seasoned mariners with 15 years of service), and the majority thinks that the added value of live action roleplay in a bridge simulator lies on the fact that it is both real-time and penalty-free. We have, indeed simulated VHF conversations for many years (in specially-equipped rooms, in language labs or simply with the use of walkie-talkies), but learners then have more time to think about their communication, for two reasons: first, because 100% of their cognitive power is then devoted to that (they are not steering a ship), and second, because there is no time constraint (unlike there is on a vessel which is moving close to other ships). Moreover, a bridge simulator allows training in an environment that is closer to that of real life (poor sound, interference, accents).

Yet, to us, the most important benefit of using a bride simulator is that the skills learnt have meaning: situated practice allows learners to understand why a particular detail has importance, why a wording is better or safer than another one. In real-time situated practice, learners experience the importance of being intelligible.

Still, there are, of course limitations to the use of bridge simulators. First, it would not make sense to teach all VHF classes in a simulator, because they only become cost- and time-effective when a significant amount of knowledge has been acquired, and sufficiently practiced (in

language-learning tasks focusing on the form) to be nonetheless mastered despite the added constraint of real-time action, and available to learners despite the cognitive load caused by the use of the bridge simulator, to accomplish complex communication tasks (focusing on the goal, instead of the form). If the simulation had to be stopped to correct mistakes and make up for missing knowledge, it would get in the way of the benefits of real-time simulation.

Also worthy of interest, is the fact that the only learner who is handling the communications is really active during the exercise (while the helmsman, or lee helmsman remain fairly passive). This is why we ask that learners rotate through all functions every 20 or 30 minutes. While this allows us to extend the benefit of such practice to more students, it undeniably does get in the way of realism. We have, to date, no solution to propose to this problem.

To conclude, as our review of literature has shown, the benefits of using a bridge simulator for SMCP practice seem real, and for that reason, they are likely to remain a part of the training of Officers of the Watch, within the French Navy. Still, more empirical data on simulator-based training is needed, and in particular when it comes to the specific question of Maritime English in general and the SMCP in particular. No doubt a topic for further research.

References

Ali, A. (2008). “Role and importance of simulator instructor”, in *International Journal on Marine Navigation and Safety of Sea Transportation*. 2(4) p. 423-427.

Barsan, E. (2004). “Sea service equivalency for full mission simulators Training”, in *Maritime Transport & Navigation Journal*, 1.

Bertin, J-C., (2001). “L’ergonomie didactique : une approche de la recherche dans le domaine de l’Apprentissage Médiatisé par Ordinateur”. In Mémet M. et M. Petit (dir.) *L’anglais de spécialité en France*. Bordeaux : Université de Bordeaux II, coll. ASp-GERAS Editeur, 237-254.

Bertin, J-C., (2003). “L’ergonomie didactique face au défi de la formation ouverte et à distance”, *ASp* [Online], 41-42 | 2003, Uploaded 1st april 2010, accessed 2 july 2019. URL : http://asp.revues.org/1163 ; DOI : 10.4000/asp.1163

Bruner, J. S. (1983). *Le développement de l’enfant, savoir faire, savoir dire.* Paris: PUF.

Carey, B. (2010). “Tracing the spark of creative problem-solving”. Article of *New York Times*. [Online] Accessed 6 May 2019.URL : http://www.nytimes.com/2010/12/07/science/07brain.html.

Chauvin C., Clostermann JP., Hoc JM. (2009). “Impact of training programs on decision-making and situation awareness of trainee watch officers”, in *Safety Science*, Volume 47, Issue 9, p. 1222-1231.

Chini, D. (2010). “Langage et-ou action ? La perspective actionnelle favorise-t-elle vraiment l’apprentissage linguistique ?”, in Macaire, D., Narcy-Combes, J.P & Portine, H. (Ed.), *Interrogations épistémologiques en didactique des langues, Le français dans le monde, Recherches et applications*, n°48, Paris, Clé international, p. 164-175.

Council of Europe. 2001. *Common European Framework of Reference for Languages.* [online]. Accessed 20 June 2019. URL : https://rm.coe.int/1680459f97.

Csikszentmihalyi, M. (1990). *Flow : the psychology of optimal experience*. Harper & Row, New York, USA.

Csikszentmihalyi M., Abuhamdeb, S., Nakamura J. (2005). “Flow”. In A. J. Elliot, C. S. Dweck, *Handbook of competence and motivation*, New-York, London: The Guilford press, p. 598-608.

Dahlström N., Dekker S., Van Winsen R., Nyce J. (2009). “Fidelity and validity of simulator training”, in *Theoretical Issues in Ergonomics Science* volume 10, issue 4, p. 305-314.

Demaizière, F., and Grosbois, M., (2014). “Numérique et enseignement-apprentissage des langues en Lansad – Quand, comment, pourquoi ?”, *Alsic* [Online], Vol. 17 | 2014, Uploaded 25 April 2014, Accessed 26 august 2019. URL : http://alsic.revues.org/2691 ; DOI : 10.4000/alsic.2691.

Deterding, S. (2011). “Situated motivational affordances of game elements: a conceptual model”. talk presented at *CHI 2011 conference*. [Online] Accessed 20 august 2019. URL : http://gamification-research.org/wp-content/uploads/2011/04/09-Deterding.pdf.

Dewey, J. (1938). *Experience and Education*. Simon & Schuster; Reprint edition (July 1, 1997), New York.

Eisen A., (1994). “Survey of neighborhood-based, comprehensive community empowerment initiatives”, in *Health Education Quarterly*, 21 (2), 235-252.

Emad G., Roth WM. (2008). “Contradictions in the practices of training for and assessment of competency: a case study from the maritime domain”, in *Education + Training*, volume 50, issue 3, p. 260-272.

Faerber, R., (2004). “Caractérisation des situations d'apprentissage en groupe”, Revue *STICEF*, [Online] Volume 11, 2004, Accessed 18 August 2019. URL : http://sticef.univ-lemans.fr/num/vol2004/faerber-07/sticef_2004_faerber_07.htm

Fenouillet F., “La place du concept de motivation en formation pour adulte”, *Savoirs*, 2011/1 n° 25, p. 9-46. DOI : 10.3917/savo.025.0009

Ferreira, A. (2010). “Lire pour agir : récits interactifs multimédias en cours de langues”. *Les langues modernes, Numéro 3/2010. [Online]. URL :* https://www.aplv-languesmodernes.org/spip.php?article3359. Accessed 15 july 2019.

Ferreira, A. (2014). "Jeux sérieux et langue de spécialité : trois exemples de ludification pour l'apprentissage de l'anglais naval", *Recherche et pratiques pédagogiques en langues de spécialité*, Vol. XXXIII N° 1 | 2014, 66-90.

Freinet, C. (1956). *Les méthodes naturelles dans la pédagogie moderne.* Paris : Bourrelier.

Germain, C. (1989). "Un cadre conceptuel pour la didactique des langues". *Études de linguistique appliquée 75* : 61-77.

Gibson, C.H., (1991). "A concept analysis of empowerment", *Journal of Advanced Nursing*, 16, 354-361.

Grosbois, M. (2012). *Didactique des langues et technologies : de l'EAO aux réseaux sociaux*, Paris : PUPS.

Guillaud, H. (2013). "Enfants et écrans : psychologie et cognition". Article on *Internet Actu*, [Online], Accessed 28 june 2019. URL : http://internetactu.blog.lemonde.fr/2013/02/01/enfants-et-ecrans-psychologie-et-cognition/

Hanzu-Pazara R., Arsenie P., Hanzu-Pazara L. (2010). "Higher performance in maritime education through better trained lecturers", in *TransNav: International Journal on Marine Navigation and Safety of Sea Transport* volume 4, issue 1, p. 87-93.

Hanzu-Pazara R., Barsan E., Arsenie P., Chiotoroiu L., Raicu G. (2008). "Reducing of maritime accidents caused by human factors using simulators in training process", in *Journal of Maritime Research* volume 5, issue 1, p. 3-18.

Houssaye, J. (1988). *Le triangle pédagogique.* Berne : Peter Lang.

Hubbard, P. (1999). *Teaching agents in CALL tutorials*, CALICO'99, Oxford, Ohio, USA.

Hubbard, P. (2000). "Taming teaching agents, meaning technologies and participatory dramas", CALICO 2000, University of Arizona, Tucson, USA.

Huizinga, J. (1988) [Reprint of original edition, 1938]. *Homo ludens : essai sur la fonction sociale du jeu*. Paris : Gallimard.

John, P., Noble, A., & Björkroth, P. (2016). "Low-fi simulation of bridge team communication: A study of the authenticity of language patterns observed in 'chat' messaging to facilitate Maritime English training", in *WMU Journal of Maritime Affairs*, volume 15, issue 2, p. 337-351.

Kobayashi H. (2005). "Use of simulators in assessment, learning and teaching of mariners", in *WMU Journal of Maritime Affairs*, volume 4, issue 1, p. 57-75.

Kounios, J. & M. Beeman. (2009). "The Aha! moment: the cognitive neuroscience of insight". *Current Directions in Psychological Science. Vol. 18(4)* : 210-216.

Legendre, R. (1988). *Dictionnaire actuel de l'éducation*. Paris and Montréal : Larousse.

Larose, F., & Peraya, D. (2001). "Fondements épistémologiques et spécificité pédagogique du recours aux environnements virtuels en enseignement : médiation ou médiatisation ?" in Karsenti, T. & Larose,

F. (Ed.) *Les tic... au cœur des pédagogies universitaires : diversité des enjeux pédagogiques et administratifs* (p. 31-68). Sainte-Foy: Presses de l'Université du Québec.

Narcy-Combes, J.P, (2005), *Didactique des Langues et TIC : vers une recherche-action responsable*, Paris, Ophrys.

Nicholls, J. (1984). "Achievment motivation: Conceptions of Ability, Subjective Experience, Task Choice and Performance". *Psychological Review*, 91, 328-346.

Nicholson, S. (2012). "A user-centered theoretical framework for meaningful gamification". Talk presented at *Games+Learning+Society 8.0*. Madison, WI, USA. [Online] Accessed august 2019. URL : http://scottnicholson.com/pubs/meaningfulframework.pdf.

Nissen, E., "Variations autour de la tâche dans l'enseignement / apprentissage des langues aujourd'hui", *Alsic* [Online], Vol. 14 | 2011, Uploaded 15 january 2011, Accessed le 16 august 2019. URL : http://alsic.revues.org/2344 ; DOI : 10.4000/alsic.2344.

Nunan, D. (1989). *Designing Tasks for the Communicative Classroom*. Cambridge : Cambridge University Press.

Pekcan, C., Gatfield, D., & Barnett, M. (2005). "Content and context: understanding the complexities of human behaviour in ship operation", in *Seaways, The Journal of the Nautical Institute*

Perret-Clermont, A.N. (1979). *La construction de l'intelligence dans l'interaction sociale*. Berne, Peter Lang.

Puren, C. (2004). "De l'approche par les tâches à la perspective co-actionnelle", *Cahiers de l'APLIUT*, Vol. XXIII N° 1 | 2004, 10-26.

Rabardel, P. & E. Vérillon. (1985). "Relations aux objets et développement cognitif". *In* Giordan, A. & J.L. Martinand (Ed.). *Acte des septièmes journées internationales sur l'éducation scientifique*. Paris : LIRESPT, Université Paris VII.

Rabardel, P. (1992). "L'utilisation d'instruments est-elle une source de savoirs spatiaux ?". *Topologie structurale No 19-1992*. [Online] Accessed 15 august 2019, URL : http://www.iri.upc.edu/people/ros/StructuralTopology/ST19/st19.html.

Rabardel, P. "Les hommes et les technologies; approche cognitive des instruments contemporains.", Armand Colin, pp.239, 1995. hal [Online] Accessed 6 july 2019. URL : https://hal.archives-ouvertes.fr/hal-01017462/document.

Rézeau, J. (2001). "Médiatisation et médiation pédagogique dans un environnement multimédia : le cas de l'apprentissage de l'anglais en Histoire de l'Art à l'université". Ph.D thesis, [Online] Accessed le 8 june 2019, URL : https://tel.archives-ouvertes.fr/edutice-00000222/

Rézeau, J. (2002). "Médiation, médiatisation et instruments d'enseignement : du triangle au carré pédagogique". *ASp, 35-36 | 2002*. [Online] Accessed 6 july 2019. URL : http://asp.revues.org/1656.

Rose, D. & Meyer, A. (2002). *Teaching Every Student in the Digital Age: Universal Design for Learning*. Alexandria, VA : ASCD.

Sampson H., Gekara V., and Bloor M. (2011). "Water-tight or sinking? A consideration of the standards of the contemporary assessment practices underpinning seafarer licence examinations and their implications for employers", in *Maritime Policy & Management*, volume 38, issue 1, p. 81-92.

Saus ER., Johnsen BH., and Eid J. (2010). "Perceived learning outcome: the relationship between experience, realism, and situation awareness during simulator training", in *International maritime health* volume 61, issue 4, p. 258-264.

Sellberg, C. (2017). "Simulators in bridge operations training and assessment: a systematic review and qualitative synthesis", in *WMU Journal of Maritime Affairs* (2017) Volume 16, Issue 2, pp 247–263.

Sussan, R. (2011). "Les ambigüités de la gamification". Article on *InternetActu.net*. [Online] Accessed 22 august 2019. URL : http://www.internetactu.net/2011/03/01/les-ambiguites-de-la-gamification/.

Van Eck, R. (2006). "Digital game-based learning: it's not just the digital natives who are restless". *EDUCAUSE Review, vol. 41, no. 2 (March/April 2006)* : 16-30. [Online] Accessed 22 august 2019. URL: https://er.educause.edu/articles/2006/1/digital-gamebased-learning-its-not-just-the-digital-natives-who-are-restless.

Vygotski, L. (1997). [1934 original edition in Russian]. *Pensée et langage*. Paris : La Dispute.

Zimmerman, M.A., (1990). "Taking aim on empowerment research: On the distinction between individual and psychological concepts", *American Journal of Psychology* 18: 169-177.

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A semiotic approach to cross-cultural interference in Maritime English

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Abstract

The global status of Maritime English poses linguistic-communicative challenges with respect to Cross-Cultural Interference (CCI). In this case, CCI refers to the communicative malfunction that may occur with cross-cultural references in (ESP) test items and course material. For instance, should the use of toponymical references to persons, places and ships, though authentic and realistic, be subject to "political correctness"? Moreover, is content neutrality an attainable and desirable goal? Despite the fact that CCI is often underestimated, awareness of one's cultural bias reflected in language is a quintessential factor in managing CCI. This paper will examine the relationship between semiotics – the study of sign process – and communication, mapping denotative and connotative meaning and discussing whether references in a cross-cultural context may be deemed appropriate or not.

Keywords: *Maritime English, cross-cultural interference, semiotics, cross-cultural communication, toponymical references, denotation, connotation*

Introduction

This paper first discusses the concept of cross-cultural interference and then addresses accomplishments and challenges in MariLANG. Further on, we make an attempt at defining what establishes a good test and use the six parameters of usefulness by Bachman & Palmer to address some of the issues of cultural bias and toponymical distractors in test making and course books. Finally, we discuss ways to balance out distractors.

Discussion

Cross-Cultural Interference refers to noise in communication between different cultural contexts. There are many types of interference (Nordquist, 2019), ranging from physiological

noise (e.g. *Fatigue can make a deck officer less attentive during watch keeping*), physical noise (e.g. *The sound of an emergency alarm can cause distress among passengers*), psychological noise (e.g. *A marine engineer being preoccupied with divorce can cause him to maintain the engine less thoroughly*), and semantic noise (e.g. *A cadet is confused by jargon, such as the difference between anchoring, berthing, docking, and mooring)*. Unfortunately, noise is a perennial part of communication and interference can take place at any stage, i.e. with the source, the channel and the receiver. It is often a story in which good intentions of the speaker (source) are misunderstood by the receiver. This is obviously one of the main reasons that the IMO created SMCP, i.e. to render communication in a maritime context "precise, simple and unambiguous" (IMO, 2002, p. iii).

What about a test for mariners? Should tests also adapt the utopian adagio of the SMCP or is the intention of creating a global test for mariners doomed from the start? In order to avoid the swamps of interference, the MariLANG project drew experience from maritime English lecturers and testing specialists, but was also inspired by material from previous EU projects such as the competence grid of MarTEL, MarTEL Plus (www.martel.pro), SeaTALK (www.seatalk.pro), MarEng and MarEng Plus.

MariLANG is/was an EU Erasmus+ funded project that brought together different European partners to create a set of assessment standards, compatible with the learning targets of the 3.17 Maritime English Model Course of the IMO and linked with existing language frameworks[1]. The goal was to create a "combined learning and assessment package" (www.marilang.eu) in a European context, which could possibly, given time, expand to globally relevant testing material.

One of the interesting discoveries, once the test specifications were made and test examples were created, was the fact that nearly all tests contained cultural bias (more in the sense of inclination instead of prejudice). Although it is almost impossible to exclude bias from language, cultural interference was mainly present in toponymical constructions, for example in names of ships, seafarers and names of waters and harbours. It is quite common as a test / course book maker to include familiar toponyms but the inclination of inserting certain locations is not as harmless a sign as it seems. It only highlights the dilemma of creating a politically correct but slightly boring "test for all" versus a test which invokes curiosity and interactiveness from the test takers but contains cultural bias. Maritime English teachers, for

1 CEFR (Common European Framework of Reference for Languages), EQF (European Qualifications Framework) and ECVET (European Credit System for Vocational Education and Training).

instance, often struggle to customize the globally unambiguous SMCP for their students and hence, SMCP tests are often perceived as something one has to pass without a lot of enthusiasm.

Before we identify some of these cultural inclinations and see to what extent and when inclinations can be perceived as prejudice, we should outline the concept "test". Test makers sometimes have unrealistic expectations and it is important to address questions such as: Who is tested and why? Does each test taker respond to a test in the same way? Is there an ultimate test for all? Should a test be context-based? How much exposure has the test taker had to English? Is testing representative for acquired knowledge? So, what makes a good test? What are the quality control standards in the design, development and use of a test? Firstly, it is obvious that the language test performance must correspond with the target language use (TLU). For instance, an ESP listening/speaking test about marine engineers responding to instructions about maintenance on a tanker ship should demonstrate the same language ability in a similar non-test situation on board ship. The other key element Bachman & Palmer (1996) discuss is the term usefulness, which comprises 6 complementary characteristics. In the next paragraphs we will explore some of the potentially disruptive influences toponymical references have on test takers by discussing these six characteristics. Any item that causes CCI ("noise") in a test / course book communication will subsequently be signified as a distractor. Distractors can express both denotative (primary meaning) and connotative (non-primary meaning) symbolic value[2].

1 - A test is only reliable if the measurement is consistent. In other words, if test 1 generates much lower results than a similar test 2, then something is off in the equation. Could the sentence "*The Captain reprimanded the 3O for being late at his watch"* in test 1 lead to better test results than "*Captain Smith reprimanded 3O Singh for being late at his watch"* in test 2 among Indian maritime test takers? In other words, are the names toponymical distractors (as in connotative for British hegemony) that jeopardize the reliability of a standardized test?

Test 1. Fill in the appropriate item. Choose from the following words: *off-time, watch, cargo* The Captain reprimanded the 3O for being late at his _____.	The terms "Captain" and "Third Officer" might have more denotative value for Indian maritime test takers.

2 The term distractor refers to semiotics, the study of signs, developed by de Saussure (1916) and Peirce (1931-1958). A sign is a meaningful unit in communication. Signs can be classified as icons (the signifier resembles the signified), indexes (the signifier is caused by the signified), and symbols (the relation between signifier and signified is arbitrary). The generation of signs implies direct meanings (denotation) and indirect meanings (connotations).

Test 2. Fill in the appropriate item. Choose from the following words: *off-time, watch, cargo* Captain Smith reprimanded 3O Singh for being late at his _____.	The terms "Smith" and "Singh" might have more connotative value (e.g. hegemony) for Indian maritime test takers.

Table 1. Sign analysis of distractors in reference to reliability.

2 - The construct of a test is valid if, for instance, the explanation of different scores for the same test is justifiable and not open to interpretation. Might the speaking test instruction "Describe the berthing process of the Saudi MV Victory in Chabahar harbour" lead to different test results among Iranian test takers and, for instance, Belgian test takers? Might the test be perceived as a good indicator for the Iranian test taker's abilities of describing the berthing process? And would the speaking test instruction "Describe the berthing process of the Flemish MV Vrijheid (*Freedom*) in Marseille harbour" have a similar disruptive effect among French test takers?[3] Most test makers stay away from politically sensitive issues because it might have an effect on, as in this case, the content of the construct validity (Messick, 1995). Moreover, it is virtually impossible for test / course makers to be aware of all the sensitive issues around the globe.

Speaking Test Describe the berthing process of the Saudi MV Victory in Chabahar harbour.	The terms "Saudi", "Victory", "Chabahar" might have more denotative value for Belgian maritime test takers.
	The terms "Saudi", "Victory", "Chabahar" might generate more connotative values for Iranian maritime test takers.

Table 2. Sign analysis of distractors in reference to construct validity.

3 - A test is authentic if the test task corresponds with the Target Language Use. Could a mess room conversation between a waiter with a Filipino accent and a guest with an American accent on a cruise ship have a disruptive effect on Filipino test takers? According to statistics[4] a vast majority of sea-based migrant Filipino workers are employed as oilers, ordinary seamen, mess men, waiters, chief cooks, bosuns, third mates, and third engineers. In other words, it might be

3 The history of Flanders and France has been conflictual in the past, with France as a dominant power and parts of Flanders as conquered territory. Whereas French was the dominant language of power in Flanders during certain eras, Dutch remained the language of the people.

4 Statistics by the POEA, the Philippine Overseas Employment Administration.

that there is a connotation between the item Filipino, a denotation for an inhabitant from the Philippines, and low-ranking people with socio-economically lower incomes. As you can see, the line from inclination to prejudice is sometimes thin. Does your test reflect authenticity or do you leave out this distractor?

Listening Test Listen to the mess room conversation between an American guest and a Filipino waiter. Say if following statements are True or False.	A Filipino accent might have more connotative value (e.g. superiority) for American maritime test takers.
	A Filipino accent might have more connotative value (e.g. inferiority) for Filipino maritime test takers.

Table 3. Sign analysis of distractors in reference to authenticity

4 - A test is interactive when the test taker is cognitively involved in the test task. Does your writing test use the name Pavel for a merchant ship? Russian maritime test takers might become less interactive because there used to be a convention that royal names (such as Pavel, a Russian tsar) were solely given to battleships (Mc Laughlin, 2003). Could this topical reference be a distractor for them because your test is deemed outdated or connoted with royalist sympathies? It would certainly prove that the interactiveness of a test is influenced by the test taker's language ability, topical knowledge, and affective schemata (Bachman & Palmer, 1996, p. 25).

Writing Test (Incl. Grammar: the Comparative) Write an incident report that describes and compares the two merchant ships MV Pavel and MV Mercury after collision.	The term "Pavel" might have more denotative meaning for non-Russian maritime test takers.
	The term "Pavel" might have more connotative meaning for Russian maritime test takers.

Table 4. Sign analysis of distractors in reference to interactiveness

5 - A test is impactful on the test taker in particular and on the system in general, i.e. work environment, education system, or society. Because a test refers to certain values or goals, test makers should be aware of the sociocultural ramifications[5]. Is the test known in the maritime industry and perceived as high-ranking or is it just a local, informal test? Statistical evidence in

5 Similar global expertise on test making and the "social and political concerns (that) affect testing decisions" can be found in tests for Aviation English by Moder & Halleck (2012, p. 137). Aviation English is a part of the International Civil Aviation Organization.

Marlins, English for Seafarers, Study Pack 1 shows that the characters that inhabit the world of this course book are people with Germanic names who sail Romanic (/Romance) ships and live / work in a European context[6].

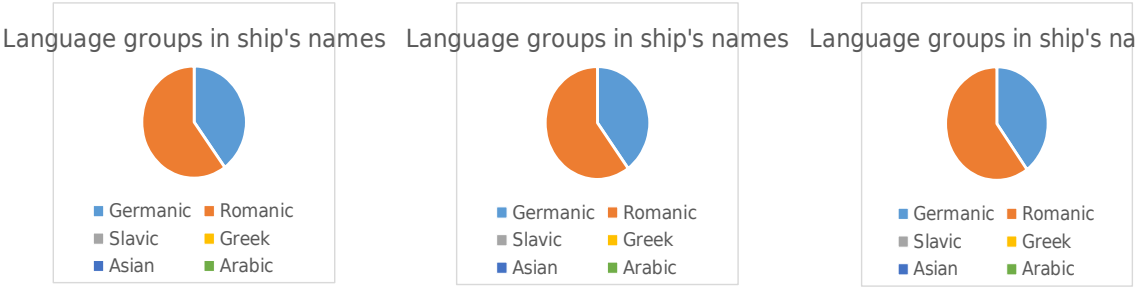

Table 5. Toponymical referencing in Marlins, English for Seafarers, Study Pack 1

Most probably, the distribution of the toponyms does not contain prejudice, but it showcases cultural bias in the sense of inclination to worlds that are more familiar to the writers. Could the misbalance of 162 toponymical hits for Europe versus 7 for Africa / the Middle East be a distractor to African maritime test takers in, for example, Casablanca (Morocco), Durban (South Africa) or Koko (Nigeria)? Is the connotation of taking a Marlins test a sign for accepting a perceived dominant (European) culture? Could the test lose its systemic impact because the book to the test is perceived as a European course book? What about only 3 hits for the US, the most powerful nation in the world? Do these data have a negative washback on American test takers, because the book to the Marlins test is perceived as not relevant for American maritime academy entries or future job applications?

Table 6. Toponymical references to countries in Marlins, English for Seafarers, Study Pack 1

Table 7. Toponymical references to cities in Marlins, English for Seafarers, Study Pack 1

6 In comparison, the Marlins, English for Seafarers, Study Pack 1 tests (the "Reviews") display people with Romanic (/Romance) names mainly sailing Romanic ships and living/working in Asia.

6 - A test is practical if the conditions and resources needed for the test actually take place. The resources can be human (availability of test takers) and non-human (availability of a test room, computer equipment, etc.). Could an international maritime test in San Francisco not be valid because it was run on Huawei mobile phones, or in Russia because the Apple software is deemed too western?

A maritime test run on Huawei software in the port of San Francisco	The term "Huawei" might have more connotative value (e.g. privacy) for American authorities.
A maritime test run on Apple software in the port of Kaliningrad	The term "Apple" might have more connotative value (western society, CEO Tim Cook's homosexuality) for Russian authorities.

Table 8. Sign analysis of distractors in reference to practicality

After having compared Bachman & Palmer's concept of usefulness with CCI distractors, let us have a closer look at the cultural bias glitches that occurred in the MariLANG project. After running toponymical statistics on our speaking test examples, evidence showed that not only most of the seafarer characters encountering safety issues (due to structural failure) had European names but the only one with a safety issue due to personal failure was a Chinese O/S. Could this juxtaposition be a distractor to Chinese maritime test takers? Another possible distractor was that some locations such as Liberia were only mentioned from a negative perspective (e.g. piracy) whereas other only had a positive reference, such as the Great Barrier Reef.

Rating Ocampo, Spanish male. Context: Safety (structural failure) A/B Beersmans, Flemish male. Context: Safety (structural failure) O/S Jacquemain, French male. Context: Safety (structural failure) 3/E Steel, English female. Context: Safety (structural failure) O/S Cheng, Chinese female. Context: Safety (personal failure)	The juxtaposition might have more connotative value (e.g. different work ethos in Europe and China).
Australia: the beauty of the Great Barrier Reef Liberia: the issue of piracy	The juxtaposition might have more connotative value (e.g. a positive perception of Australia versus a negative perception of Africa).

Table 9. Sign analysis of distractors in reference to MariLANG tests

It seems that the discussion of cross-cultural referencing in tests and course books always leads to a potential sea of troubles as if making test and course material is not already quite challenging at times. Maybe we should discard the idea of neutrality in tests and opt for a better match, i.e. relevance. Or maybe we should systematically have toponymical references tick the six boxes of usefulness as to manage the quality of the test. This way standardized ESP tests will avoid being too single-layered with denotations. When used wisely, toponymical connotations are not necessarily suspicious and taboo. However, several factors must be taken into account in order to avoid distractors to pop up in tests and to be the cause of communicative failure.

1. Test makers should keep in mind that the ontological factor of a word in a text and thus excluding another possible word, is possibly an expression of cultural bias.
2. Test specifications must balance the global and local factor, i.e. tests for Finnish maritime test takers can contain local toponyms as long as the other regions of the maritime world are sufficiently mentioned. Similarly, names of persons should not be drawn from Western sources alone but should be inclusive of other world regions.
3. Another equally important factor is crew ranking. If there is a Namibian rating in one test, there should preferably be a Namibian captain in another test.
4. With acculturation comes the power distribution factor, i.e. when two or more cultures engage in cultural exchange, there is usually a less dominant culture adapting to a more dominant culture at a particular moment in time. This inequality in power distribution can be a distractor for a test taker and must be monitored. In that sense, a test taker's performance can always be seen as "a measure of acculturation." (O'Connor, 1989, p. 152). Test makers need to be aware of terms such as "dominant hegemony, prevailing social hierarchies, and inequitable distributions of power and privilege […,] cultural rigidity and ethnocentrism" (Chirea-Ungureanu, 2013).
5. It is important to validate the variation factor of distractors in a test. For instance, do all Chilean seafarers have the same perception of their Peruvian counterparts, or only particular individuals?[7] We must keep in mind that divisions per class, country, region, politics, religion, etc. are never monolithic blocks but always apt to variation. For example, a Belgian test taker might have cultural views that are closer to the Netherlands than to his/her own country.

7 Despite century long partnership, tensions and wars have periodically occurred between Chile and Peru, with a 21st century dispute over maritime borders as the most recent example.

6. The dynamics of a distractor may also vary according to the sensitivity (intensity) of the connotation.
7. The research on cultural bias is not so much a focus on moral differences as on values encoded in language.
8. Distractors can arise when toponyms are contextualized or decontextualized and it is up to both the test maker and taker to be aware of the appropriate context.

Although O'Connor, in her research on test performance with minority groups, states that "it might be quite difficult to develop a general qualitative theory about types of cultural interference in the content matter of test items" (1989, p. 155), being able to draw toponymical references from a globally extended library would be beneficial. In this context, test makers become aware of the fact that some countries such as Indonesia (The Strait of Malacca), for instance, should not always be typically associated with piracy, despite the fact that the authenticity factor pleads for such association. Test analysis of toponymical referencing could even generate a scale of distraction and thus provide test makers with a quantitative library of data to work with. This will help detect tacit and non-tacit bias and so make test makers avoid cross-cultural pragmatic failure, i.e. a communication breakdown between "two people who, in any particular domain, do not share a common linguistic or cultural background" (Thomas, 1982, p. 91)[8] or applied to this paper, disregarding or underestimating the connotative implication of a message in cross-cultural communication. Moreover, seafarers should be trained to be cross-culturally competent and that includes toponymical knowledge of the world they are travelling.

Distractor intensity
1 (not distracting / low in connotation) – 5 (very distracting / high in connotation)

1	2	3	4	5

Table 10. Scheme to assess distractors in tests and course books (suggestion).

8 The pragmatic theory is based on Chomsky (1980), who coined the term pragmatic competence, i.e. the competence to use language in relation to the situation. The theory is further elaborated by, among others, Leech, who focuses on the difference between semantics (sentence meaning) and pragmatics (speaker meaning, i.e. the "use of language in a goal-oriented situation in which S[peaker] is using language in order to produce a particular effect in the mind of H[earer]" (Thomas, 1982, p. 92). Thomas (1982) refined the theory with terms such as pragmalinguistic competence, referring to the ability to use grammar correctly, and sociopragmatic competence, referring to the system of beliefs and knowledge of the language.

Conclusion

In this paper we discussed the challenges that come with the use of cultural referencing in tests and course books. Bachman and Palmer's concept of usefulness has served as a solid yardstick to address some of the distractors. To some extent, it has become clear that test / course book making and referencing are opposing forces, in the sense that tests are indicators / predictors of a test taker's merit whereas cultural bias produces distractors that cause volatility in a test world that tries to avoid uncertainty. However, the two are not enemies because test makers experience similar dilemmas when creating tests and including references. Test makers do not need a special training in toponymical referencing, but need to develop a sensitivity in finding the appropriate balance. All test /course book material has to be monitored carefully for the outcome to be globally applicable in terms of social roles, gender balance, political connotations and cross-cultural balance. The trial & error process is also worth the effort as a fair test resonates with the test takers' communities and makes it more relevant. Finally, toponymical referencing brings the international maritime world closer to the local test taker, reduces fear for the intercultural world and enhances cross-cultural competence, as a sum of several communicative competences[9].

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References

Bachman, L.F. & Palmer, A. (1996). Language Testing in Practice: Designing and Developing Useful Language Tests. Oxford University Press.

Brown, A., Westbrook, K. & Decancq, P. (2018). Developing test specifications (Chapter 4), unedited. Chirea-Ungureanu, C. (2013). Good Intentions are not Enough: CROSS-CULTURAL TRAINING for seafarers, a MUST-HAVE of Intercultural education. In: ALERT!, The International Maritime Human Element Bulletin, The Nautical Institute under the sponsorship of Lloyd's Register Foundation, HE01180.

Chomsky, N. (1980). Rules and Representations. Columbia University Press.

9 Intercultural competence is the sum of multiple communicative competences (Fantini, 2009, p. 458).

De Saussure, F. (1916). Cours de linguistique générale. Paris: Editions Payot Rivages.

Fantini, A.E. (2009). Assessing Intercultural Competence: Issues and Tools. In: The SAGE Handbook of Intercultural Competence. Edited by D.K. Deardorff (SAGE California). pp. 456-476.

Hymes, D.H. (1972). On communicative competence. In Pride, J.B.; Holmes, J. Sociolinguistics: selected readings. Harmondsworth: Penguin. pp. 269-293.

International Maritime Organization (2015). Model Course 3.17 Maritime English, 2015 edition. London: International Maritime Organization.

Leech, G.N. (1983). Principles of Pragmatics. London: Longman.

MarEng web-based Maritime English Learning Tool (2007). EU Leonardo Da Vinci Programme. www.utu.fi.

MarEng Plus (2010). EU Leonardo Transfer of Innovation Programme. http://mareng.utu.fi.

MariLANG (2018). Maritime English Language Training Standards. EU's Erasmus+ programme. www.marilang.eu.

Mc Daniel, E.R. et al. (2009) .Understanding Intercultural Communication: The Working Principles. In: Intercultural Communication: A Reader. Ed. by L.A. Samovar, R.E. Porter & E.R. McDaniel. Wadsworth.

McLaughlin, S. (2003). Russian & Soviet Battleships. Annapolis MD: Naval Institute Press.

Messick, S. (1995). Standards of validity and the validity of standards in performance assessment. Educational Measurement: Issues and Practice. 14 (4): 5-8. doi:10.1111/j.1745-3992.1995.tb00881.x.

Moder, C.L. & Halleck, G.B. (2012). Designing language tests for specific social uses. In: The Routledge Handbook of Language Testing. Chapter 9. Ed. by G. Fulcher & F. Davidson. Oxon: Routledge.

Nisbet, A., Kutz, A.W. & Logie, C. (1997). Marlins. English for Seafarers. Study Pack 1. Glasgow: Marlins.

Nordquist, R. (2019). Noise and Interference in Various Types of Communication. Retrieved from https://www.thoughtco.com/noise-communication-term-1691349.

O'Connor, M.C. (1989). Aspects of Differential Performance by Minorities on Standardized Tests: Linguistic and Sociocultural Factors. In: Test Policy and Test Performance: Education, Language, and Culture. Ed. by B.R. Gifford). pp. 129-181.

Peirce, C.S. (1931-1958). Collected Papers. Cambridge: Harvard University Press.

SeaTALK (2015). EU Leonardo Lifelong Learning Programme. www.seatalk.pro.

Standard Marine Communication Phrases. (2002). London: International Maritime Organization.

Thomas, J. (1982/1983). Cross-Cultural Pragmatic Failure. In: Applied Linguistics, Vol.4, No.2. pp. 90-92.

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Marine Talk – English for Marine Engineering under the Spotlight

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Abstract

The current paper reports the process of developing in-house maritime English materials specifically designed to fulfil the needs of marine engineering cadets at the Arab Academy for Science, Technology and Maritime Transport in Egypt. As an interdisciplinary major, marine engineering student officers have to be equally familiarized with sea jargon and mechanical engineering and electrical engineering jargon to cater for their study needs and to ensure their ability to communicate effectively at workplace. Accordingly, a needs analysis was conducted to identify the requirements of different curriculum stakeholders which yielded notable results that underlined the negligence of marine engineering relevant input in maritime English text books as the branch is usually given a subsidiary focus. Hence, the researcher developed twelve theme-based units that depend on authentic written/ audio-visual materials to introduce lexis and structures that help learners improve their language skills; meanwhile, enrich their knowledge of field specific jargon and SMCPs in accordance with the requirements of STCW 2010.

Keywords: *English for marine engineering, Curriculum Stakeholders, Authentic Materials*

Introduction

Adequate language proficiency and knowledge of sea jargon is a must for seafarers; therefore, maritime English is essential for maritime majors all over the world. According to Pritchard (2011), maritime English is a collective term that encompasses nautical English for seafarers, technical English for marine engineers, maritime legal English for maritime law specialists and maritime business English for logistics and administration personnel. However, most maritime English materials, either commercially purchased or house-developed, is commonly limited to the terminology specific to deck officers. Hence, other specialties, including marine

engineering, are subsidiarily tackled which evokes concerns about their readiness for communication at workplace.

The English for marine engineering study programme at the Arab Academy for Science, Technology and Maritime Transport, AASTMT, consists of three sequential courses, the first two of which focus mainly on mechanical engineering ESP while the third is concerned with the skill of writing technical reports. That is, the interdisciplinary nature of marine engineering and the lack of marine engineering specific language materials together led to a compromise that cadets study content that originally targets mechanical engineering students; accordingly, cadets complete their basic studies with minimum knowledge of maritime English. However, the third course demands cadets to write technical reports relevant to marine engineering. Therefore, to cater for the educational and occupational needs of cadets; meanwhile, to bridge the gap between the aforementioned first two courses and the third, the current study reports on the process of developing in-house English for marine engineering materials that targets students in their basic study.

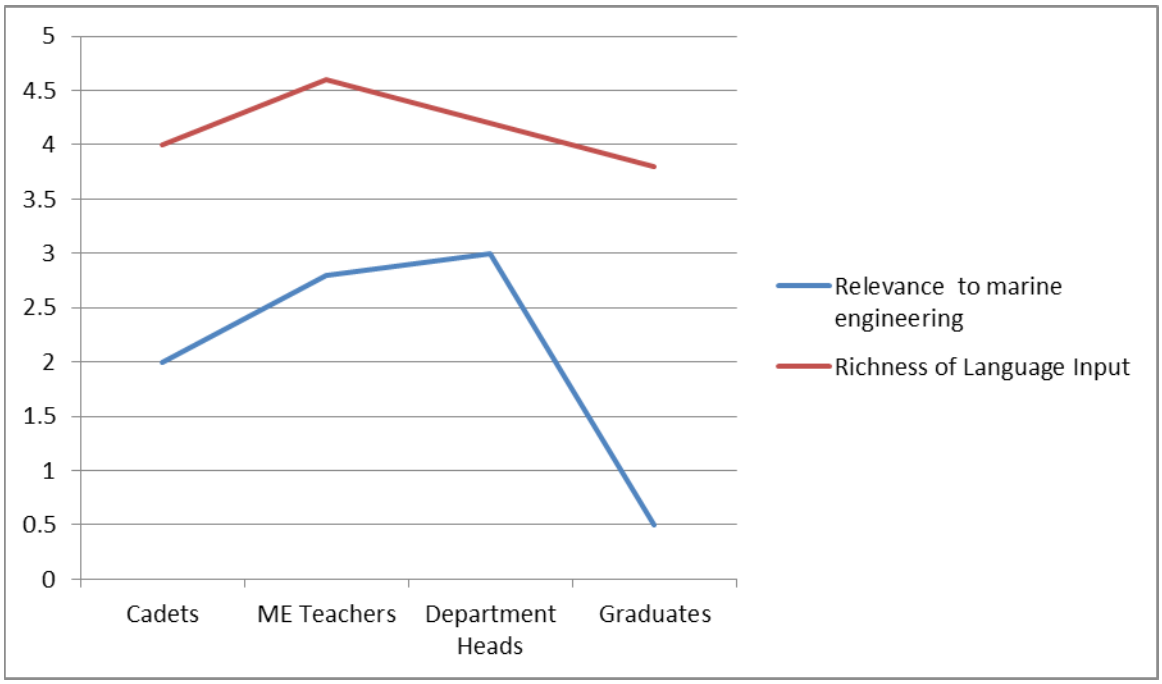
Needs Assessment & Analysis

Classified under the Umbrella of ESP, maritime English is a need specific language requirement; in other words, as underlined by Dudley-Evans and St. John (1998), ESP is developed to meet learners' needs. In view of that, needs analysis plays an active role in maritime English practices as the short term target need is students' readiness to study other content subjects and the long term target need is their ability to communicate effectively at workplace. Additionally, Hutchinson and Waters (1987) regard needs in reference to a triangular relationship among "necessities", "lacks" and "wants"; to explain, these three represent the language requirements to acquire through learning, learners' language inadequacies to overcome in order to meet those requirements and learners' individual needs which are subject to individual differences. Hence, curriculum developers in ESP context, including maritime English, are entrusted with the task of fulfilling the lacks so that learners' attain the necessities without neglecting the wants.

Therefore, for the purpose of the current study, different tools were implemented to identify the needs of all curriculum stakeholders. First and foremost, a semi-structured interview protocol was adopted to pinpoint the shortcomings of the already existing curriculum and underline real needs. Interviewees included cadets, maritime English teachers, content subject

teachers, head of department and graduates. The interviews revealed that despite the rich language input the course introduced, the relevance of the content to different stakeholders was relatively low as illustrated below. The discrepancy between the level of relevance as rated by cadets and graduates is due to graduates hands on experience of workplace requirements.

Figure (1): Stakeholders' views of the English for Marine Engineering Courses



Therefore, seeking more relevance of content, the researcher referred to the STCW 2010 to identify the topics required for marine engineering personnel; in the same way, different stakeholders were asked to fill in a checklist of topics (Table 1) to rate some selected topics in reference to their importance for cadets.

Consequently, the researcher analysed the content of some of the commercially available maritime English books, namely, Career Path – Merchant Navy, English for the Maritime Industry and The International Maritime Language Programme. Results of the analysis further confirmed the minor or no focus of marine engineering specific content in such books.

Table (1): Suggested Topics for Study and Their Importance

Topic	*5 most) (important*	*4*	*3*	*2*	*1 (least important)*
1. Ship knowledge					
2. Engine Room Machinery (Main & Auxiliary)					
3. Naval Architecture					
4. Ship Design					
5. Ship Hydrodynamics					
6. Dry-docking					
7. Deck Machinery					
8. Pump & Piping Systems					
9. Compressors & Heat Exchangers					
10. Electrical Systems on board ships					
11. Refrigeration and Air Conditioning					
12. Offshore Structures					
13. Oil & Gas production					
14. Maintenance Planning					

Scope and Sequence

Based on the needs assessment, a twelve unit theme based book project, Marine Talk, was launched. The book is designed to resemble the practical cadetship period of a character starting with his first day on board the training ship and ends with him completing the sea training period. Each unit includes a lead-in activity that targets individual vocabulary, an authentic video and a reading text through which relevant lexis and grammar are presented, related IMO Standard Marine Communication Phrases and finally a project work (see sample unit, appendix 1). Table (2) presents an overview of the scope of the units and their sequence.

Table (2): Scope and Sequence of Marine Talk

Unit	**Theme**	**Lexis**	**Grammar**
1. Welcome Aboard	Basic ship knowledge	1. Individual words 2. Compound nouns	3. Present Simple
2. The Engine Room	Crewmembers of the engine department and their duties	4. Individual words 5. Compound nouns 6. Verb – noun collocations	7. Modal verbs
3. Tools & Fixtures	Different tools used by marine engineers & signs and warnings in the engine room	8. Individual words 9. Verb – noun collocations	10. Imperative
4. Marine Engines	Types of marine engines: The internal combustion engine	11. Individual words 12. Compound nouns 13. Verb – noun collocations	14. Countable and uncountable nouns
5. Types of Diesel Engines	Two stroke engines vs. four stroke engines	15. Individual words 16. Prepositional	17. Past Simple

		Phrases	
6. Lubrication	Engine lubrication systems	18. Individual words 19. Verb – noun collocations	20. Future
7. Boilers and Heating	Boilers and heating systems on board ships	21. Individual words 22. Compound nouns 23. Verb – noun collocations	24. The Present Perfect
8. Ventilation and refrigeration	Ventilation and refrigeration systems on board ships	25. Individual words 26. Compound nouns 27. Verb – noun collocations	28. The Passive Voice
9. Firefighting	Types of fire and how to extinguish them	29. Individual words 30. Compound nouns 31. Verb – noun collocations	32. If conditional
10. Marine Accidents	Different emergency situations on board	33. Individual words 34. Adjective – noun collocation	35. If conditional (cont.)
11. Off-shore Engineering	The design and construction of structures used in the Oil and Gas industry	36. Individual words 37. Prepositional Phrases	38. Comparative
12. Naval Architecture	The design, construction and repair of vessels	39. Individual words 40. Adjective – noun collocation	41. Superlatives

Maritime English and Authentic Teaching Materials

As illustrated above, every unit in Marine Talk includes a reading text and a video viewing task; as a result, the researcher selected authentic materials for these two components for their various benefits in education. According to Vaičiūnienė and Užpalienė (2010), Nunan and Miller (1995) define authentic materials as those materials which "were not created or edited expressly for classroom use". Nunan (1999) further explains that they are "spoken or written language data that has been produced in the course of genuine communication, and not specifically written for purposes of language teaching". In the same way, cited in Bahrani and Sim (2014), Gilmore (2007) defines authentic language input as any input introducing a real message produced to communicate ideas to real audience. Essentially, the implementation of authentic materials for pedagogical practices is advantageous and constructive especially in content based learning situations because they link language learning situations to real language use, pave the way for learners to engage in actual situations where target language is the sole means of communication, and they motivate learners and teachers (Mehlinger, 1995).

In reference to ESP, including Maritime English, Vaičiūnienė and Užpalienė (2010) recommend that learners and teachers need to be exposed to authentic materials in order acquire

real language and break the constraints imposed by the didactic nature of language curricula. To add, Georgieva (2013) underlines that authentic materials should be weaved into ESP courses to balance the level of authenticity learners encounter. Georgieva also points out that authentic materials improve language skills and enhance cultural and workplace awareness.

Examples of authentic language materials are newspapers, articles, songs, movies and other more; however, the selection from the wide array of materials available was of crucial importance to the current study. Therefore, the researcher adapted a set of criteria for selection of reading and video materials; the criteria list was originally created by the researcher in 2017 as a tool in a Masters research (appendix 2).

Pilot and Implementation

During the academic semester, September 2018, the researcher piloted the first four units of the newly developed course book, Marine Talk, over 24 teaching hours. Participating cadets were two ESP I classes taught by two teachers; the total number of participants were 39 freshmen and 7 term 2 cadets who had failed the ESP I course before. At the end of the pilot time, participants were interviewed to check their satisfaction with the materials and the topics covered. Results of the interview revealed that all cadets found the materials relevant to their field of study and the tasks motivating; in addition, three of the cadets repeating the course mentioned that the new materials were more interesting than the old one. Moreover, feedback from teachers suggested that the pilot units were learner engaging, highly communicative and knowledge enriching, yet it was suggested that video segments could be supplemented with scripts for further activities. Finally, the head of department and coordinators of other content subjects preferred the newly developed materials since they better corresponded with the programme aims.

Conclusion

The paper at hand reports on the process of developing marine engineering ESP materials to better meet the needs of the different stakeholders at the Arab Academy for Science, Technology and Maritime Transport. The process started with assessment and analysis of needs, and the topics to include were selected in reference to STCW 2010 requirements. Content based English for marine engineering units were developed to actualize the identified needs, four of which were piloted and feedback was analysed for improvement and modifications as necessary.

Currently, a teacher's guide is being reviewed to provide teachers with the requisite background knowledge to facilitate their task in class.

References

Bahrani, T. & Sim,T. (2012). Audiovisual news, cartoons, and films as sources of authentic language input and language proficiency enhancement. *TOJET: The Turkish Online Journal of Educational Technology 11*(4): 56 - 64

Dudley-Evans, T. & St John, M. (1998). *Developments in English for specific purposes.* UK: Cambridge University Press.

Georgieva. N. (2013, May 17 - 19). Exploiting authentic video materials in business English teaching . *In The Proceedings of The 1st International Conference on Teaching English for Specific Purposes*. Paper presented at EPS Conference 2013 Teaching for Specific Purposes, Faculty of Engineering, University of NIS, Serbia.

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

Mehlinger. (1995). *Listening to spoken English*. Harlow (Essex): Longman. Cambridge University Press.

Nunan, D. (1999). *Second language teaching and learning*. Boston: Heinle and Heinle Publishers.

Polio. C. (2014). Using authentic materials in the beginning language classroom. *Clear, 28*(1): 3 – 8.

Pritchard, B. (2011). Minimum (technical) vocabulary – some issues in maritime English. *ESP Maritime English Journal*, 1(1): 3 – 23

Vaičiūnienė,V. & Užpalienė, D. (2010). Authentic resources in technology-based ESP learning. *Studies About Language* 17: 94 – 98

Appendix 1: Marine Talk – Sample Unit

Unit 2: The Engine Room

Youssouf Saeed is very excited today as he gets to meet the engine room personnel. He has already met the captain, the first mate and the helmsman when he reported to the bridge to submit his documents. He has also seen the boatswain and some deckhands on deck. Now, his sea daddy will introduce him to the blackgang.

a) Find words in the text that mean…

1. staff/ crew ( )
2. officer ( )
3. Crewmembers of the engine room ( )

b) Classify the engine room ranks in the table below.

3rd engineer *4th engineer* *Fitter*
2nd engineer *Oiler* *Electrician/ Lecky*
Pump man *Motorman/ Wiper*
Electrical engineer *Chief engineer*

Insignia	*Managerial level engineering officers*	*Operational level engineering officers*	*Ratings*
			

English for Marine Engineering – Sample Unit 1

c) Match the engineering officers above to the job descriptions below.

1. Taking bunkers and assisting the Chief Engineer in bunker calculations.
2. Operation and maintenance of the sewage plant.
3. Operation and maintenance of the incinerator.
4. Operation and maintenance of the oily water separator.
5. Operation and maintenance of the fresh water generator.
6. Operation and Maintenance of the air compressor.
7. Management of sludge and bilge.
8. At sea his engine watches are 0800AM-1200PM & 2000PM-0000AM. But nowadays most of the ships are equipped with UMS (Unmanned Machinery Spaces) system, so he has to work 0800AM-1700PM.

---

1. The Chief Engineer's assistant: performs most jobs on behalf of the Chief Engineer.
2. In charge of all machinery items: steering gears, pumps, auxiliary machinery and main engine maintenance.
3. At sea, his engine watches are 0400AM – 0800AM & 1600PM – 2000PM. But nowadays, because most ships are equipped with the UMS system, he has to work 0800AM-1700PM.
4. In charge of the engine room and all Engine Ratings, Fitters, Oilers, and Wipers. Gives them their daily the work schedule.
5. Makes repair lists and indents.

---

1. Gives work orders for the engine room and checks the progress of work. He should be present in the engine room during major maintenance work, for example piston overhauling.
2. Performs bunker calculations. The Fourth Engineer helps him in this work.
3. Implements law and order in the engine room.
4. Handles the main engine during critical periods.
5. Supervises most technical jobs; reports to company with Master's approval.
6. In charge of the engine during any emergency and reporting to the Master as appropriate

---

1. Operation and maintenance of generators.
2. Operation and maintenance of boilers.
3. Conducting boiler water test and cooling water tests.
4. Operation and maintenance of propulsion machinery cylinder head mountings.
5. At sea, his engine watches are 0000AM – 0400AM & 1200PM – 1600PM. But nowadays most ships are equipped with UMS system, so he has to work 0800AM-1700PM.

---

d) Refer to the job descriptions above to complete the compound nouns in the opposite box.

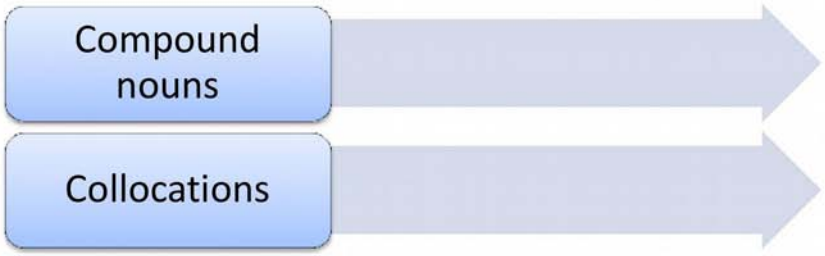
1) _____ calculations
2) _____ plant
3) _____ separator
4) _____ generator
5) _____ compressor
6) _____ watches
7) Engine _____
8) Engine _____
9) Work _____
10) Repair _____

e) Can you complete the following collocations?

ex. *Take bunkers*

1. _____ work orders
2. _____ work progress
3. _____ calculations
4. _____ law and order
5. _____ the engine
6. _____ tests

f) In groups, extract as many compound nouns and collocations as you can?



g) Meet the engineering crew of the Sam Simon and tick the correct information.

1. Patrick Matchett has about 25 years of sea experience. ( )
2. The chief engineer is Canadian. ( )
3. The engineering complement of the Sam Simon includes various nationalities. ( )
4. There is an engine watch hand over every six hours. ( )
5. Machinery is checked at the beginning of the watch. ( )

GRAMMAR Tips

h) The Modal Verbs

Note the underlined modal verbs. Then, complete the rules below.

1. The watch engineer **must** update the engine log.
2. You **should** rest before you assume watch.
3. The lecky **may not** perform mechanical tasks.
4. **Can** I report to the sickbay?
5. You **mustn't** smoke here.

Uses

- ***Must*** expresses necessity and obligation
- ***Should*** expresses advice
- ***May*** and ***Might*** express possibility.
- ***Can*** and ***Could*** express ability

- ***Form***

Sentences with modal verbs are formed as follows:

I/You/We/They + modal verb + _____
He/She/It

Negative form

I/You/We/They + _____ + not + base form of the verb

He/She/It

Question form

_____ I/you/we/they + verb (base form)?

he/she /it

i) Complete the gaps below using appropriate modal verbs.

1. The wiper has stomachache; he _____ eat spicy food.
2. The watch engineer _____ execute the orders of the chief.
3. Excessive heat is detected. There _____ be a damage in the cooling system.
4. _____ the 3rd engineer fix the generator? The cadet is not able to do it.
5. You _____ enter restricted areas; you are not allowed to.

j) Advice for watchstanders!

A lot of maintenance work can be reduced and many accidents can be avoided by following an efficient watch keeping routine in the ship's engine room. But what is the true yard stick for measuring the efficiency of a watch keeping procedure?

1. **Knowledge is the Base**: Knowledge gives a great boost to engineer's confidence level and also results in more accurate job decisions. Engine room operation also requires information from other domains of engineering such as mechanical, hydraulic, pneumatic, electrical and electronic systems, refrigeration etc.

2. **Follow Your Instincts**: It is commonly said on ships that in order to become a good watch keeper, an engineer must use all the 6 senses- i.e. touch, hearing, smell, visuals, taste and kinesthetic senses (6th Sense).

3. **Go By The Book**: Follow manuals, operating instructions, and safety and pollution prevention instructions when you are on duty.

4. **Interpreting log book**: Interpreting log book entries means keeping a track of previous records of machinery parameters to analyze the present situation or to foresee problems.

5. **Clear Communication**: Efficient communication between maritime professionals is integral for a safe and efficient operation onboard. Ongoing engine room-bridge communication is also very important to make sure that navigational officers at the bridge can plan ***their*** procedures or stay prepared for any kind of situation.

6. **Do Not Hide Faults& Call for Help When in Need:** Never hide any kind of fault even yours. Remember that the smallest fault can become dangerous if unattended at the correct time. Always report incidents to your superiors immediately.

1. What type of engineering knowledge does a marine engineer need?

2. Why is the engine logbook important for watch standers?

3. What does the underlined word in the text refer to?

4. What to do in case you make a mistake during your watch?

k) smcp At the watch handover

Read the following exchange and answer the questions below.

Relief Eng.: I'm ready to relieve you, sir. I'm ready to take watch.

Watch Eng.: Thank you. I'm ready to be relieved. The logbooks are completed and signed. There is steam leakage in the boiler room. I notified the chief. There is nothing more.

Relief Eng.: Yes, I confirm that.

Watch Eng.: Here are the engine standing orders to sign.

Relief Eng.: Thank you, then I relieve you sir.

Watch Eng.: I stand relieved. You have the watch now.

Relief Eng.: I have the watch now.

STCW Circular 2014-02, Annex 2

DAILY JOURNAL OF ENGINE-ROOM WATCHKEEPING DUTIES

(STCW Convention, Regulation II/1, 2.3)

The following, and everything above "Notes", are the required HANDWRITTEN entries, per page:

Date (YYYY/MM/DD): _____ Ship's Name: _____

Watchkeeping duty hours: _____ Ship's Location: _____

Voyage #: _____ Port of Departure: _____ Destination: _____

F.O. ROB: _____ D.O. ROB: _____ L.O. ROB: _____

Hourly Fix During Watch:

Time	Latitude	Longitude	Course & Speed	Main Engine RPM / Load

Engine Watchkeeping Activities, Specific Duties and Events During the Watch (include time when necessary):

Full Name of Candidate for OIC-EW & Signature: _____

Supervising Officer (Chief Engr. Officer or Qualified Engr.) Full Name & Signature: _____

Supervising Officer's CDC# and Issuing Country: _____

Notes:

1. The name of the Supervising Officer must match the entries in the attached crew list.
2. The candidate is free to make all notes to ensure that he is actively learning during his engine room watchkeeping duties, using the English language.

1 | Page

1. What phrase means that you have checked and agree to the log entries?
2. What expression refers to the orders that must be carried out during the watch?
3. What phrase means that you are off duty?

l) **Listen to a recruitment advertisement to fill in the gaps below.**

As a third engineer, you will use your _____ to ensure the safe and efficient operation of all machinery, equipment and spaces as a _____ stand or a day worker. You will supervise routine maintenance performed on the ship and _____ repairs and made by shore side facilities. You will be responsible for keeping detailed data on ship operation _____ and reports.

Project work

m) A shipping company is looking for engine ratings to join the complement of the LNG, Queen Tai. In pairs, write down the job ads to post on the company's website.

Appendix 2: Authentic Materials Selection Criteria

Criterion *The text/ video …*	**Applicable**	**Non-applicable**
Theme		
1. is relevant to the theme of the unit.		
2. presents a complete idea.		
3. is suitable for session duration.		
4. meets the learning objectives of the unit.		
Student needs		
5. is likely to interest students.		
6. suits students' age.		
7. corresponds with students' language proficiency level.		
Language		
8. includes the linguistic features (e.g. lexis, syntax, functions … etc) introduced in the unit.		
9. is intelligible.		
10. presents authentic language, language that is used in real life.		
11. contextualizes language to convey meaning.		
Picture (videos only)		
12. has clear pictures.		
13. employs eye appealing images.		
Sound (videos only)		
14. has good sound clarity.		
15. has no distracting background music.		
Cultural content		
16. is culturally appropriate.		

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IMEC 31 (30 September — 3 October 2019)

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Maritime English Education with collaboration between Maritime Technology and teachers of General English in Japan.

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Abstract

This paper aims to enhance the effective Maritime English teaching based on the partnership between the maritime technology and teachers of General English in Japan. The author has taught Maritime English for four years using *Let's Enjoy Maritime English*. I have faced a lot of difficulties and two of them seemed vital for both the teacher and students. First of all, I have never embarked on training ships so I could not imagine the situations where Maritime English is actually used. As a result, it is very difficult to provide a situation or context of authentic language use in the classroom. Secondly, I have never experienced the problems of onboard communications such as communicating in the loud engine room and talking through an unclear radio communication devices. Therefore, I did not have enough background knowledge to teach students to speak both slowly and clearly when they practice speaking Maritime English.

In order to cope with the difficulties I faced and improved my teaching method. Teachers in the Maritime Technology Department offered me the opportunity to acquire the necessary maritime background knowledge. I had a chance to observe the training ship, and after that, role-play activity was introduced in the Maritime English course. The partnership with teachers of the Maritime Technology Department and their support not only motivated me to teach Maritime English more effectively, but also enabled me to teach it more confidently.

Keywords: *Maritime English Education, Collaboration between Maritime and English teachers, training ship, bridge simulator*

Introduction

This paper aims to promote effective Maritime English teaching based on the partnership between the teachers of the Maritime Technology Department and teachers of General English in Japan. The Maritime English course is offered for the fourth-year students at Yuge College, and as it often happens all over the world, the course has been taught by teachers of General English who do not have sufficient technical knowledge. I have taught Maritime English for four years using *Let's Enjoy Maritime English* [7]. For the preparation of teaching Maritime English, I have made use of books and the Internet to learn technical terms. In addition, I sometimes had opportunities to ask questions to other teachers in the Maritime Technology Department. However, even though I gradually acquired the technical knowledge, it was not easy for me to teach confidently and actively in the class.

Here, I would like to explain why I did not feel confident with teaching Maritime English. First of all, I have never embarked on training ships, so I could not imagine the situations in which Maritime English is actually used. Therefore, it was difficult for me to provide a situation or context of authentic language use in the classroom. Secondly, I have never experienced the problems of onboard communication such as communicating in the loud engine room and talking through an unclear radio communication device. Therefore, I did not have enough background knowledge to teach students to speak both slowly and clearly when they practice speaking Maritime English.

In order to cope with the difficulties I faced and improved my teaching method. Teachers in the Maritime Technology Department offered me the opportunity to acquire necessary maritime background knowledge. The following four things were proposed by them to attempt this year: 1) my attending bridge simulator lessons, 2) my observing the training ship (called 'Yuge Maru'), 3) my onboarding the training ship, 4) Participating in IMEC-31. We had originally planned that I would attend bridge simulator lessons, which are held for students of the fourth and fifth grades. Unfortunately, we found that the class was not going to be offered during the spring term this year, so I am going to attend and observe the class in the autumn term.

Observation of the Training Ship (Yuge Maru)

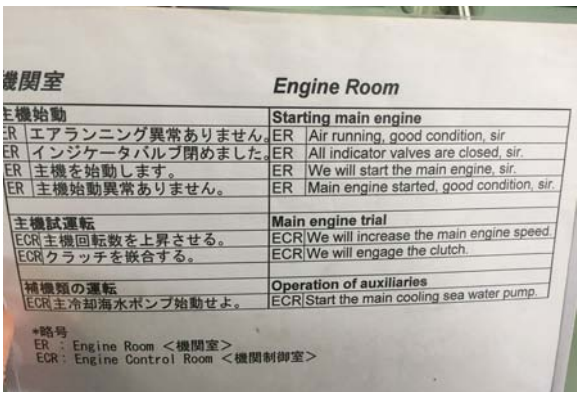
Observation of the training ship (Yuge Maru) was conducted on July 1st. A captain of the training ship and five fifth-year students gave me a tour of the training ship. Whilst they guided me to the deck, bridge, and engine room, they explained to me how the equipment and devices

were used. It was a very good opportunity for me to observe what I had learned with the textbook.

Photo 1. Observation of bridge

Photo 2. Observation of engine room

When I was observing the engine room, there was a list of conversation phrases as shown in Photograph 3. The first engineer told me that they created the list in order to provide students with the opportunity to practice speaking Maritime English. The English phrases were simple and the conversation was shorter compared to the SMCP, so students would feel easy to practice communication through a wireless system in English.



機関室 Engine Room

主機始動		Starting main engine	
ER	エアランニング異常ありません。	ER	Air running, good condition, sir.
ER	インジケータバルブ閉めました。	ER	All indicator valves are closed, sir.
ER	主機を始動します。	ER	We will start the main engine, sir.
ER	主機始動異常ありません。	ER	Main engine started, good condition, sir.
主機試運転		Main engine trial	
ECR	主機回転数を上昇させる。	ECR	We will increase the main engine speed.
ECR	クラッチを嵌合する。	ECR	We will engage the clutch.
補機類の運転		Operation of auxiliaries	
ECR	主冷却海水ポンプ始動せよ。	ECR	Start the main cooling sea water pump.

*略号
ER : Engine Room <機関室>
ECR: Engine Control Room <機関制御室>

Photo 3. A list of conversation phrases

Photo 4. Conversation Practice using the list

Before the observation, I was fully aware that my teaching method in the Maritime English course could be improved to be more creative and practical, but I was able to include a communicative activity in the class only little by little. The opportunity to observe the training ship changed my attitude toward teaching Maritime English, and encouraged me to study more effective ways to teach SMCP.

Practice

Role-play was introduced in the class in order to provide authentic and practical situations to practice the SMCP. Kovács (2014) states that "for students who are learning a language to prepare for specific roles in their professional life (e.g. in ESP), role-plays can function as rehearsals for real life tasks" (p.3). As to the instruction procedure of role-play activity, it was created according to the process of Second Language Acquisition (SLA). The process of SLA and the instruction procedure of role-play activity are shown in Table 1.

Process of SLA	Instruction Procedure
	warm-up activity / ice-braking
input	provide handout to students
noticing	read aloud the SMCP
comprehension	learn the technical terms and terminologies learn the specific features of SMCP
intake	activity, task (role-play activity, information gap task, problem-solving task)
integration	task repetition (the same activity or task with different situation)
output	presentation

Table 1. Process of SLA and the instruction procedure referring to Hiromori (2015, p. 24)

In order to make "input" more effective, a warm-up activity was conducted before handouts with the SMCP were provided to students. During a warm-up activity, students were asked to make pairs and play a role of either a captain or a pilot. The students who played the role of a captain were to report the condition of a fire occurring on the ship, and the students who played the role of a pilot were to ask questions to get the information of the fire according to the instructions shown in Figure 1.

This is an external communication between a seaman (A) and a pilot (B).

① Play a role of either A or B **in Japanese**.

② Change roles, and do the role-play again **in English**.

A: I am on fire.

B: Where is the fire?

A: Fire is on deck.

B: Are dangerous goods on fire?

A: No, dangerous goods are not on fire.

Fig. 1. Instructions for a warm-up activity (Originally in Japanese)

The first time, they were told to do the role-play in Japanese, and they played very actively in pairs. Then, the second time, they changed the roles and did the role-play in English. At first, they seemed not to know how to say the Japanese sentences in English, but soon after they started talking in their own words. Since they were working in pairs, they were able to correct the mistakes made by their partners and helped each other when one of them got stuck. After a few minutes, handouts with the SMCP including both English and Japanese expressions were provided to students. When they received the handout, students found and started murmuring the nouns or verbs which they could not remember during the exercises in pairs. Through the warm-up activity, students would be able to learn Maritime English in a natural and memorable environment.

Then, the English phrases were practiced, repeating after the model and reading aloud by themselves. After the practice, they had time to think about the SMCP features in small groups. The students remarked that the SMCP were simple and understandable compared to the phrases they made during the role-play. Then, students were asked to make pairs again, and two different types of handouts were offered as shown in Figure 2.

Each student in a pair was asked to have a handout of either version A or B, and play a role following the instructions given on it. Students practiced reporting the condition of fire or asking questions to receive the information of the fire like the warm-up activity, but this time,

they were able to refer to the handouts including the SMCP. After they finished the role-play, students were told to change the partner and continue the activity. From the second time onwards, they had to come up with the fire condition by themselves. Students seemed to feel the role-play to be a practical speaking activity, and they participated in the class positively. At the end of the class, some students told me that they would like to do the same kind of activity again in class.

A _____

First time：Report a fire and answer the questions

- Place：holds
- Dangerous goods：are on fire
- Danger of explosion: yes
- Fire control：No
- Assistance：CO_2 extinguisher
- Dangered person：no
-

Second time：Ask questions to get information about a fire and write down what you heard

- Place：
- Dangerous goods：
- Danger of explosion
- Fire control：
- Assistance：
- Dangered person：

B

First time：Ask questions to get information about a fire and write down what you heard

- Place：
- Dangerous goods：
- Danger of explosion
- Fire control：
- Assistance：
- Dangered person：

Second time：Report a fire and answer the questions

- Place：engine room
- Dangerous goods：not on fire
- Danger of explosion：no danger
- Fire control：not under control
- Assistance：fire fighting assistance
- Dangered person：two, slight burns

Fig. 2. Handouts for role-play activity (Originally in Japanese)

Questionnaire

In order to investigate how the students think about the General English and the Maritime English, a questionnaire was handed out to students from the second grade to the fifth grade in the Maritime Technology Department. The items of the questionnaire were as follows:

1. Do you like English?	Yes / No / Neither yes nor no
2. Do you want to work using English in the future?	Yes / No / Neither yes nor no
3. Which English skills do you think you are not good at? Please choose all those that apply to you.	Reading skill Listening skill Speaking skill Writing skill
4. Do you think all the foreign seafarers can speak English?	Yes / No
5. Do you understand the difference between general English and Maritime English?	Yes / No
6. Do you know what's "SMCP"?	Yes / No / I know that word.
7. What kind of communicative situations do you think is important onboard?	Free comments
8. Which onboard and external communicative situations do you think need to be practiced in class?	
9. What kind of practice do you think is practical and effective in class?	

Table 2. The nine items of the questionnaire (Originally in Japanese)

The first to the third items of the questionnaire ask students how they think about English. Question four was added to investigate how much students misunderstand that all foreign seafarers are able to speak English. The fifth to the sixth items asked to find how much they recognized the SMCP. As to the context of teaching Maritime English, it is stated that "[t]he IMO SMCP should be taught and learned selectively according to user's specific needs" (IMO, 2005, p.11). In order to investigate which maritime situations students think are important and

want to practice in the Maritime English course, Questions seven to nine were specially asked to answer by writing their own opinions.

Results and discussion for the questionnaire

The results of Questions one to three (Fig. 1, 2, 3) show that nearly one-third of the second-year to the fifth-year students in the Maritime Technology Department have a negative impression on English to a greater or lesser degree. Moreover, a close examination of the results of the first to the three questions revealed that there are some students who are motivated to use English in the future, even though he/she thinks that they do not have enough English skills.

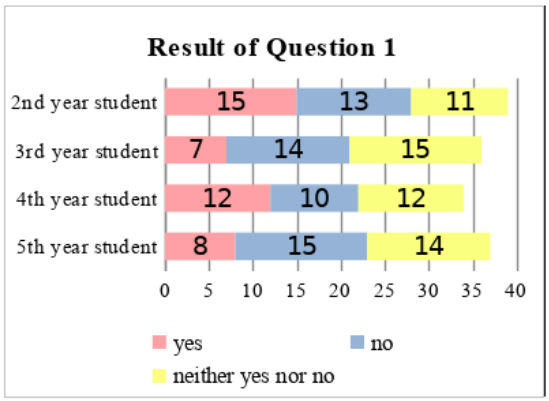


Fig. 3. Result of Question 1

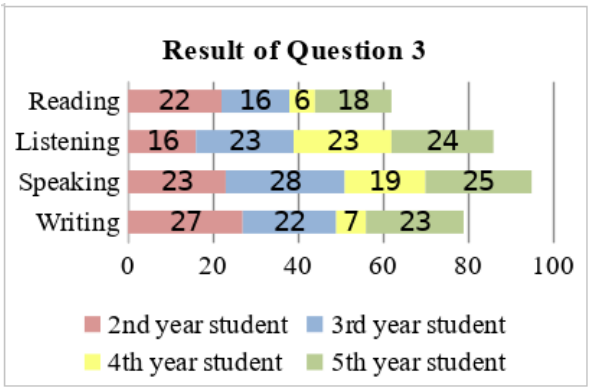


Fig. 4. Result of Question 3

Fig. 5. Result of Question 7

The result of Question seven shows that the number of students who feel on-board communication is important is the largest in all grades. The result of Question eight was similar to the result shown in Figure 6. The detailed comments of Questions seven to nine are shown in Table 3.

Comments of Question 7	
General Conversation	General conversation during the meal
External Communication	Communications on arrival, berthing and departure, Distress communications, Communications through wireless devices, Communications during cargo handling
On-board Communication	Communications on handing over the watch, Distress communications, Giving orders and answering back
Comments of Question 8	
General Conversation	General conversation during the meal, conversation to build relationship, Greeting
External Communication	Communications through wireless devices, Distress communications, Communications during cargo handling
On-board Communication	Communications on handing over the watch, Distress communications, Giving orders and answering back
Comments of Question 9	
Study Maritime English, Practice conversation with Maritime English, Practice speaking in pairs or groups, Practice interaction in various onboard situations, Speak with native English speakers, Practice speaking Maritime English on the training ship, Practice pronunciation	

Table 3. Details of students' comments of Questions 7, 8 and 9

According to the results of the last three questions, students seem to feel the importance of learning Maritime English, but at the same time, they think that daily conversation is as important as conversation using the SMCP. The results worried us as some students do not realize the necessity of English language proficiency in their future job, and can hardly imagine that they will work using English in the future. Not to mention that general conversation is important for seafarers to build a good relationship with colleagues, but Maritime English is increasingly essential for them to do their job onboard and avoid human error. Students who enter Yuge College tend to have a negative impression on English since they were junior high school students. Therefore, it is necessary for us to motivate and encourage students to learn English more actively through providing authentic and practical activities in the class.

Conclusion and future prospects

In conclusion, collaboration between teachers in the Maritime Technology Department and General English has started in order to improve the effectiveness of Maritime English Teaching in Yuge College. Since this attempt started, I have been able to include more practical activities in the Maritime English course. Moreover, the biggest improvement is that I have become able to plan the lesson or teach with a little more confidence than before, and I can consult and ask questions about technical knowledge to teachers in the Maritime Technology Department.

In class observations, most of the students work in pairs more actively than they did before I introduced role-play in the class. The attempt has just started during the spring term, so the test and questionnaire have not been conducted yet to investigate the effectiveness of both teaching and learning of the practice. As to the fact that some students asked me to do speaking activities more after the class, however, there is no harm in saying that using role-play sounds to be effective and motivating for students in my teaching environment.

The result of the questionnaire indicates that although some students cannot seriously think Maritime English as necessary competence for their future, most of the students show a positive attitude towards learning Maritime English with a practical approach. Among the students, there are some who have little interest to learn English in general, so it is our challenge to think about ways to motivate them and plan lessons where students with different degrees of motivation and levels of proficiency can work together.

For the future prospects, students will learn various onboard communication phrases such as communication while handing over the watch, distress traffic, and giving orders, through role-play activity next year. The role-play activity will be recorded on video, so that students can check their performance and learn from classmates. In addition, they will have the opportunity to present their role-play in front of teachers of the Maritime Technology Department. Moreover, if it is possible in the future, it would be desirable to practice what they learned in the class using the bridge simulator system or on the training ship.

My technical knowledge is still far from ideal, however, my motivation and confidence in teaching Maritime English surely increased, thanks to the teachers of the Maritime Technology Department who gave me such a valuable opportunity.

References

Dorathy, A. A. and Mahalakshmi, S. N. (2011). Second language acquisition through task-based approach—role-play in English language teaching. *English for Specific Purposes World*. Issue 33, Vol. 11, 1-7.

Ellis, R. (1997). *Second Language Acquisition*. Oxford: Oxford University Press.

Fauzi, A., Bundu, P. and Tahmir, S. (2016). The development of maritime English learning model using authentic assessment based bridge simulator in merchant marine polytechnic, makassar. *International Journal of Environment and Science Education.* Vol. 11, No. 10, 3231-40.

Ha, P. L. (2008). *Teaching English as an International Language: Identity, Resistance and Negotiation*. Clevedon: Multilingual Matters.

Hiromori, H. (2015). *Mechanisms for Learning English: Effective Study Methods Based on Second Lang*

International Maritime Organization. (2005). *IMO standard marine communication phrases*. London: IMO,

Jane Magallon and et al. (2017). *Let's Enjoy Maritime English - Maritime college series*. Kaibunndou Publishing Co., ISBN978-4-303-23348-8.

Kovács, G. (2014). Role-plays in teaching English for specific purposes. *10th Conference on British and American Studies – Crossing Boundaries – Approaches to the Contemporary Multicultural Discourse*. 134-144.

Motoi, N. (2013). Information gap practice: what are they and how can we use them in our classes? *Saitama Gakuen University and Kawagushi Junior College Academic Repository.* Vol. 13, 121-132.

Osami Yanagisawa and et al. (2016). Maritime English seminar with instructors from MAAP in Philippines and introduction into curriculum at maritime technology department in five NIT colleges in Japan. *IMEC28 Proceedings*, 267–266.

Swain, M., Brooks, L. and Tocalli-Beller, A. (2002). Peer-peer dialogue as a means of second language learning. *Annual Review of Applied Linguistics*. 22, 171-185.

Swain, M., Kinnear, P. and Steinman, L. (2011). *Sociocultural Theory in Second Language Education: An Introduction through Narratives*. Bristol, UK: Multilingual Matters.

Swain, M. and Watanabe, Y. (2013). Language: collaborative dialogue as a source of second language learning. In C. A. Chapelle (Ed.), *The Encyclopedia of Applied Linguistics.* 3218-3225. Hoboken, NJ: Wiley-Blackwell.

Trenkner, P. and Cole, C.W. (2004). Profiling the maritime English instructor. *IAMU Journal* 3, 85- 93.

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Ship-shore Voice Communication upon Ships' Port Entry: a Case-based Analysis of Compliance with Existing Communication Standards

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Abstract

Ship-shore voice communication upon a ship's port entry can be defined as a subgenre of the broader category of external maritime voice communication. As such, it is governed by the standard procedures and rules set out by the International Telecommunication Union (ITU), International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA), and International Maritime Organization (IMO).

This paper presents findings on two aspects related to maritime voice communication. Firstly, defined communication standards are compared concerning their message structure, phrase content, and message delivery. Secondly, compliance with the aforementioned standards is analysed by means of a qualitative analysis of a single transcript of ship-shore communication upon a ship's entry into the Port of Koper, Slovenia.

The findings reveal numerous communication inconsistencies on the ship and shore sides, but also incongruence among the documents that ought to provide a clear regulatory framework for maritime voice communication.

Keywords: *maritime radio communication, maritime routine communication, port entry, ITU compliance, IALA compliance, IMO SMCP compliance*

Introduction

Communication among vessels and with shore stations in the open sea takes place via MF and HF stations or satellite systems. Outside VHF coverage there is no requirement (and technically

no possibility) for contacting other ships or shore-based stations by means of VHF radio (i.e., *voice*) communication. However, once a vessel proceeds into coastal waters with the aim to call at a port, her crew relies on verbal interaction with shore centres, pilots, and tugs to conduct her approach safely and efficiently.

Vessel Traffic Services (VTS) are shore-based systems which provide services designed to improve the safety and efficiency of vessel traffic and to protect the marine environment and/or the adjacent shore area, worksites and offshore installations from possible adverse effects of maritime traffic. VTS allow the identification and monitoring of vessels, strategic planning of vessel movements and provision of navigational information and assistance. Some VTS centres may also play a role in other activities, such as maritime security.

A bridge team's voice communication with the local VTS follows relatively strict communicative patterns which aim to exchange the required information in a clear and unambiguous manner. This information typically includes the ship's position, last port of call, port of destination, the ship's draught, information on dangerous cargo, etc.

A vessel's approach is most often assisted by a marine pilot who supports the bridge team with advice based on their knowledge of the local area. Prior to the pilot boarding the vessel, information is given via voice communication on the boarding speed as well as on the position and height of the embarkation ladder. If tug assistance is required (or compulsory), the vessel's bridge team (including the pilot) also communicate with the tug master(s) via radio communication to optimise the vessel's movement in the confined waters of her port entry. Usually this communication will be conducted in the national language of the pilot and tug master(s).

Approaching a port is a routine procedure which involves a specific and highly standardised communicative setting which basically covers an identical information exchange with little variation. For this reason, one would expect a strict adherence to the guidelines and recommendations outlined in relevant legal documents.

This paper identifies those documents which regulate the specific communicative setting of voice communication with the VTS and marine pilots and provides a case-based example of the degree to which regulations are complied with.

The authors aim to contribute towards filling the gap in authentic data on maritime voice communication which has been identified as a scarce commodity (Dževerdanović-Pejović, 2013a; John, Brooks & Schriever, 2017).

Regulatory framework of maritime voice communication

The core documents that regulate maritime voice communication are the ITU Radio Regulations (2016a; 2016b; 2016c; herein forth RR) and, published in accordance with Article 20 of the RR and results from studies carried out in the ITU-R since 2008, the Manual for Use by the Maritime Mobile and Maritime Mobile-Satellite Services (2016d – Volume 1; 2016e – Volume 2; herein forth ITU Manual). In addition, IALA documents are relevant for the regulation of VTS communication, a sub-genre of maritime voice communication. These include the IALA VTS Manual (2008) and the IALA G1132 Guideline: VTS VHF Voice Communication (2017; herein forth IALA Guideline). These documents all recognise the importance of knowledge and use of the IMO Standard Marine Communication Phrases (2001; herein forth IMO SMCP). The superordinate role of the ITU RR, and thus the ITU Manual, is clearly recognised by the IALA Guideline (2017, p6): "Radio communications between coastal stations and ships have to comply with the ITU Radio Regulations." as well as the IMO SMCP (2001, p11): "… their use in ship's external communications has to be in strict compliance with the relevant radiotelephone procedures as set out in the ITU Radio Regulations." This paper analyses four documents:

4 the ITU Manual (2016d; 2016e),
5 the IALA VTS Manual (2008),
6 the IALA Guideline (2017),
7 and the IMO SMCP (2001).

Each will briefly be presented below.

The main purpose of the ITU Manual (2016d, p*vii*) is "to provide the maritime community with a description of the GMDSS and other maritime operational procedures". The ITU Manual is divided into two volumes. Volume 1 provides a description of the organisation and operation of the GMDSS, and of maritime operational procedures. On the other hand, Volume 2 refers to regulatory texts relevant to the field of maritime operations. Compared to the RR (2016a; 2016b; 2016c), the ITU Manual provides practical instructions for daily work with GMDSS equipment, which is why it provides relevant information for the topics addressed in this paper.

The IALA VTS Manual is intended to be "a comprehensive guide to VTS and a point of reference for further detailed study." (2008, p13) Of particular relevance to this paper is Chapter 17: Operational Procedures, designed to assist a uniform and consistent approach to operational procedures in VTS communications using key terminology.

On the other hand, the IALA Guideline is a 13-page document designed to facilitate clear and unambiguous VTS communication. Its main objective is to "engage and support all VTSOs, new and experienced, in promoting best practice in effective VTS radio voice procedures." (2017, p4) In addition, it provides guidance that should ensure consistency among the various VTS operators engaging in VHF communication all around the world (IALA, 2017).

Last but not least, the IMO SMCP (2001, p11) have been compiled to "assist in the greater safety of navigation and of the conduct of the ship, to standardize the language used in communication for navigation at sea, in port approaches, waterways and harbours, and on board vessels with multilingual crews, and to assist maritime training institutions in meeting the objectives mentioned above." The IMO SMCP aim at the standardisation of the language and terminology used in external and internal maritime communication that should in turn enhance the safety of ship operation and navigation.

Methodology

This study has been designed to contribute to the still under-researched question of the differences between standard procedures and practice at sea (Bocanegra-Valle, 2011), and inconsistencies among international standards. Therefore, the research questions that this paper attempts to answer are:

2. RQ_1: Do the relevant ITU, IALA and IMO documents include any discrepancies related to maritime voice communication?
3. RQ_2: Is ship-shore communication upon ships' port entry consistent with the procedures and rules set out by international standards?

Data collection and analysis

The data collection process for RQ_1 started by selecting those ITU, IALA, and IMO documents that would provide relevant and useful information on organisational and discoursal features of maritime voice communication. All documents were acquired in a searchable electronic format. Subsequently, relevant sections were identified, copied into a common document, and analysed (see section *Maritime voice communication in ITU, IALA and IMO documents*).

The examination of RQ_2 relies on the analysis of a single transcript. Importantly, single case analysis is an adequate way of conducting an analysis that is devoted to detail in talk (Sacks, 1984, 413). The recording that was required to examine RQ_2 was acquired by using a wireless

handheld scanner to listen to maritime voice communication between the vessels, port pilots, and the Harbour Master Office before ships' entry in the Port of Koper, Slovenia. A series of eight conversation exchanges between one vessel on one side and the Harbour Master Office and port pilots on the other was then transcribed and analysed against the rules and recommendations of the ITU, IALA, and IMO documents identified as a result of the analysis of RQ_1. The vessel's name and call sign have been changed to provide for anonymity.

Setting

The Port of Koper is the only cargo port in Slovenia. It lies in the northern Adriatic Sea, latitude 45° 33' North, longitude 13° 44' East. A traffic separation scheme has been established off the port. Pilotage is compulsory for vessels over 500 GT and is available at any time of day and night. In 2018 the Port of Koper accepted 1,903 vessels, which means an average of five vessels per day. (Port of Koper, 2019)

In Slovenia all tasks regarding maritime traffic are carried out by the Harbour Master's Office, an integral part of the Slovenian Maritime Administration. Their duties include supervision of ship port entry in accordance with the requirements of the Convention on Facilitation of International Maritime Traffic, as amended (IMO, 1965), the provision of VTS services, requiring mandatory pilotage and towage, and determining the number of required tugs for each specific vessel (Slovenian Maritime Administration, 2019).

The VHF Channels used by the various services in the Port of Koper area are: Channels 08 and 16 by the Harbour Master's Office, Channels 12 and 16 by the Maritime Rescue Coordination Centre, Channel 08 by the Harbour Pilot, tugs, mooring services, and the Port of Koper operational planning service. (Port of Koper, 2019) The working channels of the Harbour Master's office are Channels 07 and 12. (Slovenian Maritime Administration, 2019)

Results

RQ_1: Maritime voice communication in ITU, IALA and IMO documents

The objective of the first research question was to identify inconsistencies among the ITU, IALA, and IMO documents that regulate maritime voice communication. A ship's entry into a port leads to routine communication, thus special emphasis was placed on the rules and recommendations pertaining to routine messages, if applicable. Table 1 summarises various elements of routine maritime voice communication found in the examined documents ('x' indicates the presence of an element in each document, '-' indicates its absence).

	ITU (2016d; 2016e)	IALA (2008)	IALA (2017)	IMO SMCP (2001)
Message structure				
Beginning of a routine communication	x	-	x	-
Response to the beginning of a routine communication	x	-	x	-
Procedure for calling a station providing pilot service	x	-	-	-
Basic message structure	x	-	x	-
Routine message structure	x	-	-	-
Over vs Out	x	-	x	-
Phrase content				
Procedural words (prowords)	x	-	x	x
Message markers	-	x	x	x
English as the language of communication	x	-	x	x
Reference to the importance of using IMO SMCP	x	x	x	x
Lexico-grammatical recommendations	-	-	x	x
Vocabulary recommendations	-	-	x	x
Use of single-topic sentences	-	-	x	x
Use of abbreviations	x	-	x	-
Delivering a message				
Phonetic alphabet	x	-	x	x
Figure code	x	-	x	x
Keyword emphasis	-	-	x	-
Conversation tone and volume	-	-	x	-
Speech rate, grouping and pausing	?	-	x	-
Read-back techniques	-	-	x	-
Giving geographical positions	x	-	x	x

Table 1: Content analysis – routine communication operational procedures and recommendations

Message structure

Rules and recommendations referring to the routine message structure can only be found in two documents: the ITU Manual and IALA Guideline while the IALA VTS Manual and the IMO SMCP do not make any reference to a standardised structure of routine messages.

The ITU Manual states that (2016e, p31): “Commonly, radio circuits are simplex using one frequency and for these a routine needs to be established to enable successful communication. The exchange is divided into “overs” with just one party transmitting at any one time by using the press to talk switch. A typical call to start a communication would be:

1) name or call sign of called station;
2) the words THIS IS;
3) name or call sign of the calling station;
4) the word OVER."

It adds that the response from the called station will agree on the channel to use, and that exchanges will finish with the word 'OUT'.

Annex 1, Section III "Method of Calling, Reply to Calls and Signals Preparatory to Traffic when Using Calling Methods Other than Digital Selective Calling" of the ITU Manual (2016e, p385) describes the structure of the call when Digital Selective Calling is not used:

"– the call sign or other identification of the station called, not more than three times;
– the words THIS IS (or DE spoken as DELTA ECHO in case of language difficulties);
– the call sign or other identification of the calling station, not more than three times."

The ITU Manual adds that (2016e, p386): "When contact is established, the call sign or other identification may thereafter be transmitted once only."

The same document (ITU, 2016e) includes section B4 "Procedure for Calling a Station Providing Pilot Service". The text, however, only gives instructions on which frequencies to use in order of preference but does not provide any recommendations on discoursal elements how a call to a pilot station should be structured or which elements it should contain.

Speaking of VHF VTS communications, the IALA Guideline (2017, p6) emphasises that "communications should therefore be structured in order to give the best chance of understanding to the receiver and to keep the message as concise as possible." and that (2016, p4) "messages should be formulated in a procedural manner at all times." It extends the rules of structured communication to both routine and non-routine situations (IALA, 2016, p4): "Structured communication applies to both routine and non routine situations." Furthermore, the document advises the users to use a maximum of two message markers and two phrases in a single message so that the recipient is not overloaded with information. The structure of a basic VTS message structure is presented in Table 2:

1. Establish contact	(Name of vessel/Call sign) this is (name) VTS	
2. Exchange information	*4.* Message marker	See message markers
	5. Phrase(s)	
3. End of message	Over	When expecting a reply
	Out	When expecting no reply

Table 2: Basic VTS message structure (IALA, 2017, p6)

Phrase content

The rules and recommendations on phrase content or, in other words, how phrases within a message shall or should be compiled, are unequally distributed among the examined documents.

The use of procedural words (or *prowords*) is recommended to facilitate communication by the ITU Manual (2016d, p32): "To facilitate communications, procedure words (prowords) are commonly used to convey information in a standard form. Examples are; CORRECT – that is correct, NOT CORRECT – that is not correct, RECEIVED – your message has been received, I SAY AGAIN – I am repeating the transmission. For clarity the phonetic alphabet and figure code may be used (see Chapter 10) following the proword I SPELL." Prowords are also recommended by the IALA Guideline (2017, p6): "Pro words complement the message marker and prepare the receiver for the nature and content for the message that will follow (e.g. 'WEATHER' before 'INFORMATION' and 'COLLISION' before 'WARNING')." The prowords recommended by the IMO SMCP (2001) are different from those found in the other two documents. They include, for instance, the use of 'Mistake' and 'Correction' when a mistake is made in a message, 'Repeat' when a part of a message is considered so important that it needs to be repeated by the speaker, or 'Say again' when a message is not properly heard.

Although the ITU Manual (2016d; 2016e) does not make any reference to message markers, their use is recommended by the other three documents. The IALA Manual (2008, p157) thus states that: "To facilitate shore-to-ship and ship-to-shore communication in a VTS environment, one of the following eight message markers may be used to increase the probability of the purpose of the message being properly understood. It is at the discretion of the shore personnel or the ship's officer whether to use one of the message markers and, if so, which marker is applicable to the situation." For VTS operators, the IALA Guideline (2017, p5) adds that they "should use the 'message markers' listed and explained in IALA Guideline 1089. This is in order to keep the communication short, to the point and clear for all users." Finally, the IMO

SMCP (2001) tentatively suggests (‘may be used’) the use of the eight message markers in shore-to-ship and ship-to-shore communication or radio communication in general.

The role of English as the language of external maritime voice communication is recognised by three of the examined documents. The ITU Manual clearly summarises the knowledge required by deck officers (2016d, p79): “… search and rescue procedures of the IAMSAR Manual, the means to prevent the transmission of false alerts, ship reporting systems, radio medical services, the use of the International Code of Signals and the Standard Marine Communication Phrases (Published by IMO as Assembly Resolution A.918(22)), and the English language.” In the IALA Guideline (2017, p4), however, the modal verb ‘should’ rather than ‘shall’ is used: “In order to provide safe guidance to traffic the VTSO should be able to communicate in English.” On the other hand, the IMO SMCP (2001, p1) as the main document standardising the English language at sea clearly require the use of English: “English shall be used on the bridge as the working language for bridge-to-bridge and bridge-to-shore safety communications as well as for communications on board between the pilot and bridge watchkeeping personnel unless those directly involved in the communications speak a common language other than English …”

In addition to the knowledge of general Maritime English, all four documents refer to the use of the IMO SMCP. As already stated in the previous paragraph, the ITU Manual (2016d, p79) requires deck officers to have a knowledge of the IMO SMCP. The IALA Manual (2008, p161) also draws the attention to the use of standard terminology as prescribed by the IMO SMCP (but not clearly the IMO SMCP themselves): “Attention is drawn to the importance of using standard terminology as prescribed in IMO SMCP. IMO Resolution A.918(22) - IMO Standard Communication Phrases.” The IALA Guideline (2017) only mentions the IMO SMCP in the Acronyms, Explanation and References sections while the IMO SMCP (2001, p3) refers to the STCW Convention that requires the watchkeeping officers to be able to use and understand the IMO SMCP: “Under the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as revised 1995, the ability to use and understand the IMO SMCP is required for the certification of officers in charge of a navigational watch on ships of 500 gross tonnage or more.”

Lexico-grammatical recommendations on message phrase content are provided in the IALA Guidelines (2017) and in the IMO SMCP (2001). Thus, the IALA document (2017, p7) gives the following suggestions: “Keep the subject, verb, and object as near to one another as possible.”, “Use the active form (such as ‘advice to‘; instead of passive ‘you are advised to’).”, and “Make

sentences positive." The IMO SMCP (2001), on the other hand, give advice on other lexico-grammatical features, for instance providing fully worded answers to yes/no questions or avoiding modal verbs in ambiguous contexts.

The rule that each sentence should contain a single piece of information is emphasised by the IALA Guideline (2017, p7): "Each phrase should contain only one topic." and in the IMO SMCP (2001, p12): "… providing one phrase for one event."

Finally, the use of abbreviations is dealt with by the ITU Manual (2016e, p383): "To facilitate radiocommunications the service abbreviations given in Recommendation ITU-R M.1172 may be used." and the IALA Guidelines (2017, p7): "Abbreviations will often save time in speech. Many abbreviations are so commonly used in normal speech that they are more familiar than their original unabbreviated form. The use of such abbreviations in radio transmissions is to be encouraged provided that: they are quicker and easier to use than the full word (e.g. ETA, ETD) …"

Delivering a message

The same format of the phonetic alphabet is presented in the ITU Manual (2016d; 2016e), IALA Guideline (2017), and IMO SMCP (2001). The ITU Manual, for instance, states that (2016d, p89): "When it is necessary to spell out call signs, service abbreviations and words, the following letter spelling table given in the Radio Regulations, Appendix 14 should be used: Alfa, Bravo, …"

On the other hand, the spelling of figures is not so straightforward. The ITU Manual refers to the spelling of figures in its Volume 2 where it says (2016e, p89): "The phonetic alphabet and figure code in Appendix 14 and the abbreviations and signals in accordance with the most recent version of Recommendation ITU-R M.1172 should be used where applicable." However, Volume 1 of the same Manual acknowledges that (2016d, p90): "When it is necessary to spell out figures or marks, the spelling table given in Appendix 14 is not widely used and it is preferable to use the table given in the IMO SMCP: …" The figure code in Appendix 14 uses the following forms: Nadazero – 0, Unaone – 1, Bissotwo – 2, Terrathree – 3, Kartefour – 4, Pantafive – 5, Soxisix – 6, Setteseven – 7, Oktoeight – 8, and Novenine – 9. One the other hand, the spelling recommended by the IMO SMCP is more similar to standard general English with some modifications (Table 3). The IALA Guideline (2017, p13) follows the spelling as proposed by the IMO SMCP (2001).

Number	Spelling	Pronunciation
0	zero	ZEERO
1	one	WUN
2	two	TOO
3	three	TREE
4	four	FOWER
5	five	FIFE
6	six	SIX
7	seven	SEVEN
8	eight	AIT
9	nine	NINER
1000	thousand	TOUSAND

Table 3: Spelling of figures according to the IMO SMCP (2001, p13)

Moreover, that numbers are to be pronounced in separate digits is explicitly stated by the IALA Guideline (2017, p13), for instance: “Pronunciation is as follows: 963 – Niner six tree.”, and the IMO SMCP (2001, p16): “Numbers are to be spoken in separate digits: …”. However, this pronunciation is not explicitly mentioned by the ITU and IALA manuals.

Several recommendations on delivering voice messages are only provided in the IALA Guideline (2017). Among these we can find the following recommendation on placing emphasis on keywords (2017, p8): “The keyword, most important part of the message, should be spoken slightly louder, longer, and higher than its neighbouring words.”, tone and volume: “Transmissions should be sent with a tone of calm confidence, politeness and professionalism.” and “The volume of a transmission should be at a level used for normal conversation.”, speech rate, grouping words, and pausing: “modulating speech at a slower rate of around 120 WPM is highly recommended for clear and effective communication” and “intelligibility can be enhanced considerably by dividing sentences into smaller groups of phrases and by pausing briefly between word groups”. A suggested technique is reading back (2017, p10): “Read back could be considered a powerful feedback tool. There are two main principles for reading back communications. The first principle is to benefit other mariners and the second is to ensure that the message is received correctly.”

Last but not least, three among the examined documents recommend the format in which geographical positions should be given. The ITU Manual (2016e, p91) only refers to giving a vessel’s position within distress, urgency, and safety messages, for instance: “the position, given as the latitude and longitude, or if the latitude and longitude are not known or if time is

insufficient, in relation to a known geographical location; …" For the specific job of VTS operators, the IALA Guideline (2017) states that geographic locations rather than latitude and longitude should be used when a VTS operator provides traffic information. Finally, the IMO SMCP (2001, p16) acknowledges two ways of giving positions, in terms of longitude and latitude, or as a bearing to a charted object.

RQ_2: Consistency of ship-shore communication before port entry with the procedures and rules set out by international standards

After a detailed presentation of ITU, IALA, and IMO rules and recommendations on voice communication in the maritime domain, the second research question concerns the consistency of ship-shore communication before a ship's port entry with the presented rules and recommendations. The analysis relies on a sample of eight communication exchanges between a vessel entering the Port of Koper on one side of the conversation, and the Harbour Master Office and port pilots on the other. Each section represents one conversation exchange between the vessel and the shore. Before each, a brief summary of the conversation exchange is provided. At the end of the transcript, comments are given on the (non-) observance of the rules and recommendations presented in the section Maritime voice communication in ITU, IALA, and IMO documents. Examples are labelled as follows: E1(2) – Exchange 1, Turn 2.

First, the vessel contacts the pilots to confirm the pilot boarding time. The vessel is given instructions on which side the pilot ladder must be rigged and on the approaching speed. Upon the vessel's request, they are also given information on wind speed in the port.

Exchange 1

1 Vessel: Koper Pilots, Koper Pilots. This is Vessel, Vessel.

2 Koper pilots: Vessel, Koper Pilots. Good morning.

3 Vessel: Good morning, Sir. Please confirm pilot boarding time zero seven.

4 Koper pilots: Roger. Zero seven. Pilot ladder on starboard side, one meter above the water, and please call the pilot two miles before the fairway buoy.

5 Vessel: Confirming pilot boarding time at zero seven. We will prepare pilot ladder on starboard side one meter above the water. Can you advise the maximum approaching speed?

6 Koper pilots: Approaching speed maximum five to seven.

7 Vessel: Ok. We will approach the fairway buoy at five to seven knots. What is the wind speed in the port?

8 Koper pilots: Well, at the moment, just let me check, yeah, it is about five knots, even less, five knots from, amm, oh, very variable, around five knots.

9 Vessel: Thank you. Standing by on channel zero eight and one six.

10 Koper pilots: Ok, thank you.

The vessel calls the pilots to inform them that they are two miles away from the fairway buoy. The vessel is given instructions to proceed.

Exchange 2

1 Vessel: Koper Pilots. Vessel, Vessel, channel zero eight.

2 Koper pilots: Yes, Vessel, pilots. Go ahead.

3 Vessel: Good morning again, Sir, just to advise that we are two miles away from the fairway buoy.

4 Koper pilots: Ok. Proceed, Vessel.

5 Vessel: Ok, proceeding.

The vessel calls the Harbour Master to ask for their permission to launch a fast rescue boat for training purposes. The permission to do so is granted by the Harbour Master.

Exchange 3

1 Vessel: Koper Port, Koper Port. Vessel, Vessel, channel zero eight.

2 Vessel: Koper Port Control, Koper Port Control. Vessel, Vessel, channel eight.

3 Harbour Master: Vessel. From Koper Harbour Master office.

4 Vessel: Koper Harbour Master, good morning. This is Vessel. Just looking for permission to launch our fast rescue boat this morning for some training purposes.

5 Harbour Master: Ok, you have permission.

6 Vessel: Thank you, Sir.

The vessel calls the Harbour Master to ask them for their permission to conduct a lifeboat drill. The permission is given to the vessel but they are also advised to contact the pilots before the drill to make sure that there is no traffic in the vicinity. The vessel is also instructed not to send the lifeboats far away from the ship.

Exchange 4

1 Vessel: Good morning, Harbour Master. Ammmm, at ten o clock local time this morning we will be holding crew drill. Can we have permission to send away starboard life boats, lower into water and send away starboard life boats?

2 Harbour Master: You have permission but first you have to contact pilots before starting the drill to make sure there is no traffic.

3 Vessel: We must contact the pilots to make sure there is no traffic, aye, aye. Ok, we will keep watch on zero eight and one six.

4 Harbour Master: But, anyway, you are not allowed far away from the ship.

5 Vessel: Ok. We will not send the boats far away from the ship. Well received and understood.

6 Harbour Master: Ok.

The vessel calls the pilots to ask if there will be traffic in the area at the time when their lifeboat drill is planned. Although the pilots do not have that information yet, the vessel is granted permission to conduct the drill.

Exchange 5

1 Vessel: Koper Pilots, Koper Pilots, Koper Pilots. Vessel Zulu Bravo Delta Oscar Nine calling channel eight, good morning.

2 Koper pilots: Yes, Vessel, go ahead. Good morning.

3 Vessel: Good morning, Sir. Between ten AM and twelve noon we will be holding crew drill where we will be sending away starboard life boats not far away from ship. Could you confirm if there is traffic during this period.

4 Koper pilots: I don't know exactly now what will happen this time, Captain. Anyway, you can do the drill.

5 Vessel: Ok, we can carry out the drill. Thank you for your cooperation. Vessel, zero eight, one six. Have a good day, Sir.

The vessel calls the Harbour Master to inform them on a distress message transmitted by a ship in the vicinity that they have intercepted. The vessel offers to help in the communication in German but the Koper Harbour Master says they will take over the situation.

Exchange 6

1 Vessel: Koper Port Control, Koper Port Control. This is Vessel, Vessel.

2 Koper Port Control: Vessel. Koper Port Control. Nice read, over.

3 Vessel: Ah, hi. There we have just got an emergency call from a ship in German language which was off Piran claiming that they had water ingress. Somewhere off Piran. I do not know the exact location. I don't know the name of the ship either.

4 Koper Port Control: Ok, understood. Still hear their conversation, over?

5 Vessel: Come again.

6 Koper Port Control: Do still reach them on your VHF, over?

7 Vessel: Not permanently.

8 Koper Port Control: Ok, we will take over, thank you.

9 Exchange: Ok, and if you need any assistance the guy spoke German, I can help you out.

10 Koper Port Control: Ok, we can do it, over.

11 Vessel: Ok.

The vessel calls the Harbour Master to give them the position of the ship in distress.

Exchange 7

1 Vessel: Koper Port Control, Koper Port Control. Vessel, Vessel.

2 Koper Port Control: Vessel, Vessel. Koper port control.

3 Vessel: Yeah, that mayday call came in again. I have a position for you if you want.

4 Koper Port Control: Yes, please give the position.

5 Vessel: Latitude four five degrees three two minutes north, longitude zero one three degrees three five minutes east. The caller said the name was Panta Ray or something like that.

6 Vessel: Ok, Vessel. We heard that, too. Thank you for your cooperation.

7 Koper Port Control: No worries. Standing by on one eight eeeee one six and eight.

The Harbour Master informs the vessel that the distress situation has been resolved and that they are on the distress scene.

Exchange 8

1 Harbour Master: Vessel, Vessel. Port Koper, Harbour Master Office.

2 Vessel: Koper Port Control, Vessel.

3 Harbour Master: Yes, I just want to inform you that the distress signal is resolved. We are on the place.

4 Vessel: Sorry, come again.

5 Harbour Master: Regarding the distress signal, we are there so the matter is in [unintelligible].

6 Vessel: Ok, you are all over it, thank you.

7 Harbour Master: Yes, we are there, so no problem.

Message structure

Most exchanges start with the name or call sign of the called station, for example E1(1): “Koper Pilots, Koper Pilots.” and E2(1): “Koper Pilots.” An exception is E4 where the vessel starts the conversation like this E4(1): “Good morning, Harbour Master.” The name of the called station is said once in E2(1): “Koper Pilots.”, twice in E6(1): “Koper Port Control, Koper Port Control.”, and three times in E5(1): “Koper Pilots, Koper Pilots, Koper Pilots.” In all exchanges the name of the called station is only used at the beginning of the exchange but not at the beginning of every turn. A similar pattern can be observed in the responses of the called stations. In the first response turn, the name of the called station is stated but not at the beginning of every turn.

The rule that ‘this is’ shall be used to identify the name of the calling station is rarely applied. ‘This is’ is used, for instance, in E3(4): “This is Vessel.” but not in E3(1) at the beginning of the same exchange: “Vessel, Vessel, channel zero eight.”

The response from the calling station never includes an agreement on the channel to use. Given that these routine exchanges always use Channel 08, there is no need for this turn.

The proword ‘over’ is almost never used to indicate the end of a turn. The only exception can be found in E6 where the operator consistently uses ‘over’ when ending a turn, for example E6(4): “Ok, understood. Still hear their conversation, over?” and E6(6): “Do still reach them on

your VHF, over?" On the other hand, no instance of 'out' to finish an exchange has been found in the examined exchanges. When indicating the quality of the reception, E6(2) says: "Nice read, over." and not "I read you …" (IMO SMCP, 2001, p15).

Phrase content

In two cases, E6(5) and E8(4), the called station does not understand what the calling station operator has said and asks for that part of the message to be repeated using "Come again." In E7(7), 'Mistake' and 'Correction' could have been used. Instead, the pause filler 'eeeee' was used: "Standing by on one eight, eeeee, one six and eight."

No instances of the use of message markers can be observed in the examined exchanges although there are several opportunities in which they could be used. Examples are 'Request' in E1(3): "Please confirm pilot boarding time zero seven.", 'Information' in E8(3): "Yes, I just want to inform you that the distress signal is resolved. We are on the place.", or 'Question' in E6(6): "Do still reach them on your VHF, over?"

The same statement can be applied to the use of the IMO SMCP (2001). Standard conversational English is used instead of the recommended phrases, for instance E1(4): "Pilot ladder on starboard side, one meter above the water, …" instead of "Rig the pilot ladder on port side/starboard side/leeside ... metres above water." (IMO, 2001, p43).

In terms of lexico-grammatical features, the subject, verb and object are kept near to each other, for instance in E7(3): "I have a position for you if you want." and E8(3): "I just want to inform you that …", the active form is used in all cases, for example in E6(9): "Ok, and if you need any assistance …", and most sentences follow the positive form pattern. However, these recommendations are not always observed. A negative sentence in the passive form is used, for instance, in E4(4): "But, anyway, you are not allowed far away from the ship."

Questions are generally not answered using the full wording, as in E1(8): "Well, at the moment, just let me check, yeah, it is about five knots, even less, five knots from, amm, oh, very variable, around five knots." or E3(5): "Ok, you have permission." In E4(3), however, the instruction given by the Harbour Master is repeated by the vessel: "We must contact the pilots to make sure there is no traffic, aye, aye." A similar example is E4(5): "Ok. We will not send the boats far away from the ship."

The modal verb 'can' is used in an ambiguous context in E4(1): "Can we have permission to send away starboard life boats, lower into water and send away starboard life boats?"

Most of the transcript text contains very short exchanges in which each sentence only contains a single piece of information. Nonetheless, there are several instances in which one sentence contains more than one topic. Examples of this are E1(4): "Pilot ladder on starboard side, one meter above the water, and please call the pilot two miles before the fairway buoy." or E6(3): "There we have just got an emergency call from a ship in German language which was off Piran claiming that they had water ingress."

Delivering a message

The phonetic alphabet is used once in the transcribed exchanges, in E5(1): "Vessel Zulu Bravo Delta Oscar Nine calling channel eight, good morning."

Many instances of the spelling of figures can be found in the transcript. None of them follows the spelling of figures as suggested by the ITU Manual (2016d) nor the IMO SMCP (2001). Instead, they follow the standard general English spelling, for instance E5(1): "Koper Pilots, Koper Pilots, Koper Pilots. Vessel Zulu Bravo Delta Oscar Nine calling channel eight, good morning." and E5(5): "Ok, we can carry out the drill. Thank you for your cooperation. Vessel, zero eight, one six. Have a good day, Sir." In addition, the digits are not pronounced separately when giving the time, for example in E4(1): "Ammmm, at ten o clock local time this morning we will be holding crew drill." and E5(3): "Between ten AM and twelve noon we will be holding crew drill where we will be sending away starboard life boats not far away from ship."

Discussion and conclusion

This paper attempted to provide answers to two research questions. Firstly, it identified inconsistencies related to maritime voice communication among the examined ITU, IALA, and IMO documents (see RQ_1). Secondly, it compared the rules and regulations identified in the international standards to the existing practice in routine communication that takes place before a ship enters a port (see RQ_2).

Firstly, to answer RQ_1, several inconsistencies were found among the examined documents. These inconsistencies are related to the coverage of rules and recommendations pertaining to routine messages, use of prowords and message markers, the English language, and the spelling of figures.

As shown in Table 1, the rules and recommendations on maritime voice communication are dispersed among the analysed documents. This means that, in order to be well informed,

instructors in "Specialised Maritime English for GMDSS Radio Operators" (IMO, 2015) should be familiar will all four documents because they will not be able to find all relevant information in one. Moreover, the information provided by these documents is not always consistent.

With reference to phrase content, the proword 'I say again' in the ITU Manual (2016d, p32) is explained as used when "I am repeating a transmission". On the contrary, the IMO SMCP (2001) recommend the use of 'Say again' (without the subject 'I') when "a message is not properly heard." (IMO, 2001, p15) while the use of 'Repeat' is used with the function of 'Say again' in the ITU Manual, namely when "any part of the message is considered sufficiently important to need safeguarding, say: ""Repeat ..." - followed by the corresponding part of the message." (IMO, 2001, p15).

Secondly, message markers are given extensive attention in the IALA Manual (2008), IALA Guideline (2016), and IMO SMCP (2001) yet the strength of the recommendation of their use is not clear. While the IALA Manual (2008, p157) says that their use is "at the discretion of" the users, the IALA Guideline (2017) says that they 'should' be used, while according to the IMO SMCP they 'may be used'. Pritchard and Kalogjera (2000) found that in real maritime voice communication the message markers are usually left out and are only implied, mostly because they would add to the length of the communication. Model Course 3.17 for Maritime English (IMO, 2015) mentions the message markers at several points in the recommended syllabus. The question is how much emphasis an instructor should place on the teaching of message markers if then in practice they 'may be used' and would only be implied.

Interestingly, the role of the English language in maritime voice communication is still is not evident. The IALA Guideline (2017) recommends rather than requires the knowledge of English for VTS operators while the other documents clearly demand the knowledge of the English language for bridge-to-bridge and bridge-to-shore communications unless those involved share another language, which is rarely the case in this typically international working environment.

Under the heading of message delivery, the identified inconsistency refers to the spelling of figures. In this case the same document, yet in two different volumes, recommends two different formats. Thus, Volume 1 of the ITU Manual recommends the spelling of figures according to the figure code (e.g., 'novenine' for 9) while Volume 2 recognises the possibility of using the spelling as suggested by the IMO SMCP (2001) (e.g., 'niner' for 9). For a full discussion on the issue of spelling of figures in maritime voice communication, see Suban, Jurkovič and Perkovič (2019).

To answer RQ_2, a comparison of real-life maritime voice communication against the rules and recommendations of the examined ITU, IALA, and IMO documents corroborated the results of previous studies that found that in practice several deviations from the standard procedures can be observed (Suban, Švetak and Perkovič, 1999; Pritchard and Kalogjera, 2000; Dževerdanović-Pejović, 2013a; Dževerdanović-Pejović, 2013b). In fact, real-life routine maritime voice communication may differ significantly from the established standards and is highly similar to everyday standard general English. The main distinguishing feature between routine maritime voice communication as analysed in this paper and standard general English seems to be genre-specific properties or the division of the conversation exchange into specific moves (Pritchard and Kalogjera, 2000).

The main reason for these deviations can be identified in the artificial nature of maritime voice exchanges if the international rules and recommendations are strictly adhered to (Dževerdanović-Pejović, 2013a; Dževerdanović-Pejović, 2013b). This holds true of routine communication, and there is also little doubt that in an emergency situation phrase content will largely fall back on general English (Dževerdanović-Pejović, 2013b). How this can be done by a VTS operator that "should be able to communicate in English" (IALA, 2017, p4) is a separate question. In relation to the spelling of figures, maritime radio operators might be violating the set rules because the spelling of figures according to the figure code leads to pronunciation that is less clear and takes longer, as was identified using a speech rate test by Suban, Švetak and Perkovič (1999).

Last but not least, in today's multilingual and multicultural world of navigation where the levels of English of some crews might be far from the expected levels in standard general English, general Maritime English, and specialised Maritime English, we would expect the international regulatory and advisory documents to be consistent, clear, and comprehensive. In addition to a solid knowledge of English at various levels of specificity, this is a precondition for maritime voice communication that is (Bocanegra-Valle, 2011, p37) "free from ambiguity, brief, relevant and meaningful while also being systematically delivered and still achieving its communicative purpose."

References

Bocanegra-Valle, A. (2011). The language of seafaring: standardized conventions and discursive features in speech communications. *International Journal of English Studies, 11*(1), pp. 35-53.

Dževerdanović-Pejović, M. (2013a). Discourse Analysis of the Vhf Communication at Sea. *Maritime English Journal, 1*, pp. 12-24.

Dževerdanović-Pejović, M. (2013b). Discourse of VHF Communication at Sea and the Intercultural Aspect. *International Journal for Traffic and Transport Engineering, 3*(4), pp. 377-396. doi:http://dx.doi.org/10.7708/ijtte.2013.3(4).03

IALA. (2008). *VTS Manual*. Saint Germain en Laye: IALA.

IALA. (2017). *G1132 Guideline: VTS VHF voice communication*. Saint Germain en Laye: IALA.

IMO. (1965). *Convention on Facilitation of International Maritime Traffic*. London: IMO.

IMO. (2001). *Resolution A.91822: IMO Standard Marine Communication Phrases*. London: International Maritime Organization.

IMO. (2015). *Model Course 3.17. Maritime English*. 2015 Edition. London: IMO.

ITU (2016a). *Radio Regulations Articles Edition, Volume 1*. Geneva: International Telecommunication Union.

ITU (2016b). *Radio Regulations Articles Edition, Volume 2*. Geneva: International Telecommunication Union. (retrieved 06 August 2019).

ITU (2016c). *Radio Regulations Articles Edition, Volume 3*. Geneva: International Telecommunication Union. (retrieved 06 August 2019).

ITU. (2016d). *Manual for Use by the Maritime Mobile and Maritime Mobile-Satellite Services. Edition of 2016. Volume 1*. Geneva: International Telecommunication Union.

ITU. (2016e). *Manual for Use by the Maritime Mobile and Maritime Mobile-Satellite Services. Edition of 2016. Volume 2*. Geneva: International Telecommunication Union.

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.

Port of Koper. (2019). *Port Info Book*. Koper: Port of Koper.

Pritchard, B., & Kalogjera, D. (2000). On some features of conversation in maritime VHF communication. In M. Coulthard, J. Cotterill, & F. Rock, *Dialogue Analysis VII: Working with Dialogue: Selected papers from the 7th IADA conference* (pp. 185-196). Tübingen: Niemeyer.

Sacks, H. (1984). On doing "being ordinary". In J. M. Atkinson & J. Heritage, (eds.), *Structures of social action: Studies in conversation analysis*, 413–429. Cambridge: Cambridge University Press.

Slovenian Maritime Administration. (2019). *Kapitanija*. Retrieved from http://www.up.gov.si/si/delovna_podrocja/kapitanija/ (13 August 2019)

Suban, V., Švetak, J., & Perkovič, M. (1999). How to spell figures in maritime communication. *Conference on maritime education and training: PADECC preventing accidents, dealing with emergencies, coping with casualties - the education and training perspective and WOME 10 workshop on maritime English preventing accidents, dealing with emergencies*, (pp. 57-62). Rijeka: Visoka pomorska škola.

Suban, V., Jurkovič, V., and Perkovič, M. (2019). How to spell figures in maritime voice communication. Paper presented at IMLA 26, *Modern Challenges in Maritime Education and Training*, Batumi State Maritime Academy, 23-25 September, 2019.

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E-Thesaurus Design Principles on the Basis of Maritime Pseudo-Equivalent Terminology

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Abstract

The article is focused on pseudo-equivalent sea terms presenting the most ambiguous layer of Maritime English vocabulary. Treated as “false friends” of Russian-speaking seafarers, these are often confused with common international English words that can lead to misunderstanding and threaten safety at sea. To arrange the whole bulk of ambiguous terms into a lexis and semantic system the original approach to the methodical arrangement of Maritime English terminology has been developed. Its essence is to build up an information retrieval e-thesaurus applying corpus-based and network-based techniques. The advantage of representing terms in this way is their grouping around key nautical concepts simultaneously visualizing a wide range of paradigmatic relations between pseudo-equivalent sea terms, as well as showing their links with common English words. The proposed method of terminology arrangement facilitates Maritime English language acquisition and minimizes Russian-English language interference in professional communication.

Keywords: *Maritime English language, pseudo-equivalent terms, e-thesaurus, corpus, network-based approach, methodical arrangement, language interference*

Introduction

The multinational character of the maritime industry enhances the role of Maritime English (ME) in the system of maritime education.

Unqualified seafarers holding fraudulent certificates of competency are a clear danger to themselves, others on board and the marine environment. According to IMO, over 80% of accidents and incidents at sea are due to human error, with a high 30% of them being accounted

for by linguistic and/or communication mistakes (Bocanegra-Valle, 2011; SeaTALK Project; Cole & Trenker, 2010).

As a language for specific purposes, ME has a peak concentration of sea terms which "verbalizing the concepts serve as a cognitive tool and provide a valuable informative language support to learners' communicative needs" (Yarovaya, 2005, p. 4), and thus deserve careful consideration in the course of the ME teaching process. The reach language of the sea has developed through the centuries and accumulated a huge number of terms. To fit the times and meet the standards of today's maritime education the process of their acquisition should be well-arranged and well-judged. First, it is vitally important to take into account the peculiarities of terms semantics, and thus implement the differentiated approach to selection and methodical topology of maritime terms. The topology is based on the degree of difficulties in vocabulary acquisition, that is the degree of equivalence between concepts and terms used for their expression both in a target language (ME) and seafarers' native language (here Russian). With regard to this topology the research is focused on the most ambiguous layer of ME vocabulary classified as pseudo-equivalent terms (Mironenko, 2011) and treated as "false friends" of Russian-speaking seafarers as they are often confused with common international English words and can cause misinterpretation of the message and result in communication breakdown.

To avoid terminological ambiguity aspiring seafarers must be armed with the tools which help them to retrieve the relevant information speedily and use it efficiently. One of these is an e-thesaurus the construction principles of which are presented in the present paper.

Related work

The theme of thesaurus construction and use is very topical as it has received an extensive coverage in numerous research (Lykke, 2001; Nykyri, 2010; Sanatjoo, 2007; Lukashevich, 2010; Kiselyov, 2015).

Both in common language usage and in linguistics a thesaurus is often seen as a kind of conceptual dictionary that groups words by concept or semantic relation (the most common among which are synonymy, antonymy, hierarchical relations) instead of arranging them in alphabetical order.

The insight into the thesaurus as controlled vocabulary has gained attraction in numerous research. Karaulov (1981) views a thesaurus as "a controlled but variable vocabulary which explicitly establishes semantic relationships between its lexical units (descriptors and non

descriptors)" (p. 145). Soergel (1999) defines it as "a semantic tool that represents a domain of knowledge through its conceptual structure with the aim of providing an overview of and a general understanding of that domain". Lykke (2001) views the thesaurus as "a tool that helps individual users to get an understanding of the vocabulary of the collective knowledge domain".

From this, it follows that thesaurus construction is a very special kind of terminology work, where one has to consider various matters of thesaurus use that is a very sensitive issue which requires language sensitivity.

Thesaurus approach to knowledge representation is fully applicable to specialized dictionaries dealing with specific information retrieval systems (Karaulov, 1981, p. 176; Lykke, 2001). Here the knowledge representation is equivalent to domain specific terminology representation and for this purpose information retrieval thesauri are used.

A fairly standard format for IR thesaurus was established with the publication of the *Thesaurus of Engineering Terms* in 1964 presenting an alphabetical sequence of terms with equivalence, hierarchical, and associative relationship types, which are still used today (Dextre Clarke, 2001 in Sanatjoo, 2007, p. 19). Bernier and Heumann introduced a "technical thesaurus" that brings together the vocabularies of searchers and the retrieval system. They wanted the user to go from relationships he knows to all those which he needs to know for a complete search (Bernier and Heumann, 1957, p.212), and the thesaurus should be a complex network showing all the multiple relations between words.

A number of terminological thesauri are now accessible via web-based applications, which allow the presentation of rich, detailed information on each term, the visualization of term relations, and the display of real-life usage examples of the term in the domain-related texts, e. g., a terminological multilingual thesaurus on Land surveying (Horak, 2019); a monolingual company-specific thesaurus to support exchange and retrieval of documents across a large product development company, working within the pharmaceutical industry (Lykke, 2001); the Plant Pathology Thesaurus (Sanatjoo, 2007).

The aim of the present paper is to exploit the previous experiences in designing terminological thesauri to find effective and efficient methods of Maritime domain thesaurus construction aimed at hitting the most ambiguous layer of nautical terms that is pseudo equivalent terms or homonyms for standardization of their use in information storage and retrieval.

Methods

Effective communication and interaction with the end-user depend on the thesaurus design and display**.** According to Sanatjoo (2007), thesaurus design refers to the conceptual content, to the selection of concepts and terms, the definition of relationships, the nature of scope notes and definitions provided as well as the selection and inclusion of other descriptive elements. Thesaurus display refers to the way in which the conceptual contents of the domain, including concepts and relationships, are arranged and presented to the users as the display structure of the thesaurus.

So, the construction of the thesaurus is a staged time-taking process, which should be started with justification of the need for the new thesaurus within a certain domain for a certain end-user.

Knowledge domain

Knowledge is always restricted to knowledge over a certain domain. The larger the information domain, the more important is to find an effective and efficient way to define narrower domain for searching. As we see nautical terminology as the core of ME, the initial stage of the thesaurus design is the selection of a term list or vocabulary of the thesaurus. To enhance the effectiveness of ME acquisition it is necessary to meet the educational needs of the end-users, in the present case, Russian-speaking cadets of a Maritime training institute. So, it is reasonable to prioritize terms which are the most difficult for the learners' acquisition.

From the linguistic point of view ME is a specific jargon. Still, this does not mean that it is a self-sustaining separate entity. It certainly extends its influence to General English ascribing to its lexical units new meanings, while making specific use of it.

The reciprocating influences of General English and Maritime English have brought into existence pairs of words which are similar in the plane of expression (spelling and pronunciation), but different or overlapped in the plane of content, and the most troublesome are those pairs of words that share meaning in some but not all context. This language phenomenon is known as homonymy, covers a wide range of synonymic names: "false friends", pseudo-international words, deceptive cognates, partial cognates , pseudo-equivalents and, according to the methodical typology based on the criterion " presence/ absence of language interference" (Belyaev, 1965; Osmanova, 2008), classified as the most difficult for acquisition.

As equivalence is one of the three basic inter-term relationships characterizing any thesaurus construction, in our research we name the terms which form homonymous pairs with General

English words as pseudo-equivalent terms (PETs). Their presence in ME is a stumbling block in the sphere of terminology functioning since PETs are viewed as subtle cultural and language barriers and can be misinterpreted in professional communication.

So, at the stage of the thesaurus vocabulary building the analysis of monolingual and translation dictionaries of nautical terms allowed us to collect a sufficient number of terms that resulted in compiling a relational database of 247 PETs (Mironenko, 2019). In comparison with the many thousand ME vocabulary items the number of PETs is rather limited. However, the cost of confusion can be high. For instance, the order *Check the cable!* can be misinterpreted by Russian speaking seafarers as *Задержать якорь-цепь!*, and as *Проверить кабель!*, and as *Сверить расстояние в кабельтовых!*, because the term *cable* in ME has the meanings *anchor chain (*rus. «якорь-цепь», hawser (rus. «кабель»), and *a nautical unit of measure equal to one tenth of a nautical mile* (rus. «кабельтов»).

In the viewpoint of a number of language experts (Baryshnikov, 2010; Ter-Minasova, 2007 in Mironenko, 2011), ignorance of pseudo-familiar lexis is potentially more dangerous than lack of knowledge of unfamiliar lexis, as in the first situation a learner feels certain about the knowledge of the words and is not in want of consulting a special-purpose dictionary for their meanings.

The presence of PETs in ME advocates the idea (Milstead and Feldman, 1999; Chan, Lin & Zeng, 2000 in Nykyri, 2010) that homonymy is one of the major causes of false hits in information retrieval and along with polysemy and synonymy is a language problem that causes poor precision. When operating with a foreign language, this problem is even more difficult to solve without any vocabulary or terminological help. So, it is the maritime navigation e-thesaurus which is aimed at providing such a help.

Corpus-based method

To control the vocabulary the choice of terminological sources for language check of indexing terms is required. For this we applied a corpus-based approach.

To reflect the representativity of the language phenomenon, that is pseudo-equivalent maritime terminology, the specialized corpus was built with reference to the educational needs of the cadets in the context of their professional competence development. For its compilation the following terminological sources were used: 1) IMO instruments: Conventions, Protocols, Amendments, Recommendations, codes and guidelines; Resolutions; 2) the study books of the field and of the fields close to it, reference books, and 3) professional periodicals. As the real

products of professionals working in the shipping industry, these full authentic texts help to eliminate the anomaly between the language which is taught in class and the real language for specific purposes.

In the context of the present research we make use of a concordancer, that is a development program which permits a researcher to search for natural language text files for words, phrases and patterns. WordSmith concord helped to create the word lists and sort them in frequency order. Preliminary, all selected PETs were distributed into 7 lexical-semantic groups with each of them compiling a word list. As an example, in figure 1 the results of Wordmith Concord processing of the PETs grouping around the key concept "Navigational space object" are shown.

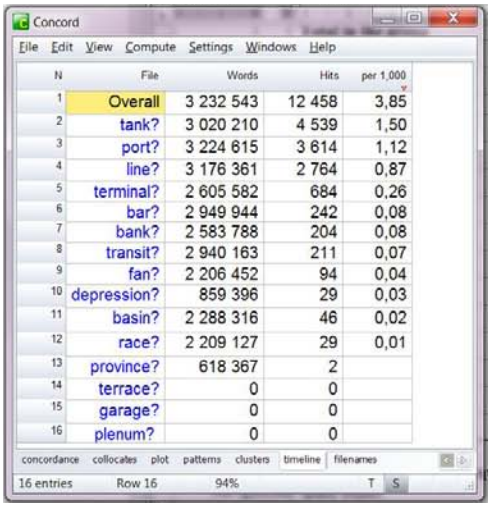

Fig. 1. Frequency order list of pseudo-equivalent terms belonging to the group with the key concept "Navigational space object"

By computer processing of the full texts the highest frequency PETs within their lexical-semantic groups were identified, that allowed us to compile the final list of PETs that should be acquired in the course of ME communicative competence development. As a result, from 247 PETs initially considered as candidates for inclusion in the controlled vocabulary 200 were accepted.

Network-based method

Crucial for thesaurus developing is the internal structure of the domain: if there were no structure, one could never search the domain in an efficient way, or even know what the extent of the domain was.

With the evolution from the approach of term-based thesauri, present in ISO 2788, to concept-based thesauri, present in ISO 25964 (ISO25964–2, 2013), and in relation to structural organization information retrieval thesauri can be regarded as semantic nets of various types,

thus a network model must be admitted as beneficial for thesaurus structure (Martínez-González, 2019; Hjørland, 2007). The advantage of a network-based method applying to selected PETs presentation is in the potentiality of their grouping around a key concept on the basis of logical-semantic relationships while also in graphically showing their relationships with common lexis.

Bearing in mind that the thesaurus construction standards stipulate the use of three basic inter-term relationships, which are the equivalence relationship, the hierarchical relationship and the associative relationship (Aitchison & al. 1997, p. 47 in Nykyri, 2010), the semantic analysis of PET definitions given in monolingual and translation dictionaries of nautical terms was carried out.

First, the hierarchical relationships were established. They cover two different kinds of logical relationships: 1) hyponymy (or generic relationship) where more specific words constitute a subclass of a more general word. This relationship can be expressed in terms of "An X is a kind of Y". *A tender is a (kind of) ship.* For instance, the terms *packet, dandy, tractor, tender, zodiac* are referred to as hyponyms of *ship; 2)* the hierarchical whole-part relationship which is specified in terms of "X is a part of Y". E.g., *A boss is a part of a propeller. A palm is a part of an anchor.*

The second basic inter-term relationship, which underlies the network-based approach to thesaurus construction, is the equivalence relationship. According to Karaulov (1981), and many other thesaurus researchers (Lukashevich, 2010; Lykke, 2001; Nykyri, 2010) correspondence and equivalence are discussed through synonymy, homonymy and polysemy. It is stated that usually in special language terminology work the aim is that one concept refers to one term and one term to one concept. In practice, the principle “one term –- one concept” is considered to be an ideal, which should be aimed at but only within certain limits. In natural languages – that is also special vocabularies – there exist three common phenomena, which break the rule for one-to-one concept and term, namely synonymy, homonymy and polysemy (Nykyri, 2010, p. 39).

Unlike synonymy, which is the main type of relationship that features in the majority of thesauri, the specificity of the thesaurus under construction is homonymy, which is regarded in the present research as the key type of relationship within the maritime navigation domain contrasted with General English vocabulary. This is due to the reciprocating influences of General English and Maritime English, as mentioned above. Consequently, the main structural unit of the thesaurus is a PETset, where the definite PET is presented in the relational system with the other PETs within the Marine Navigation domain as well as with General English

words. The range of relationships is presented by 1) hierarchical (generic and whole-part), 2) synonymic, 3) polysemic, and 4) homonymic types.

In the format of e-thesaurus every lexical and semantic group is presented by a segment of semantic net; nods stand either for PETs within maritime navigation domain or for General English words embracing neutral lexis and links define the type of relationships between concepts. To correlate the nods with real life concepts definitions are used. They provide the information sufficient for the identification of a corresponding term. In a number of cases the definitions are shortened to synonyms. As an example, the segment of the semantic net with the key concept "Navigational spatial terms" is shown in figure 2.

The presented semantic net is referred to a definitional network, where nods 1, 2 are related to a concept type (key concept) and subtype (sea term) of the lexical-semantic group “Navigation spatial object”, nod 3 is attributed to a General English lexical unit; links 4 – 7 mark types of relationships between terms within the maritime shipping domain and beyond it. Thus, semantic network is generally characterized by a superior graphic representation of knowledge and permits a simple approach to investigate the problem space of the knowledge domain, namely, PETs.

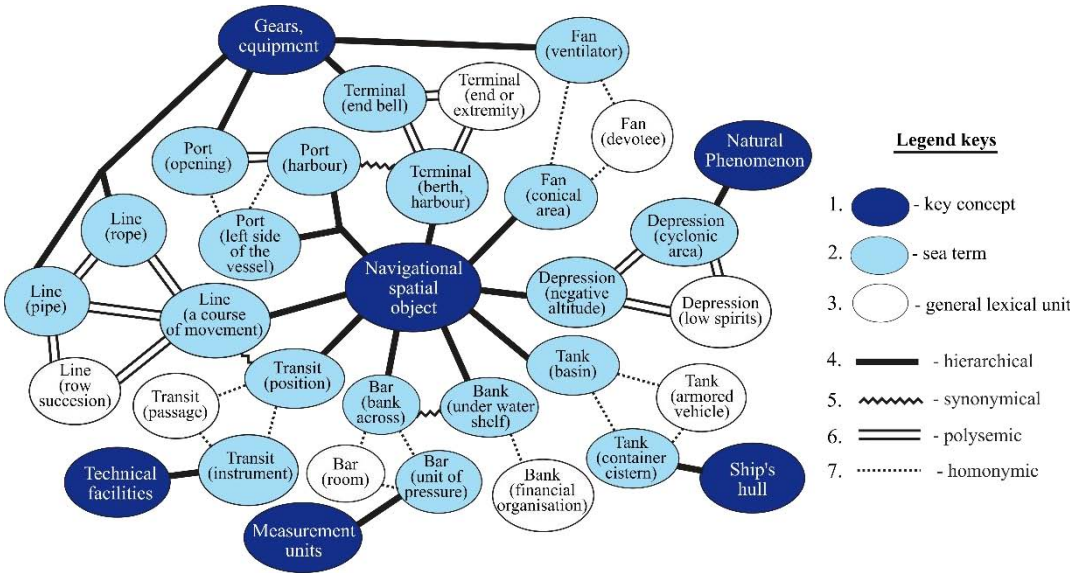

Fig. 2. The semantic net with the key concept "Navigational spatial object"

For the representation of the e-thesaurus structural unit, that is a PET, the frame technique has been used. Having been originally derived from a semantic network a frame is “a network of nodes and relations” (Minsky, 1975), and therefore a part of structure-based knowledge representations. If a PET defines an object, a frame is a group of properties identifying the

condition of an object, and this object is related with other frames or objects. In artificial intelligence the frame is known as a slot-filler knowledge representation method. The frame representing the thesaurus PETset has the following structure (Equation 1).

$$PETset\left[\langle ID\rangle,\langle PET\rangle,\langle RG\rangle,\langle GD\rangle,\langle GX\rangle,\langle RT\rangle,\langle TD\rangle,\langle TX\rangle,\langle TG\rangle,\langle L\rangle,\langle SV\rangle,\langle TF\rangle\right] \quad (1)$$

where: ID – identifier; PETset – name of the frame; PET – $\langle pet_i\rangle$pseudo-equivalent sea term; RG – $\langle rg_i\rangle$ Russian general word; GD – $\langle gd_i\rangle$ general word definition; GX – $\langle gx_i\rangle$ general word example; RT – $\langle rt_{i1}, rt_{i2}, rt_{i3}\rangle$ – Russian equivalent of sea term; TD – $\langle td_{i1}, td_{i2}, td_{i3}\rangle$ – sea term definitions; TX – $\langle tx_{i1}, tx_{i2}, tx_{i3}\rangle$ – sea term examples; TG – $\langle tg_{i1}, tg_{i2}, tg_{i3}\rangle$ – sea term theme group; L – matrix 4x4 for indexing the type of relationship for a PET; SV – $\langle pet_j, l\rangle$ tuple of relationship between PETs; TF – $\langle tf_i\rangle$ sea term frequency.

For each particular PETset the slots must be filled by specific instances. As an example, for PET "transit" the frame is as shown in equation 2.

$$\begin{gathered}\langle pet_i, Transit\rangle,\\ \langle rg_i, Транзит, перевозка\rangle,\\ \langle gd_i, Passage\rangle,\\ \langle gx_i, Transit\ of\ cargo\rangle,\\ \langle RT, Створ, Теодолит, NULL\rangle,\\ \langle TD, Two\ distant\ ¿\ objects, Instrument\ used\ by\ a\ surveyor, NULL\rangle,\\ \langle TX, \in transit, urveying\ transit, NULL\rangle,\\ \langle TG, Navigation\ spatial\ object, Technical\ facilities\ related\ ¿\ navigation, NULL\rangle,\\ \left\langle L_i, \begin{pmatrix} 0 & 3 & 0 & 2\\ 3 & 0 & 0 & 2\\ 0 & 0 & 0 & 0\\ 2 & 2 & 0 & 0 \end{pmatrix}\right\rangle,\\ \langle SV_i, \langle 145(Line), 6\rangle\rangle,\\ \langle TF_i, 0.7\rangle.\end{gathered} \quad (2)$$

The graphic display of the same PETset is given in figure 3.

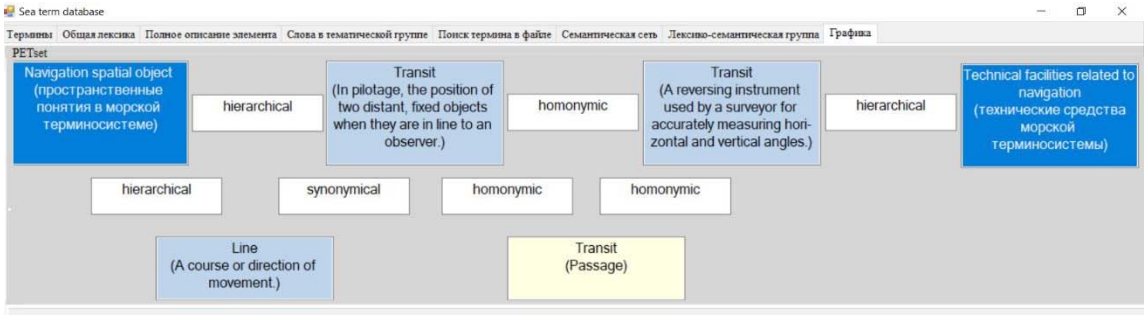

Fig. 3. Graphic display of the PETset “transit”

Thus, the use of network-based approach to the thesaurus display is beneficial for the profession-oriented vocabulary representation in the process of ME mastering as it helps to build and memorize relevant connections in the mind of a learner. The clear benefit of network approach to pseudo-equivalent maritime terminology arrangement is in its generalized, and at the same time well-structured nature that encourages the learners to revise their background knowledge not only in the sphere of professional communication, but also in off-duty socializing avoiding wrong mental associations caused by language interference.

Conclusion and future work

In the present paper we share our vision on specific domain thesaurus design and display. The combination of the proposed approaches allows us to consider the e-thesaurus being developed as a useful tool which guides language usage. As the utility of any tool is dependent on its aims and focus, we believe that not only novices in a domain will profit from the thesaurus, but ME teachers can use it as an electronic learning resource which is focused on the most ambiguous layer of ME vocabulary, namely, PETs of which wrong interpretation can lead to misunderstanding, and thus break the professional communication. We hope that the proposed method of terminology arrangement facilitates ME acquisition and minimizes Russian-English language interference in professional communication.

The thesaurus system uses the preliminary built well-balanced specialized corpus which provides an automated functionality for extracting PET candidates based on the available and up-dated terminological sources. The network-based approach application to the thesaurus display helps to arrange and graphically represent the controlled vocabulary encouraging the end users to build and memorize relevant connections in their minds and thus preventing language interference.

In future research, we will further automatically expand an existing small thesaurus by updating the database and widen a specific layer of maritime terminology coverage. Along with that, we plan to identify the PETs context concordance viewing of occurrences by computer processing of the updated specialized texts.

Moreover, we intend to enrich the system of relationships by investigating the associative relationship which refers to the link between two terms "mentally associated to such an extent that the link between them should be made explicit in the thesaurus, on the grounds that it would reveal alternative terms which might be used for indexing or retrieval". (ISO 2788–1986, p.17 in Nykyri, 2010). With the developments planned the educational potential of the described thesaurus will be enhanced.

References

Belyaev, B.V. (1965). *Essays on the Psychology of Foreign Language Teaching: Manual for Teachers and Students.* M.: Prosveshhenie. 165 p.

Bernier, C. L. & Heumann, K. F. (1957). Correlative Indexes III. Semantic relations among semantemes – the technical thesaurus. *American Documentation.* Vol. 8, № 3, 211 – 220.

Bocanegra-Valle, A. (2011). The Language of Seafaring: Standardized Conventions and Discursive Features in Speech Communications. *International Journal of English Studies (IJES).* Vol.11, No. 1, 35 – 53.

Cole, C. and Trenkner, P. (2010). Raising the Maritime English bar: the STCW Manila amendments and their impact on Maritime English. *Proceedings from IMLA – IMEC 22*, Alexandria: Arab Academy for Science, Technology and Maritime Transport, 3 – 16.

ISO25964–2: 2013 (Information and documentation – Thesauri and interoperability with other vocabularies – Part 2: Interoperability with other vocabularies). Retrieved on July 11, 2019 from https:// www.iso.org/standard/53658.html

Hjørland, B. (2007). Semantics and knowledge organization. *Annual Review of Information Science and Technology (ARIST).* № 41, 367 – 401.

Horak, A., Rambousek, A., Suchomel, V., Baisa V. (2019). A New Approach for Semi-automatic Building and Extending a Multilingual Terminology Thesaurus. *International Journal on Artifical Intelligence Tools, World Scientific Publishing*. Vol. 28, No 2. Retrieved on July 03, 2019 from https://arxiv.org/abs/1903.10921.

Karaulov, Y. N. (1981). *Linguistic design and the Russian language thesaurus.* Moscow: Science. 368 p.

Kiselyov, Y.A., Mukin, M. J. Porotnev, S.V. (2015). Modern state of electronic thesaurus of the Russian language: quality, completeness and accessibility. *Software Engineering Journal.* № 10. 38 – 48.

Lykke, M. (2001). A framework for work task based thesaurus design. *Journal of Documentation.* Vol. 57, № 6778. Retrieved on June 23, 2019 from https://www.researchgate.net/publication/235302668_A_framework_for_work_task_based_thesaurus_design.

Lukashevich, N. (2010). *Thesauri in information retrieval tasks.* M.: Publishing house of Moscow state university. 396 p.

MarTEL (Plus) projects (n.d.). Retrieved on July 05, 2019 from http://tests.maritime-tests.org

Martínez-González, M. M., Alvite-Díez, M.- L. (2019). The support of constructs in thesaurus tools from a Semantic Web perspective. Retrieved on July 24, 2019 from https://doi.org/10.1016/j.csi.2019.02.003

Minsky, M. (1975) Minsky's frame system theory. *Proceedings of the 1975 workshop on theoretical issues in natural language processing,* Cambridge, Massachusetts, 104–116.

Mironenko, E. (2011). Methodical typology of pseudo-equivalent maritime English terminology as the basis of future seafarers' special lexical competence development. *Pyatigorsk State Linguistic University Bulletin.* № 3, 311 – 315.

Mironenko, A., Mironenko E., (2019) English-Russian glossary of pseudo-equivalent marine terms. DB. 2019620530 Russian Federation. Retrieved on April 03, 2019 from http://new.fips.ru/registers-doc-view/fips_servlet?DB=DB&DocNumber=2019620530

Nykyri, S. (2010). *Equivalence and Translation Strategies in Multilingual Thesaurus Construction.* Åbo: Ácademi University Press. 433 p.

Osmanova, I.V. (2008) Methodology of the component of linguistic (lexical) competence development on the basis of lexis with national-cultural semantics. *Pyatigorsk State Linguistic University Bulletin*. № 4. 285 – 289.

Sanatjoo, A. (2007). Improvement of thesaurus design - through a work-task oriented methodology. *Danmarks Biblioteksskole.* Retrieved on July 06, 2019 from https://static-curis.ku.dk/portal/files/163188274/985.pdf

SeaTALK Project. (n.d.). Retrieved July 05, 2019 from http://seatalk.pro/index.php?option=com_content&view=article&id=98&Itemid=603

Soergel, D. (1999). The rise of ontologies or the reinvention of classification. *Journal of the American Society for Information Science (JASIS)*, 50, 1119- 1120. Retrieved on July 06, 2019 from https://www.researchgate.net/publication/220435743_The_Rise_of_Ontologies_or_the_Reinvention_of_Classification

WordSmith Tools. Retrieved from http://www.lexically.net/wordsmith/index.html

Yarovaya, L. (2005). *Russian maritime terminology of navigation: monograph*. Odessa: Feniks. 200 p.

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Maritime English: a focal point for training in the bridge simulator

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Abstract

Simulator training within MET and, indeed within VET in general, is proven to foster the acquisition of real-life skills and, often, to replicate authentic workplace environments. Within a maritime context, the bridge simulator offers the ideal opportunity in which to provide inter-curricular training, whereby knowledge, understanding and proficiency (KUP) across several domains are acquired, practised and assessed. How to operate and manage state-of-the-art bridge equipment is, naturally, the prime objective of exercises in the simulator, but to what extent should (Maritime) English be a focal point in simulator training and assessment? This paper presents the results of a survey carried out within the context of a Master's thesis at Antwerp Maritime Academy, Belgium, and Aboa Mare, Turku. From the learner's point of view, the survey explores the relationship between Maritime English courses and subsequent simulator training and encourages discussion about English-language training in the bridge simulator.

Keywords: *bridge simulator, inter-curricular training, KUP, Maritime English.*

Introduction

Simulator training within MET[1] and, indeed within VET[2] in general, is proven to foster the acquisition of real-life skills and, often, to replicate authentic workplace environments. Healthcare training and aviation training are frequently cited when it comes to the use of simulation in VET. Both sectors are notably 'high-stake' whereby failure to perform effectively, which might include, for example, the inability to master technology, can lead to costly errors

1 Maritime Education and Training

2 Vocational Education and Training

and even fatalities. The maritime sector, where lives at sea and billion-dollar equipment are at stake, is no exception.

As in the healthcare and aviation sectors, simulation-based training in the maritime domain permits learners to hone their skills in a risk-free setting. Simulator technology reproduces a wide variety of conditions that mirror real-life situations. The learner benefits from this authentic environment by gaining the practice required to master various techniques, not least the operation of state-of-the-art technology, under different, sometimes challenging, circumstances.

Simulation is not only beneficial to training but also to evaluation and assessment, which similarly reap the benefits of the authentic environment. As noted by Scalese, Obeso and Issenberg (2007, p. 46) education at the turn of the last century saw "*the paradigm shift to outcomes-based education with its requirements for assessment and demonstration of competence*". This led to a need to train, prove and assess competence under authentic conditions. Current educational methods and techniques are frequently based on honing competence in practical, real-life situations, certainly where essentially vocational skills are concerned.

Thus the simulator provides a reliable environment in which provision of training in a variety skills and assessment of competence in multiple areas can – and should! – take place.

Maritime training in the full mission bridge simulator

Within a maritime context, the full mission bridge simulator offers the ideal opportunity in which to provide inter-curricular training, whereby knowledge, understanding and proficiency (KUP) across several domains are acquired, practised and assessed. Peters (2019) explains that bridge simulators tend to focus on ship handling, cargo handling, bridge team management and bridge equipment training such as the ARPA, Radar, AIS, etc. At Antwerp Maritime Academy in Belgium (hereafter referred to as AMA), the Radar/ARPA course (Master programme) in the simulator is described as *"Training with intensive use of all instruments and means available to achieve a correct interpretation of the [navigational] situation in order to assure safe navigation in congested traffic and in port areas. It includes exercises on Search and Rescue (SAR), shiphandling, visual navigation and ECDIS-AIS."*

In order to achieve *"a correct interpretation of the [navigational] situation"* (as stated above) or *situational awareness*, as it is often referred to, many factors, covering not only navigational

aspects, need to be taken into account. Moreover these factors demand seamless interaction to ensure safety and efficiency on board. These factors include technical aspects such as the correct interpretation and operation of navigational equipment (e.g. shiphandling, visual navigation, ECDIS-AIS, as mentioned above), adherence to the necessary procedures on board, fluent organisational factors (namely during drills, SAR, etc.) and suitable application of bridge ergonomics.

However, less tangible factors are also at play. The Radar/ARPA course (Master programme) at AMA also refers to "*fulfiling the advanced duties of a deck officer on board the ship and in relation to maritime stakeholders. This includes, among other things, multicultural communication skills, awareness of the complexity of the role of 'responsible leader', conflict management, insight into the different 'leadership styles', techniques for handling emergency situations and abandoning ship as OOW or captain (Crisis and Crowd Management)"*. These can justifiably be grouped together and, as such, are subject to influence from 'human' factors, such as fatigue, stress, information overload, boredom, insensitivity to cultural diversity, lack of training, commercial pressure and poor communication, to name but a few. For this reason, the term *Human Element* is often applied to the aforementioned factors. Pyne and Koester (2005) state that "*accidents and incidents in the maritime domain are often caused by a break down in the socio-technical system which constitutes and characterizes the work in the domain"*.

The authors go on to highlight one particular area of this socio-technical system as being particularly vulnerable, namely communication between crewmembers. They note that the odds of poor communication and/or miscommunication, involving misunderstandings and mistakes, are clearly increased by crewmembers of the same cultural background who share (speak) the same mother tongue. Throw into the mix crews using English as a second language combined with cultural differences, and the probability of a lapse in communication increases even more.

Aware of the communicative problems which would later be highlighted by Pyne and Koester, in 1973 the International Maritime Organization (IMO) moved to establish English as the language at sea. Member states agreed that when language difficulties arise a common language should be used for navigational purposes and that this language should be English. Moreover, the literature in general (Bocanegra-Valle, 2011; Trenkner & Cole, 2012; Noble, 2017) frequently notes the importance of one common language (English) on board and establishes that, any which way, communication failures can lead to significant lapses in safety.

Use of English in the full mission bridge simulator

The use of English amongst members of the bridge team when navigating would appear to generate beneficial results. For example, if all those present communicate strictly in one language everyone is the team is able to understand the 'talk' and thus situational awareness is shared. In addition switching to English for VHF communication demands less cognitive effort when the working language has already been established as English. Another example constitutes the use of the IMO Standard Marine Communication Phrases (SMCP) (2002) which becomes less cumbersome if English is consistently used. From there, given the multiple benefits, it would seem a small step to justifying and demanding the exclusive use of English, including for instruction, during bridge simulator training. In fact this may be taken for granted at many MET institutions; it is, in other words, a *no-brainer*!

Moreover, from a pedagogical perspective, the use of English in the bridge simulator adheres to a constructivist approach whereby "*learning through participation is more likely to facilitate critical thinking and problem solving skills as students work collaboratively to advance learning through doing*" (Er & Er 2012 p. 1442). During research into lo-fi simulation, Noble, Björkroth and John (2014 p. 159-174) explore the ways in which learners are encouraged to interpret authentic situations in order "*to enhance, expand and even create their own knowledge through interaction with the physical and social world*". Facilitating the use of English within an authentic bridge setting, namely the simulator, thus obliges learners to abandon their linguistic 'comfort zone' and immerse themselves at a communicative level, as well as at (all) other contextual levels. This serves as realistic preparation for the workplace, in this case the ship's bridge.

Courses in the simulator certainly include the training and assessment of (Maritime) English when used for radio communication (ship-to-shore, shore-to-ship and at times ship-to-ship). To this end the IMO Standard Marine Communication Phrases (SMCP) (2002) for use in external and internal radio communications are taught and tested both during Maritime English classes and during practical exercises in the full mission bridge simulator. The phrases are designed for use on the bridge between the bridge team and the engine room (internal) and in routine traffic situations in the fairway in the approaches to port (ship-to-shore and vice versa), and for use in emergencies, according to the Global Maritime Distress and Safety System (GMDSS).

It should be reiterated at this stage that Maritime English and/or communication is often not the focal point of training in the bridge simulator. As Sihmantepe, Sernikli and Ziarati (2011 p. 103) point out it is often the case that communication is becomes a secondary issue or, even, an

unintentional outcome of bridge training. Clearly communication is an integral aspect of the safe navigation of the ships. Given that miscommunication is just as responsible for accidents and incidents at sea as navigational errors and technical failures, enhancing maritime English for effective communication should justifiably be an integral part of simulator training. Referring specifically to instruction in Maritime English, John, Noble and Björkroth (2016) also advocate a "hands-on" approach, amounting to an interdisciplinary method, in which the language (English) is practised "in situ", as a focal point, bringing a more authentic and practical environment to the learning sphere.

This paper, however, focuses not on the use of the IMO Standard Marine Phrases but on the consistent and constant use of English, as opposed to the learner's mother tongue, as the language of both instruction and operation in the full mission bridge simulator. Should this, as previously postulated, be taken for granted? Are there other MET institutions, similar to Antwerp Maritime Academy, where applying English as the language of instruction, for example, becomes more complicated? It is relevant to consider situations where cadets a) learn English as a foreign language (as opposed to as a second language) and/or b) may not master English sufficiently thus exposing themselves to cognitive overload when having to deal with both language and navigational issues and/or c) are following MET in a country, such as Belgium, where national laws about the use of language/s for educational purposes influence teaching practices.

The following sections examine the results of a survey-based study, carried out at Antwerp Maritime Academy in Belgium and Aboa Mare in Turku, Finland, on the use of (Maritime) English in the full mission bridge simulator.

Survey-based study

Although MET institutions worldwide undertake to comply with the *International Convention on Standards of Training, Certification and Watchkeeping for seafarers, 1978 as amended* (1978) (hereafter referred to as *STCW'78*) it is should be noted that levels of competence, especially in subjects such as Maritime English, may vary, depending on, for example, the region. These anomalies are the result of a combination of factors, not least the competence obtained during secondary school. This goes on to influence the level of intake students at maritime universities and colleges (Noble, 2017). Every MET institution signs up to the minimum standards, as set out in the STCW and facilitated in the IMO model courses, but some

centres of training offer more advanced (sometimes more theory-based) training, such as academic Bachelor and Master programmes.

The survey-based study (Peters, 2019) conducted at Antwerp Maritime Academy (AMA), Antwerp, Belgium and Novia University (Aboa Mare), Turku, Finland is therefore deemed of particular interest to the Maritime English community. At these two particular maritime academies, the student population is diverse thus providing a large and international body of trainees as a target group. The latter generates reflection on the different approaches to providing simulation training and, in particular, the linguistic context in which this is framed. The principal objective of the survey was to obtain a better notion of the importance students assign to Maritime English and to gauge how they assess its relevance to and integration in simulation training.

Survey methodology

The survey was carried out during academic year 2018-2019 by Peters and formed the basis of a dissertation[3] conducted within the framework of the Master's programme in Nautical Sciences at Antwerp Maritime Academy. The survey was conducted on the online platform, Limesurvey. As a result the survey was distributed in digital form and data was collected in a Pdf and an Excel file. The language chosen for the survey was English. Conducting both surveys in English seemed the most logical decision, firstly to avoid any interpretation errors from the usage of different languages and secondly to facilitate the discussion of the data analysed within the context of the thesis subject.

Respondent profile

The student profile at both academies is very diverse and students of many different nationalities are enrolled. For example at AMA students are drawn not only from the Belgian region of Dutch-speaking Flanders, but come from a wide range of French-speaking regions and countries, including the Belgian region of Wallonia, France, Africa (Morocco, Ghana, Burundi, DR Congo) and the Caribbean. In Turku, students tend to be Finnish-speaking or Swedish-speaking (or both) and courses taught in English naturally attract overseas students speaking a different mother tongue to the national languages.

3 Peters, R. (2019). *Maritime English: a focal point for training in the bridge simulator*. Supervisor: Dr. A. Noble. Antwerp Maritime Academy, Belgium.

It should be noted that the diversity reflected in the survey target group has certain implications. For example, students emanating from different regions and countries will have different educational backgrounds (see above) and this, in turn, can have a major impact on courses such as Maritime English or Mathematics, where the school-leaving level of the subject in question may prove an advantage – or conversely a disadvantage! – but also a requirement of some sort. Noble (2017 p. 86-87), referring to the survey conducted under the SeaTALK project, notes that data gathered "*seem to support the implication that some geographical areas suffer more from lack of competence in General English than others*". Secondly, the fact that not all students start MET immediately after finishing high school also influences their background knowledge of General English.

In addition, the average age of students at Aboa Mare tended to be higher: only 1 respondent was under the age of 21. At AMA students tend to start their maritime studies at around the age of 18, immediately after leaving secondary school, certainly in the case of students from the Flanders region in Belgium. Two thirds of the respondents at Aboa Mare Academy already had more than 3 months of sailing time when completing the survey, whereas the majority of the respondents at AMA had an average previous sailing time ranging from two to six weeks, thus much shorter.

Survey distribution

AMA

The survey was distributed on December 9th 2018 via the aforementioned platforms and taken offline on February 19th 2019 to process the results. The survey was thus online for ten weeks. By the end of this period, the survey had yielded a total of 130 respondents.

Aboa Mare

The survey distributed at Aboa Mare was online for a total of 5 weeks, starting on April 1st and ending on May 6th, 2019 and was created and organised to resemble as closely as possible the survey distributed at AMA. Some questions and answers, such as "In what language do you expect the simulator courses to be taught?" had to be slightly adjusted to fit the local context, where learners tend to have either Finnish or Swedish as their mother tongue.

During the period of Peters' visit, many students were at sea, taking part in onboard training, which meant that the potential number of respondents was much lower. In total, 36 students were enrolled in the "Watchkeeping duties 2" simulation class of the spring semester of 2019.

In the end 22 students responded to the survey, which was almost 2/3 of the total number enrolled.

Survey findings

AMA

Results obtained from the survey detailed that 48% of the respondents had studied General English for less than 6 years before enrolling at AMA. Some examples of the additional comments that were given are “exactly 6 years”, “mother tongue”, “1 year” and “no English course before AMA”. This illustrates the contrasting extremes that exist among students regarding English language knowledge[4], with at one end of the spectrum students who consider English their mother tongue and, at the other end, students who have not learned English at all or very little compared to their peers.

At AMA, one third of the respondents rated their level of spoken general English in the C category (according to the Common European Framework of References for languages (CEFR)), thus meaning they master English well enough to be able to produce clear and detailed sentences about complex subjects. 39% of the respondents rated themselves to be either in the B1 or B2 category. When we looked at the results in more detail, we noticed that 24 respondents, or almost one fifth, rated themselves to be B1. One fifth of the respondents said they were comfortable holding a basic conversation, within the limits of their interests.

When asked about the students’ knowledge of Maritime English according to the Yardstick model (Cole & Trenkner, 2008), 35% of the respondents found themselves to be “a modest user” of Maritime English, followed up by 32 respondents who rated themselves as being “an effective user”. The total percentage of these 2 groups adds up to 70%, meaning that 70% of the students that completed the survey are confident enough in their ability to master their Maritime English, but how does this translate into practice, during the simulator exercises?

Almost half of the respondents, 48%, agreed that their General English courses at secondary school prepared them enough to follow the Maritime English courses at AMA.

When asked about how students learn the SMCP, 67% answered that they learnt it through the documents provided by AMA. In second place, at almost one quarter of the respondents, come

4 For a more detailed discussion about levels of competence in the use of English by school-leavers see Noble, A. (2017). *Maritime English put to the test! The desirability and feasibility of setting global standards for Maritime English: a survey-based study*. (Doctoral dissertation). Antwerp, Belgium: UPA University Press Antwerp, 2017. Available online https://www.researchgate.net

the online platforms available, for example <smcpexamples.com>. It is important for teachers to demonstrate and support the different platforms available, thus not only giving students a variety of ways to study, but at the same time encouraging them to do so.

On the matter of the importance of SMCP, different opinions were given, ranging from “it might feel like a drag” (!) or “be hardly ever used on board” to several ideas and opinions such as “important in critical situations”, “vital for non-native English speakers”, “essential tool” but also “outdated” and “not used sufficiently”.

When asked about the respondents’ expectations regarding the instruction language during the simulator courses, a great majority (81%) expected this to be English.

Some of the respondents commented that the briefing and debriefing should be done in Dutch or French but that the exercise and language on the bridge should be conducted in English. Other respondents declared it to be “stupid” to have to speak Dutch or French since neither of these is the working language on board. Finally, one respondent declared he preferred the instruction to be in French so he would better understand it all. It is noteworthy that over 80% of the students not enrolled in simulator course expect the course to be taught in English.

Finally, the question was asked if English should become the main language of instruction during the simulation classes. The answers clearly show two camps, where opinions are divided: those that are in favour of having the simulator class conducted in English and those that are against it.

The respondents that are in favour generally all provide the same justification: it gives a more realistic, authentic touch to the simulator and ‘empowers’ students in the use of SMCP, thus eventually improving their knowledge. On the other hand, those against state that students will most likely ask fewer questions when situated in an environment where their mother tongue is not the *lingua franca*, in other words when removed from their ‘comfort zone’. Also, as long as the instruction (thus briefing and debriefing) is given in the mother tongue, the exercise itself may be conducted in English. This would avoid any miscommunication during the briefing and, during the debriefing, assiting students to analyse better the mistakes made during the exercises.

Aboa Mare

When asked about their level of spoken English according to the CEFR, over one third of the respondents answered C2, the highest grade possible. C2 is then followed up by C1, where 27%

of the respondents find themselves to be. B2 was selected by 23% of the respondents. Only 1 respondent each answered to be in the B1 or A2 "category". No respondent answered A1.

When asked about the respondent's knowledge of Maritime English the results reflect the answers given on the previous question. 45% describe themselves as "an effective user", again, the highest 'category' possible, followed by 41% describing them as "a modest user". Finally, only one respondent answered "intermittent user".

The majority of the respondents had studied General English for more than 6 years before enrolling at Aboa Mare. This may explain why their perception of their level of General English is higher than at AMA.

When asked in what language they expected the simulator courses to be taught, all respondents answered English. In the survey conducted at AMA, 81% of the respondents answered English.

Then, the preference for learning the SMCP was analysed. The majority of the respondents (94%) at Aboa Mare learn the SMCP online, followed by documents, library and finally help from friends.

In general, the perception of the level of General and Maritime English is higher at Aboa Mare. It can also be seen that online learning is preferred to traditional tool learning. In addition students experience on board training early in their maritime education, whereas at AMA a totally different system is in operation.

Simulator Observations

During observation in the simulator, Peters (2019) focused mainly on the communication aspect of the exercise, and, in particular, how each particular exercise was organised.

AMA

Observation showed that when communication by VHF is necessary, students often find it difficult to switch between English and the language on the bridge in which they tend to work, namely Dutch or French. For example, the VTS might request (in English) information, which the master does not immediately have to hand. Typically the master then asks the 1/O in French, the 1/O answers in French, the master translates the 1/O's answer and finally the master provides the reply in English to the VTS. This situation most probably typifies the situation at sea if crew on the bridge share the same mother-tongue. The constant change of language is observed to be cumbersome, causes concentration problems and increases stress. Clear and

concise communication would prevent the stress that could possibly lead to information overload (Grech, 2015).

The choice of language in a team and in this case in the bridge simulator undoubtedly has an impact on levels of communication, as well as the nature of the dialogue. For example research conducted by Keysar, Hayakawa and Gyu An (2012) reveals that using a foreign language reduces decision-making biases, and often "loss aversion". This might prove an advantage to a ship's bridge team! By contrast Horwitz, Horwitz and Cope (1986) note that "*just as anxiety prevents some people from performing successfully in science or mathematics, many people find foreign language learning, especially in classroom situations, particularly stressful"*. Even if anxiety and stress are removed from the discussion, it is, obviously, just easier for interlocutors sharing the same L1 or national language to converse in that language: it is natural and more communicatively effective.

Peters (2019) notes that some students clearly have difficulty with the combination of stress, VHF communication in English, bridge operations and bridge communication, especially as a result of not knowing which question might be asked and/or when the information required is not available.

Aboa Mare

It was interesting to note that at Aboa Mare, trainees were given time to get accustomed to working in the simulator before formal assessment started. This is not the case at AMA where from the start students are being scrutinised and evaluated. It could be valuable to allow students a 'warm-up', which might even constitute various sessions, before proceeding to assessment sessions.

In Finland, during VHF communication, it was observed that less importance to SMCP seems to be given or to the message markers. 'Maas approach' 'Pilot Maas' are not strictly repeated three times, no 'over' 'out' is used. The supervisor notes all the information given on a separate sheet of paper. Some questions are asked by the supervisor about the manoeuvres planned, such as "what is your intention?". The level of General English is good and clear.

Conclusions and recommendations

Simulations are optimal for learning because they provide a focused learning experience where skills, processes and knowledge can all be improved in a context that reality cannot offer.

The maritime full mission bridge simulator offers the learner the opportunity to train under authentic conditions without the fatal and costly risks involved in real life situations.

This paper set out to examine the approaches to Maritime English in bridge simulator training in Belgium (AMA) and in Finland (Aboa Mare), in the context of a study aimed at maritime cadets pertaining to different language groups. As discussed in this paper, it would seem to make sense that simulator training should also include the use of (Maritime) English as an integral feature and focal point, leading to enhanced communication on the bridge.

However, the data from the survey conducted revealed groups of learners with different levels of competence in English. One group, mainly French-speaking students, at AMA (Belgium) perceived that they had a lower level of English than the simulator trainees at Aboa Mare (Finland). This led to students at AMA being split into two camps with divided opinions about the use of English in the bridge simulator: those in favour of having the class, including instruction (briefing and debriefing), conducted entirely in English and those who would prefer to see at least some of the instruction given in their mother tongue. At Aboa Mare this discussion did not arise.

Given some of the comments offered by trainees in the simulator regarding the use of English, we feel it is relevant here to refer to the chapter on Safety of Navigation within IMO SOLAS convention, which states:

> *English shall be used on the bridge as the working language for bridge-to-bridge and bridge-to-shore safety communications as well as for communications on board between the pilot and bridge watchkeeping personnel**, unless those directly involved in the communication speak a common language other than English***. (IMO SOLAS (Safety of Life at Sea) Convention, Chapter V)

This section of SOLAS could be considered pragmatic, offering, it seems, a sort of ‘loophole’ in the obligation to use (Maritime) English on the bridge and, correspondingly, in the simulator.

Whichever way the discussion leads, in an institution such as AMA, the integration of Maritime English into simulation sessions requires a well-established level of coordination between simulator instruction and Maritime English instruction. A good training session during simulation sessions would start with good planning and coordination between the different units (Maritime English course and simulation course). ‘Twinning’ such as this already occurs at some MET institutions, although it is not by any means universal.

If ship bridge trainees were to speak only English during simulator classes it is sometimes claimed that their navigational skills would suffer and, possibly, decrease in accuracy. However, if English were introduced into the program from the start in a natural and authentic manner and twinned with technical content courses, simulator training included, speaking English would become a habit, and, as a consequence, the perceived obstacle of managing both navigational and communicative aspects would disappear. Eventually the entire simulator training might be carried out in English, obliging students not only to move out of their comfort zone but also make them aware of reality on board. There is justification for filtering English into the simulator classes at AMA over a period of weeks so that it is used with increasing frequency. In this manner, Maritime English and communication would certainly come to be a focal point of the training.

In the long-run implementing inter-curricular training between the Maritime English course and the simulation course in practice could mean, for example, assessing the communication part of the simulator exercises as part of a Maritime English course. This assessment could be carried out by lecturers from the Maritime English department.

Moreover, introducing an on scene assessment by one of the Maritime English lecturers during one or more of the simulator exercises could make the debriefing more efficient in terms of communication. Remarks and tips could be made, freeing up a small task for the simulator instructors and giving them the opportunity to concentrate more on the navigational aspect. Elaborating on the importance of debriefing, simulations could then be designed in a way that would force the students to use what has been taught during the previous debriefings.

This paper only touches on a much wider socio-linguistic discussion about the training and assessment of a second or foreign language for professional purposes in the work environment, with all the hindrances and, in some cases, advantages, that this might encompass. In the context of the ship's bridge simulator, students must be given the opportunity to familiarise themselves with an environment where fluidity and clear/unambiguous communication in English are essential. This is the case at Aboa Mare in Turku. As long as the quality of the training in question is not affected, in this case learning how to operate the technology on the bridge, it is vital that increased exposure to English in maritime education, specifically in the simulator, contributes to the learning process. Despite the SOLAS instruction that bridge team crew sharing the same language may revert to their mother tongue, Maritime English in the simulator should become a key player and not simply a bystander.

References

Bocanegra-Valle, A. (2011). The Language of Seafaring: Standardized Conventions and Discursive Features in Speech Communication. *European Journal of English Studies* 11(1):35-53. DOI: 10.6018/ijes.11.1.137091

Cole, C. & Trenkner, P. (2008). The Yardstick for Maritime English STCW Assessment Purposes.

Er, M. & Er, N.F. (2013) "Instructional technology as a tool in creating constructivist classrooms". *3rd World Conference on Learning, Teaching and Educational Leadership (WCLTA-2012)*. In Procedia – Social and Behavioral Sciences 93 (2013) pp 1441-1445John, P., Noble, A. and Björkroth, P. (2016).

Grech, M. (2015). Working onboard: Fatigue at sea. *Human performance and limitation for mariners*. London: The Nautical Institute.

Horwitz, E., Horwitz, M., & Cope, J. (1986). Foreign Language Classroom Anxiety. *The Modern Language Journal*, 70(2), 125-132. doi:10.2307/327317

International Maritime Organization. (1978). *International Convention on Standards of Training, Certification and Watchkeeping for seafarers, as amended (1995 & 2010)*. International Maritime Organization, London.

International Maritime Organization. (2002). *Standard Marine Communication Phrases*. International Maritime Organization, London.

John, P., Noble, A. & Björkroth, P. (2016). Lo-fi simulation of bridge team communication. *WMU Journal of Maritime Affairs*. DOI 10.1007/s13437-015-0097-x

Keysar, B., Haykawa, S. & Gyu An, S. (2012). The Foreign-Language Effect: Thinking in a Foreign Tongue Reduces Decision Biases. *Psychological Science* XX(X) 1-8. DOI: 10.1177/0956797611432178.

Noble, A., Björkroth, P. & John, P. (2014). Exploiting the didactic possibilities of low-fi simulation in virtual bridge-team communication exercises. In *Proceedings IMLA-International Maritime English Conference (IMEC26)*, Terschelling, Netherlands pp. 159-174. Available online https://www.pfri.uniri.hr/bopri/IMEC_Proceedings/index.html

Noble, A. (2017). *Maritime English put to the test! The feasibility and desirability of setting global standards for Maritime English: a survey-based study*. (Doctoral dissertation). Antwerp, Belgium: UPA University Press Antwerp, 2017. Available online

Peters, R. (2019). *Maritime English: a focal point for training in the bridge simulator*. Unpublished Master's thesis. Antwerp Maritime Academy, Antwerp, Belgium.

Pyne, R. & Koester, T. (2005). Methods and Means for Analysis of Crew Communication in the Maritime Domain. *The Archives of Transport* Vol XVII, No 3-4.

Trenkner, P. & Cole, C. (2012). The STCW Manila Amendments and their Impact on Maritime English. *Polish Maritime Research*. Year XIII. 239-244.

Scalese, R.J., Obeso, V.T. and Issenberg, S.B. (2008). Simulation Technology for Skills Training and Competency Assessment in Medical Education. *Journal of General Internal Medicine*, Vol 23, (Supplement 1), pp 46-49. Springer. Available online https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2150630/

Sihmantepe, A., Sernikli, S. & Ziarati, R. (2011). Building Maritime English by Event Simulation. In *Proceedings IMLA-International Maritime English Conference (IMEC23)*, Constanta, Romania, pp. 102-112. Available online https://www.pfri.uniri.hr/bopri/IMEC_Proceedings/index.html

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Developing a Can-Do Self-Evaluation List for Listening Skills

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Abstract

Listening comprehension skills are the most important skills in communication. However, it is often neglected in English teaching and learning. To measure the English language listening comprehension skills in samples of non-native-English speakers, a standard listening sample test was administered to first-year university students in the Philippines. Using item analysis, difficult items were analyzed. Results show that students' difficulties focused on the responses to tag questions, idioms, and making inferences and generalizations. Informed by the findings of the study, a *Can-Do Self-Evaluation for Listening Skills*, adapted from the Common European Framework of Reference for Languages (CEFR) was developed and pilot-tested. This study recommends the inclusion of activities, training, and assessment in listening across the curriculum to enhance the listening comprehension skills of students.

Keywords: *Item analysis, listening comprehension, receptive skills, CEFR, listening skills inventory, self-evaluation, TOEIC*

Introduction

Listening is the skill of understanding spoken language. Listening is an essential skill present in most of the activities carried out by humans (Aryadoust, 2013; Buck, 2001; Field, 2008). About 40 to 50% of communication time of adults is spent in listening (Gilman & Moody, 1984). In spite of its importance, listening has been ignored in language learning, research, and teaching. Literature reviews demonstrate that learners' listening skills can be improved by teachers' assistance and the use of appropriate learning materials and activities.

Diagnosing listening comprehension skills is rarely done in the classrooms (Lynch, 2011; Vandergrift, 2007). Generally, listening comprehension skills are tested along with reading

comprehension in language classes. For employment purposes and entry to international schools, the admission requirements include definite levels of language efficiency measured through the International English Language Testing System (IELTS), Test of English to Speakers of a Foreign Language (TOEFL), or the Test of English for International Communication (TOEIC). These tests are designed to assess the language ability of non-native speakers of English who intend to study or work where English is the language of communication.

In the Philippines, there are no specifications on the level of language proficiency required among college students. Among maritime students, however, the Standards of Training and Conventions for Watchkeeping (STCW) require mostly a Common European Framework of Reference (CEFR) Independent User-B1 level of language proficiency for trainees and maritime professionals in generally all its professional courses. Students at this level are expected to understand the main points of clear, standard speech on familiar matters regularly encountered in work, school, leisure, etc., and can understand the main point of many radio or TV programmes on current affairs or topics of personal or professional interest when the delivery is relatively slow and clear (COE, 2001). There is no standard English language test conducted among university students in the Philippines except for international students applying for admissions in state universities and colleges. In which case, a TOEFL, IELTS or TOEIC passing score is required as an entry requirement.

In other countries, the CEFR levels of language proficiency are widely used. The CEFR distinguishes 34 scales for listening, reading, speaking and writing, which cover both general competences and communicative language competences for a range of domains to define six levels of proficiency (Little, 2007). The CEFR classifies language proficiency and divides proficiency into three categories with a total of six levels (A1, A2, B1, B2, C1, and C2).

The CEFR has contributed to the innovation of language teaching in many important ways. Focusing on providing language learners a tool for self-evaluation, it has promoted a major change in the perception of language proficiency from a teacher-oriented product to a learner-oriented process (Runnels, 2016). Asian countries like Japan, China, Malaysia, Taiwan, Vietnam, among others have developed CEFR-based language proficiency level. Thus, as a component of Association of Southeast Asian Nations (ASEAN) integration, the Philippines may need to assess the language proficiency levels of maritime students based on the CEFR. Using the CEFR has been noted to allow students to define their own learning abilities and plan the direction of their learning (COE, 2001; Glover, 2011; Little, 2006). Specific focus could be

given to assessing the listening skills of students given the dearth of studies focussing on this receptive skill.

Realizing the importance of developing listening among the students as preparation for the workplace, this study is focused on diagnosing the listening comprehension skills of university students, identifying the areas of improvement, and developing a list of Can-Do Statements for Listening based on the Common European Framework of Reference for Languages (CEFR) which serves as a self-assessment tool.

The current paper reports on a project which aims to standardize the assessment of language production in the academic context. This project resulted from the innovation of the language teaching curriculum in agreement with the CEFR guidelines. The aim of the project was to produce a set of listening learning targets that are representative for the different components of the CEFR levels in the local and maritime contexts, which could then be used for standardization of a listening assessment. Although this project was not set up as an empirical evaluation of the CEFR, attempts to embed the CEFR into the day-to-day teaching practice serve as a relevant verification of its feasibility. This study is guided by the following research questions:

1. What is the current level of listening comprehension skills of the students?
2. What are the focus areas in listening that should be developed among the students?
3. How accurate are the self-assessment evaluations of the students?

This study forms part of an on-going project of the College of Marine Transportation to provide baseline data and explore innovations for enhancement of language proficiency of its students.

Methods

A total of 481 first year students from a private tertiary university participated in this study. Participants were unfamiliar with performing self-assessment using can-do statements and the CEFR. All the participants have taken the Test of English for International Communication (TOEIC) for the first time.

This study was conducted in two phases. First, a standard Test of English for International Communication (TOEIC) listening test was given to the participants. The second phase pertained to a self-assessment through the Can-Do Statements in Listening. Participants indicated the extent of their agreement to 40 ordered can-do statements from the CEFR on a

five-point Likert scale. For the five-point scale, the categories were *0=I can't do this at all*; *1=I can do this with a lot of help from my instructor*; *2=I can do this a little*; *3= I can do this fairly well*; *4= I can do this really well*; and *5=I can do this almost perfectly*. The survey was administered through a questionnaire.

To determine the level of listening proficiency among the students, the listening test scores of the students in the 100-item test were converted into a TOEIC Listening Score. Descriptive statistics was used to described the data. The mean scores of the students were compared.

Item analysis was run to determine the difficulty indices of each item. Based on their TOEIC listening scores, difficult items were identified and examined for possible causes of difficulties. Items with difficulty indices were categorized in terms of linguistic focus areas, themes or topics, and skills targeted.

To ascertain the accuracy of self-assessments, a qualitative comparative analysis was made on the top and bottom scorers among the students. The mean scores in the self-assessments across all levels were taken and compared. The highest mean score across all levels was taken to represent the scale of listening skills based on the CEFR for each participant. If there were differences in the responses to the CEFR scales in listening and the actual performance in the listening test, further examination of the statements was made to determine which skills were over-rated or underrated by the participants.

Finally, using meta-analysis, instruments used to measure listening skills in Southeast Asia were compared in order to develop a local version of the CEFR-based Self-Evaluation of Listening Skills appropriate for Philippine students. The final listening self-evaluation instrument or Can- Do List was subjected to a readability test using an online grammar and plagiarism software.

Results & Discussion

Results and findings of this study are presented in the order of the research questions as follows.

1. What is the current level of listening comprehension skills of the students?

The scores of the participants were well distributed (M=58.94, SD=13.75). Figures 1 shows the frequency distribution of scores. The median score is 60; the highest score is 92 and the lowest score is 21. About 2% of the participants comprise the top scorers while 1 percent comprise the low performers. The mean score of the 481 participants is 59. About 19% of the

participants got scores between 53-60. More than a quarter of the group (23%) got a score within the range of 61-68.

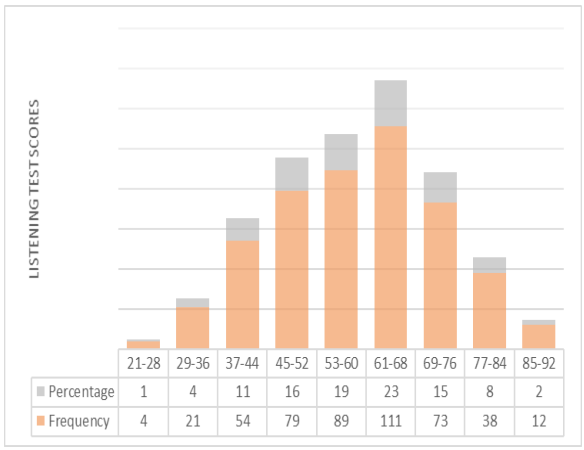

Figure 1. Frequency Distribution of Listening Scores

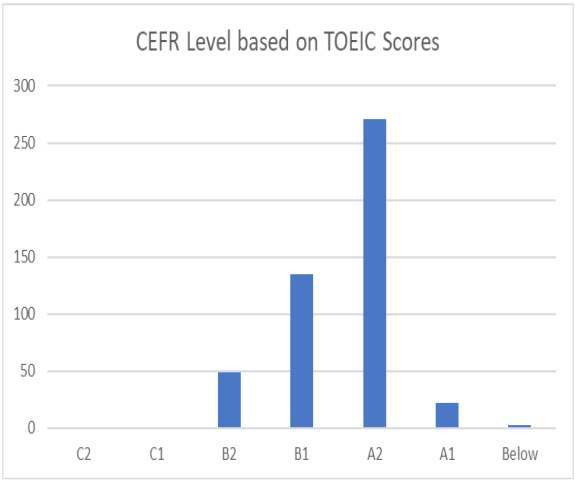

Figure 2. CEFR level based on TOEIC Scores

These listening scores were converted into TOEIC Listening Scores as shown in Figure 2. With these scores, the current level of listening comprehension skills of the students is A2 based on the conversion table provided by Waikato Institute of Education (2019). Students at this level can "*understand phrases and the highest frequency vocabulary related to areas of most immediate personal relevance (e.g. very basic personal and family information, shopping, local area, employment).*" Moreover, students at this level can "*catch the main point in short, clear, simple messages and announcements*" (COE, 2001).

This result seems to suggest that the level of listening skills of the participants is below the general requirement and that there is a need to train students in order to enhance their listening comprehension skills.

2. What are the focus areas in listening that should be developed among the students?

Table 1 presents the topics, communicative activity, and skills focus of the test. As used in the TOEIC test, focus area pertains to the tasks involved in the listening test, such as picture clues, questions and answers, dialogues or conversations between two speakers, or short talks by a single speaker. Common topics tackled in the listening test pertains to common personal activities like shopping, calling, listening to announcements and instructions, or office matters. The types of communicative activities used in the analysis were adapted from the listening competencies described in the CEFR can-do statements.

To determine the difficulty indices of the test items, an Item Analysis matrix was generated. The listening test registered a reliability index of 88%. Out of the 100 items, 42 were considered average questions; 36 were easy questions, and 9 were very easy items. About 12 items were found to be difficult and one item considered as very difficult for the participants based on their listening performance (p=0.1476~0.3971). Items with difficult and very difficult indices were selected and qualitatively analyzed. The results of this examination may be useful for enhancement and enrichment activities for the students.

In terms of focus areas, the short talks by a single speaker seemed to be the most challenging task for the participants. The topics in these items included real estate, office reports, specific historical buildings, announcements about restaurants, the weather, at the airport, and instructions about phone services. These topics should be the focus of listening activities in the classrooms. More specifically, these tasks involved abilities such as understanding main ideas and important details, understanding key vocabulary, making inferences about relationships among ideas, and integrating information with one's own knowledge.

It was observed that the participants had difficulty relating to the topics discussed such as real estate, airports, and very specific historical buildings and places. The context of the communicative tasks may have been unfamiliar to the participants which accounted for the difficulty in listening comprehension. In an earlier study of Orbe (2018) the main difficulties among maritime students in terms of listening comprehension focused on unfamiliarity with some vocabulary words, phrasal verbs, and in making inferences. In this present study, the lack of prior knowledge of the participants on specific contexts, for example, the airport and the announcements about weather changes, could have contributed to the difficulty in

comprehension. North (2007) has explained that lack of familiarity with tasks contribute to the perceived increase in task difficulty. These contexts could be introduced to students as part of their language enhancement activities.

Table 1. Skills Focus of Difficult Items

Code	Topic	Communicative Activity	Skills Focus/Difficulty
39	Airport	Short Response to questions	Responding to a question
43	Real Estate	Understanding Interaction	Noting Details
45,46	Real Estate	Understanding Interaction	Vocabulary
57	Office Report	Understanding Interaction	Inferencing
75	Historical Building	Listening to an announcement	Noting details
78,79	Dialing Numbers	Listening to instructions	Inferencing
81	Cape Canaveral	Listening to an announcement	Noting details; idioms
84	Flight Cancellation	Listening to an announcement	Noting details; vocabulary
87	Real Estate	Listening to an announcement	Inferencing; vocabulary
91	Restaurant Ad	Listening to an announcement	Noting details; vocabulary
98	Weather	Listening to an announcement	Inferencing; vocabulary

Informed by the results of the listening tests and the common difficulties in the test items, the Can-Do List of Listening Skills was developed through a document analysis of listening instruments developed in China, Japan, Canada and Britain, which were all based on the CEFR.

Using meta-analysis, a local version of the CEFR-based Self-Evaluation of Listening Skills appropriate for context was developed. The final listening self-evaluation instrument or Can- Do List consisted of 40 statements which were adapted from the EAQUALS Core for Inventory for General English (North, Ortega & Sheehan, 2010). The Can-Do List for Listening Skills now called the Self-Evaluation for Listening Skills has fewer statements than the Canadian Language Benchmarks but more statements than the CEFR-J (Runnel, 2013) and the China Standards of English (CSE). It was also subjected to a readability test using an online grammar and plagiarism software. Based on the sentence structure and complexity of the statements, the document was found to be readable. Figure 3 describes the main features of the listening self-evaluation survey.

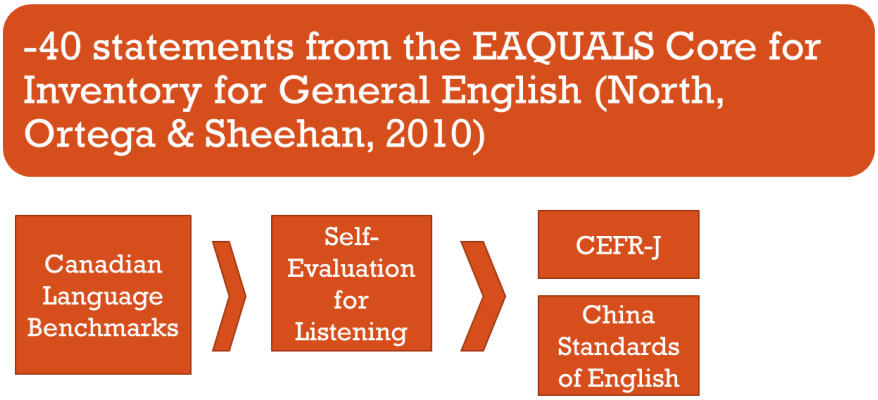

Figure 3. Features of the Self-Evaluation for Listening Skills (Orbe, 2019)

The self-evaluation instrument has 40 statements and descriptors of specific abilities for each level. The statements are arranged randomly and labeled as A1, A2, B1, B2, C1, C2 statements. A1 statements have eight (8) descriptors, A2 has six (6) descriptors, B1 has six (6) descriptors, B2 has seven (7) descriptors, C1 has six (6) descriptors, and C2 has seven (7) descriptors.

Of particular interest to students in this study are the Can-Do statements for A2 level. These are shown in the table below.

A2 Statements	Scale
42. I can understand the main information in announcements if people talk very clearly. For example, weather reports, etc.	0 1 2 3 4 5
43. I can understand short, clear, and simple messages at the airport, bus, or train station, etc. For example: "*The train to London leaves at 4:30.*"	0 1 2 3 4 5
44. I can follow changes in a topic in TV news reports and understand the main information.	0 1 2 3 4 5
45. I can understand short conversations about family, hobbies, and daily life provided that people speak slowly and clearly.	0 1 2 3 4 5
46. I can understand what people say to me in simple, everyday conversation if they speak clearly and slowly and give me help.	0 1 2 3 4 5
47. I can understand simple information and questions about family, people, homes, work, and hobbies.	0 1 2 3 4 5

The difficult listening behaviors for the students as shown in this study were consistent with language descriptors at A2 level.

3. How accurate are the self-assessment evaluations of the students?

This project is not an empirical evaluation of the developed instrument thus the accuracy of the self-assessment evaluation of the students was explored using qualitative comparative

analysis between the CEFR level and the self-assessments made by the top and bottom scorers among the participants. The self-assessments of the key informants were tabulated, scored, and analyzed using descriptive statistics.

It was found out that both informants overrated themselves. For instance, the top scorer rated himself at C2 level and the low performer rated himself as an B1 listener. In contrast, the top scorer was at C1 level and the low performer is below A1 level. This phenomenon supports the findings of Davidson and Henning (1985) who warned that one of the weaknesses of self-assessments is exaggeration in estimation of one's abilities.

Conclusions & Recommendations

Based on the findings of this study the following conclusions are derived:

13. Listening level is A1 that is below the standard level for university level.
14. Common cause of difficulty is unfamiliarity with context, vocabulary words, and idiomatic expressions.
15. The Self-Evaluation for Listening Skills (Can-Do List for Listening) is a learner-centered, action-oriented approach that provides students the learning outcomes for each desired level.

In the light of student difficulties in certain listening abilities, the inclusion of activities, training, and assessment in listening across the curriculum to enhance the listening comprehension skills of students is highly recommended. More focus should be given to exposure to conversations between native speakers in varied communication contexts.

Further studies should also be made to determine if there were empirical differences in the responses to the CEFR scales in listening and the actual performance in the listening test. The levels of agreement must be compared across the entire population through an analysis of variance (ANOVA) in a future research. Further ANOVAs may be performed within each of the levels. If any differences were to be found, LSD post-hoc tests may be used to determine which can-do statement resulted in significantly different mean responses across the rating scales.

References

Aryadoust, V. (2013). *Building a validity argument for a listening test of academy proficiency*. New Castle: Cambridge Scholars Publishing.

Buck, G. (2001). *Assessing listening.* Cambridge: Cambridge University Press.

Council of Europe. (2001). *Common European Framework of Reference for Languages: Learning, teaching, assessment (CEFR)*. Cambridge: Cambridge University Press.

Davidson, F. and Henning, G. (1985). A self-rating scale of English difficulty: Rasch scalar analysis of items and rating categories. *Language testing*, 2, 164-179.

Field, J. (2008). *Listening is the language classroom*. Cambridge: Cambridge University Press.

Gilman, R. A. and Moody, L.M. (1984). What practitioners say about listening: Research implications for the classroom. *Foreign Language Annals,* 17 (4), 331-334.

Glover, P. (2011). Using CEFR level descriptors to raise university students' awareness of their speaking skills. Language Awareness, 20, 121-133.

Little, D. (2006). The Common European Framework for Languages: Content, purpose, origin, reception and impact. *Language Testing*, 39, 167-190.

Lynch, T. (2011). Academic listening in the 21st century: Reviewing a decade of research. *Journal of English for Academic Purposes,* 10 (2), 79-88.

North, B. (2007, February). *The CEFR Common Reference Levels: Validated reference points and local strategies.* Paper presented at the Common European Framework of Reference for languages (CEFR) and the development of language policies: Challenges and responsibilities, Strasbourg. Retrieved from http// www.coe.int/T/DG4/North-Forum-paper.

North, B., Ortega, A. and Sheehan, S. (2010) *The British Council – EAQUALS Core Inventory for General English (CIGE)*. Retrieved from http//www.teachingenglish.org.uk/publications/british-council-eaquals-coreo-inventory-general-english.

Orbe, M.C. (2018). Listening comprehension skills of selected MAAP midshipmen. *MAAP Research Journal*, 4.

Orbe, M.C. (2019). *Developing a CEFR-based can-do statements for listening*. Paper presented at the 6th MAAP Research Forum, Mariveles, Bataan, Philippines.

Runnels, J. (2016). Self-assessment accuracy: Correlations between Japanese English learners' self-assessment on the CEFR-Japan's can-do statements and scores on the TOEIC. *Taiwan Journal of TESOL,* 13(1),105-137.

Vandergrift, L. (2007). Recent developments in second and foreign language listening comprehension research. *Language Teaching*, 40, 191-210.

Psycholinguistic Side of E-Learning

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Abstract

E-learning can be a good education tool for future seafarers (students) and seafarers working onboard because life-long education and self-study is required in their ever-evolving working environment. Our research proves that it can be successful under certain psycho-pedagogical conditions.

We offer own model of psycho-pedagogical conditions of effective e-learning which is based on psychological, linguistic and pedagogical theories. The psychological process involved in this type of educational technology has been studied. The main contribution of our study is the finding of psychological barriers to effective adaptation to e-learning. We also offer practical recommendations to teachers of Maritime English who are just beginning to introduce e-learning into the educational process.

Keywords: *psychological barriers, adaptation to e-learning, readiness to e-learning, technologies of Maritime English teaching*

Introduction

Some features of marine education (many hours of students' absence in the lecture room because of being on a shipboard training) force the educators to implement technologies of self-education and the ways to improve teaching effectiveness in the lecture-room. One of such techniques is e-learning.

We support the definition that e-learning is the use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services, as well as remote exchange and collaboration (Alonso et al., 2005).

According to Pritchard (2004) we can find six different kinds of Internet information sources for Maritime English e-learning:

1. Maritime Education and Training (MET) institutions websites, such as maritime universities, colleges, academies, maritime training centres, etc.
2. Websites of international organizations in the maritime sector such as International Maritime Organisation or International Labour Organisation
3. Commercial software developers, for example Videotel, Seagull or Marlins
4. Individual websites developed by maritime English teachers
5. Various pages on the websites of shipping and crewing companies
6. Individual websites run by former masters, maritime lexicographers, boat designers and other people with various interests in maritime trade.

Available resource material permits to use new information and communication technologies based on computer use: Internet access, electronic mail, chat, forum and video conference. But teachers encounter some psychological barriers implementing e-learning in their teaching process.

The **purpose** of our research was to make psycho-pedagogical recommendations to the teachers of Maritime English for the application of e-learning technologies into practical teaching activities.

Methods we used:

1. Observation of psycho-pedagogical literature to widen a theoretical basis of the possibilities of introduction of the newest technologies in the program of language training of students and the theoretical substantiation of expediency of the use of e-learning technologies.
2. Analyses of students' and teachers' interviews concerning their attitudes to e-learning to find out psychological barriers of e-learning implementation. The respondents were the students of The Institute of Water Transport of The State University of Infrastructure and Technologies and the teachers of Maritime English of the same university. We conducted 30 interviews among the students of navigation and engineering departments and 10 lectures of different age and teaching experience.

Theory. The following theories were the basis for interpretation of our observations:

1. L2 learning theories from psychology and psycholinguistics (e.g. input processing, the notion of knowledge);

2. Cognitive learning theories where learning is seen as an internal process that involves memory, thinking, reflection, abstraction, motivation, and metacognition.

Features of e-learning in psychological literature

We studied different views of scientists and teachers on e-learning but the attitudes of students (learners) are of great importance too. In this respect the research on the students' preferences concerning material on line and printed material led us to some conclusions. Most of the students said they preferred a web page or a computer program over books, but they still thought that the written word was the best way to gain knowledge. The students wanted a total experience from their course material, with the texts being shorter and including a better overview, and being enhanced with video, sound, interactive tests and games. They also wanted their course material to be integrated with social media so they could stay connected with their peers and teachers, and they wanted their teachers to be able to update the material (Stoop, J, Kreutzer, P and Kircz, J G (2013). This result proves that e-learning cannot replace face-to-face learning and the use of blended learning can realize students' desires.

Our interest was attracted by the research of Seafarers International Research Centre (Cardiff University) about the differences of new technologies used by seafarers of different nationalities. They found that when different forms of learning are grouped into 'self-learning', 'specific training', and 'both' we find significant differences between nationalities. European seafarers are much more likely than some other groups to fall into the 'self-learning' category. Thirty-nine percent of Europeans had acquired their knowledge of computers via 'self-learning' as compared with 32% of ASEAN seafarers, 29% of 'other nationalities', 24% of Chinese respondents, 22% of Indians, and 20% of Filipino seafarers. (ASEAN (Association of Southeast Asia Nations) (Sampson, H. and Tang, L. (2011). The main conclusion we draw from this research is that cultural factor will influence the adoption to e-learning.

Another important feature which influences e-learning adoption is individual differences and learning styles. Learning style refers to how a learner perceives, interacts with, and responds to the learning environment; it measures individual differences. Thus, awareness of own learning style helps the student to choose the appropriate resource of information (an exercise, a video film, e-book etc.) and an electronic device (a cell phone, a tablet, a computer etc.).

Metacognition is a learner's ability to be aware of his or her cognitive capabilities and use these capabilities to learn. When learning online, learners should be given the opportunity to reflect on what they are learning, collaborate with other learners, and check their progress. Self-check questions and exercises with feedback throughout a lesson are good strategies to allow learners to check how they are doing, so they can use their metacognitive skills to adjust their learning approach if necessary (Mayer R. (2003), Sternberg R. (1998)).

Discussion

The question for discussion is whether e-learning make extremely positive impact on the process of L2 acquisition. In this respect we should mention the research where the students read the text on paper and digitally. The assessment of the reading comprehension showed that the students who read on paper scored significantly better than those who read the texts digitally. It was easier for those who read on paper to remember what they had read. Mangen et al. say that this is because paper gives spatio-temporal markers while you read. Touching paper and turning pages aids the memory, making it easier to remember where you read something. Having to scroll on the computer screen makes remembering more difficult (Mangen, A, Walgermo, B R and Brønnick, K (2013)).

The world is changing and becomes more computerized, but the laws of the course of cognitive processes force foreign language teachers to find a balance in the use of different teaching methods. In the fast-paced world of e-learning the available technologies to make a course new and exciting are always changing, and course content can and should be updated quickly to give students the very latest information. E-learning offers the ability to share material in all kinds of formats such as videos, slideshows, word documents and PDFs. Conducting webinars (live online classes) and communicating with professors via chat and message forums is also an option available to users.

The other question is teachers' motivation to use e-learning training in their work. Use of e-learning training require from the teacher special computer skills, methodological knowledge, extra time for preparation and doesn't give financial benefits therefore only motivated teachers implement e-learning in their teaching process. Their motives are: 1) facilitate own work as a teacher; 2) become competent in peculiarities of the professional subjects while teaching English for professional purposes; 3) awareness that input material will give adequate output of students' knowledge.

The learner is exposed to input. Parts of it are taken in short-term memory. These are intake. Some of the intake is stored in a long-term memory. It is considered to be knowledge of a foreign language. And the knowledge which is used by the learner to produce written and spoken foreign language is considered to be output. While exposing e-learning material teachers concern about the output which learners acquire (efficiency of e-learning).The question of proper input is important in e-learning. The context of target material should be appropriate lexically, grammatically and contextually. The teacher should expose the tasks which learners are able to fulfill. In other case the task will not give the desired result. That is why very often the learners are not enthusiastic about e-learning and prefer face-to-face teaching (Myrberg C. and Wiberg N. (2015)).

It seems obvious that the non-English speaking countries are faced with a greater challenge, namely that of establishing methodologies and developing materials that improve the efficiency of language teaching and the learning process. Together with traditional means such as textbook and blackboard, Maritime English teachers must become aware of the benefits that new information and communications technologies provide language teaching, and, furthermore, they must take advantage of these means for themselves and for their students. But they must also take into account that those technologies have unique properties that must be applied to the teaching context using the appropriate methodologies.

Psycholinguistic model of effective e-learning

Implementation of e-learning as the instrument and the tool for L2 acquisition (in our research Maritime English acquisition) can be successful under different psycho-pedagogical conditions. Bellow, we offer own model of psycho-pedagogical conditions of effective e-learning (fig.1).

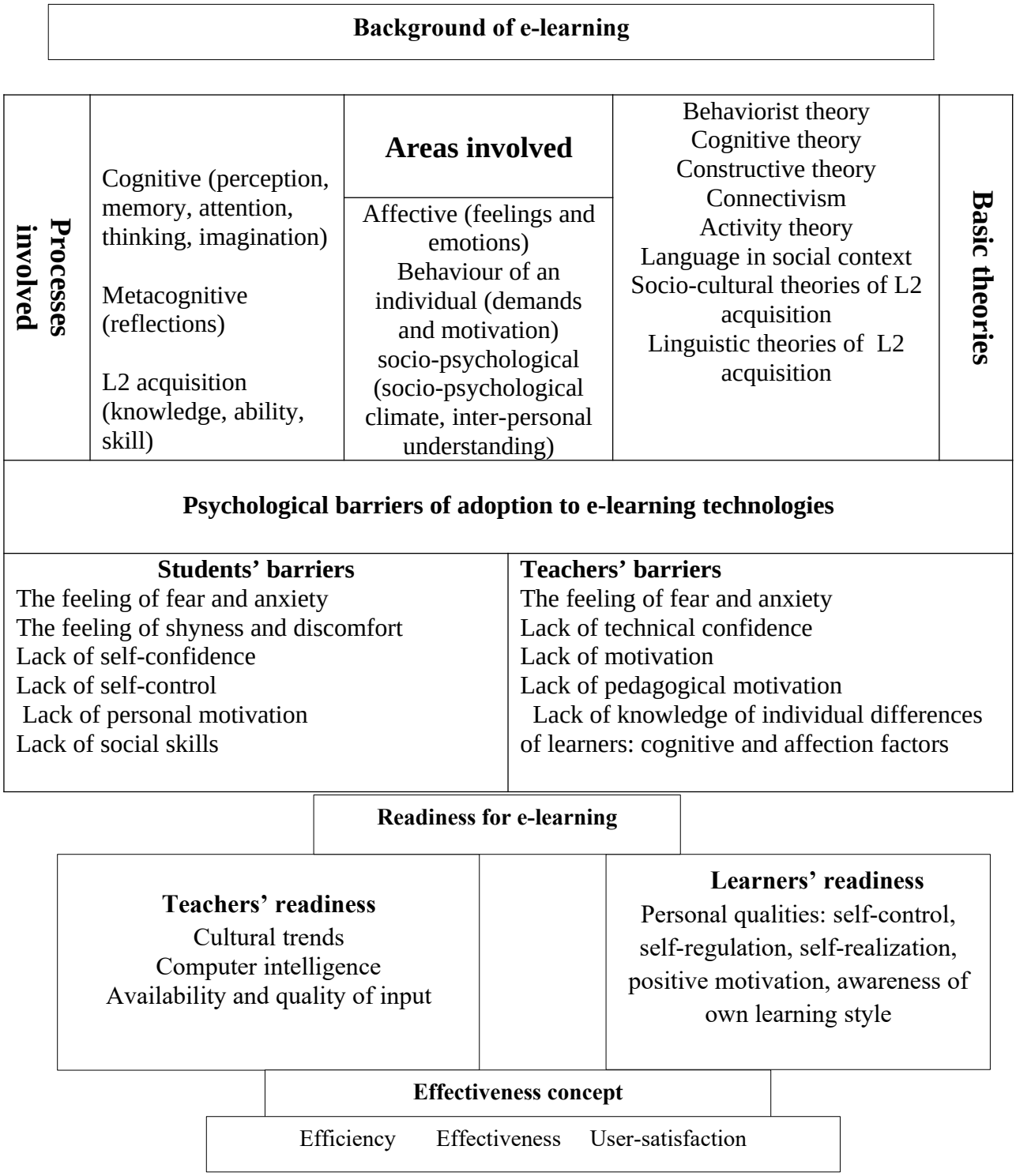

Fig. 1 Model of psycho-pedagogical conditions of effective e-learning

The first part of the model we build on the basis of theoretical analyses, observations of the existing psychological, linguistic and pedagogical concepts. As you can see in figure 1, the psychological background of e-learning consists of scientific theories, psycho-pedagogical processes and psychological spheres of an individual. Cognitive process includes the perception of a foreign language with all its elements, the ability of the individual to memorize exposed learning material, ability to attract and retain attention, development of thinking and imagination).

Metacognitive process includes teachers' reflections on the results of their teaching activity through students' abilities and skills assessment. It also includes students' reflections on the effectiveness and efficiency of the means of obtaining their knowledge and results.

L2 acquisition process should be directed on the development of main language activities: listening, speaking (monologs and dialogues), reading and writing. While teaching with the use of e-learning technologies for L2 acquisition, the teachers should always be aware of the deductive purpose of this use, strictly define what language activity is supposed to be developed, what skills and abilities will be improved, predict the results and feedback to what extend the purpose was realized.

The other part of the model is connected with the empirical research conducted among the students of the navigation department (30 students) and the lectures of Maritime English (10 teachers. We were researching the psycho-pedagogical barriers of the implementation of e-learning, teachers' and students' motivation of e-learning use.

Psychological barriers of e-learning technology implementation

Some of the largest psychological barriers to the adoption of e-learning technology include:

Students

1. The feeling of fear and anxiety. With so many education technologies relying on the internet for access to programs and systems, lack of internet access significantly hinders adoption.

2. The feeling of shyness and discomfort. It occurs in the case when a teacher asks to bring a device into the lecture room or gives a task based on some device and a student doesn't have it because of the financial component. Students without easy access to technology may fall behind, or they may feel shame or embarrassment by not being able to fulfill the task. Many low-income students don't have access to technology at home.

3. Lack of self-confidence. The stronger your learners' ability to be emotionally aware throughout the e-learning experience is, the better sense of control over their inner selves they gain, therefore the greater becomes their self-confidence to achieve their learning objectives.

4. Lack of self-control over one's emotions. Learners often feel frustration, boredom, and anxiety during difficult, dull, or disengaging e-learning assignments.

5. Lack of motivation. Self-motivation is the ability that we have to channel our motivation and drive to achievement. In eLearning, a strong sense of self-motivation on your learners' behalf means that they are able to generate positive feelings like enthusiasm, zeal, and persistence, in order to learn.

6. Lack of social skills. Social skills are the ability to relate to other people in a supportive way, by managing conflict. When learners are able to communicate and cooperate well with each other, they become more effective and produce better results.

Teachers

1. Lack of confidence. Even if teachers have access to learning technologies, they're not receiving the proper training to use these technologies. Tech training is especially important for teachers because many of them aren't digitally intelligent and may not have skills like most of their students have.

2. Lack of knowledge of individual differences of learners. Social psychologists say that learners of L2 with the common methods of teaching achieve different results. These differences occur due to individual differences. They divide the learners into two groups, the cognitive and the effective. To the cognitive factors the scientists refer intelligence, language aptitude and language learning strategies. To the affective factors social psychologists refer language attitudes, motivation and language anxiety. (R. Mitchell& F. Myles,1998)

3. The feeling of fear and anxiety. Fears and anxiety concern the technical options: The Internet may be disconnected during the process of teaching, the site you are going to use is not opening, exercise may be downloading longer than you expected, the students don't respond to the task you prepared not in the way you expected and many other cases of frustration students' behavior.

4. Lack of pedagogical motivation to implement e-learning such as

a) Lack of productive activity. Even given all the benefits of e-learning, one cannot deny there are some drawbacks. A good example of a disadvantage of online learning is that practical skills are somewhat harder to pick up from online resources.

b) Not always respond to learners' type. It's true that as individuals we don't all respond to one teaching method in the same way - some learn visually, and others learn with repetition or writing. E-learning responds to those different needs with the use of different types of material, whether that is audiovisual content or interactive testing on the go, there is a plethora of options to cater to the needs of each and every learner and in the end, help them learn online in a much more efficient way.

Recommendations to Maritime English teachers starting the use of e-learning technologies

1. A Learning Management System (LMS) is a software system that delivers courseware plus e-tutoring over the Internet. LMS should not be your starting point. LMS offers a large array of embedded tools that provide the ability to create, curate and enhance content. Also, the benefits of using a LMS include the all-in-one element which enables the user to create the platform (website) and the content all in the same space. But if you are only starting with e-learning and creating online courses is not your professional responsibility, try free opportunities. LMS is not the only answer, you can implement e-learning with other tools, not expensive (even free) and easy to work with. You should start by thinking about an appropriate instructional design that uses appropriate teaching strategies for various learning types. Use videos on Youtube, encourage your students to use online dictionaries, share learning material on social sites, give consultations by e-mails.

2. If you feel like conducting a webinar, start with Skype – it is free and you will experience the teaching on line. Now, teachers can connect with students virtually using a lot of virtual tutoring tools. In this way you will know how you feel while talking (teaching) in front of a cam, how you manage organizational issues and will get feedback from your students.

3. If you have collected enough material – create an e-book using easy for use software, such as Flipping Book. Your e-book must satisfy different learning styles, there for include links to videos, pictures, authentic texts. Don't forget to update your e-book every year.

4. Mind cognitive process. Information should be chunked to prevent overload during processing in working memory (Miller, 1956). To facilitate efficient processing in working memory, online learning materials should present between five and nine items on a screen. If there are many items in a lesson, their organization should be shown in the form of information

maps. Try free sites for making exercises, flashcards, tests, audio-material (e.g. www. quizlet) to make a small part of your lesson with e-learning technology)

5. Don't use e-learning chaotically. Make a schedule to establish an open line of communication with your students. Specify which means of communication you prefer and during which hours. The student will be aware that can receive the help or support that they need.

6. When you teach English for specific purposes (e.g. Maritime English, Technical English) and need to develop practical skills of speaking in professional environment, video will give you opportunity to build a real new dimension to your teaching methods. If your course content involves a level of practical skill, this can be demonstrated.

7. If you conduct lectures for distant learning, record your lessons. A video of the lecturer giving a lecture helps the students to feel interpersonal connection.

Conclusion

1. Successful introduction of e-learning to master a foreign language depends on linguistic and psychological factors. Mastering linguistic units of foreign language is conducted according to the general laws of foreign language teaching, whereas the introduction of new technologies is more related to psychological processes such as psychological readiness, motivation, and cognitive processes. We claim that understanding theoretical basis of e-learning technologies, psychological barriers and didactic opportunities of teaching with the use of electronic devices and the Internet will help Maritime English teachers improve their teaching competence.

2. The main contribution of our study is the finding of psychological barriers to effective adaptation to e-learning. We don't call them disadvantages but only barriers, which, as all barriers, can be eliminated or corrected therefore the psychological support is required for successful implementation of e-learning. Psychological barriers exist in both fields: students' learning and teachers' teaching process.

3. We have summarized the scientific opinions on the use of e-learning in the maritime industry and emphasize that the effectiveness of its use depends on the country (cultural aspect) and the student's learning style (human factor).

4. We offer practical recommendations to teachers of a foreign language who are just beginning to introduce this technology into the educational process. These recommendations are

the result of the psycholinguistic research of e-learning for L2 acquisition on the example of mastering Maritime English.

References

Alonso, F. et al. (2005) "An instructional model for web-based e-learning education with a blended learning process approach", British Journal of Educational Technology; Mar, Vol. 36/2, 217-235.

Hesham, H. (2003). Computer based training: a global survey of current developments and its application to maritime education and training. *Proceeding of IAMU 4th General Assembly*. http://iamu-edu.org

Kozma, R. B. (2001). Counterpoint theory of 'learning with media'. In R. E. Clark (Ed.), Learning from media: Arguments, analysis, and evidence (pp. 137–178). Greenwich, CT: Information Age Publishing Inc.

Mayer, R. E. (1998). Cognitive, meta-cognitive, and motivational aspects of problem solving. Instructional Science, 26(1–2), 49–63.

Mayer, R. E. (2003). Elements of a science of e-learning. Journal of Educational Computing Research, 29(3), 297-313.

Mangen, A, Walgermo, B R and Brønnick, K (2013). Reading Linear Texts on Paper Versus Computer Screen: Effects on Reading Comprehension. *International Journal of Educational Research* 58: 61–68, DOI: https://doi.org/10.1016/j.ijer.2012.12.002

Mitchel,R & Myles F. (1998). Second Language Learning Theories. New York: Oxford University Press.

Myrberg, C. & Wiberg, N., (2015). Screen vs. paper: what is the difference for reading and learning?. Insights. 28(2), pp.49–54. DOI: http://doi.org/10.1629/uksg.236

Pritchard, B. (2004). *A Survey of maritime English teaching materials: a report on the current state of the art* . Tokyo: International Association of Maritime Universities. http://iamu-edu.org

Sampson, H. and Tang, L. (2011) "New Shipboard Technology and Training Provision for Seafarers", Cardiff: SIRC, October, ISBN 1-900174-41-3.

Simmons, D. E. (2002). The forum report: E-learning adoption rates and barriers. In A. Rossett (Ed.), The ASTD e-learning handbook (pp. 19– 23). New York: McGraw-Hill.

Sternberg, R. J. (1998). Meta-cognition, abilities, and developing expertise: What makes an expert student? Instructional Science, 26(1-2), 127–140.

Stoop, J, Kreutzer, P and Kircz, J G (2013). Reading and Learning from Screens Versus Print: A Study in Changing Habits: Part 2 – Comparing Different Text Structures on Paper and on Screen. *New Library World* 114(9/10): 371–383, DOI: https://doi.org/10.1108/NLW-04-2013-0034

The Theory and Practice of online learning. Second Edition edited by Terry Anderson, first edition, 2004. Published by AU Press, Athabasca University.

Thorndike, E. L. (1913). Educational psychology: The psychology of learning. New York: Teachers College Press.

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Education for Sustainable Development and General Maritime English

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Abstract

The concept of sustainable development, which has become central to international discourse, is a key concern of the maritime industry and all of its sectors, including MET. The principles of education for sustainable development (ESD), including critical and systems thinking, and problem-solving mirror the competences largely expected to be required from future seafarers, who both contribute to and benefit from sustainable maritime development. Moreover, the learner-centred, collaborative pedagogical methodologies advocated in ESD reflect those strongly associated with English language classrooms in general, and Maritime English (ME) in particular. On that basis, the General Maritime English (GME) classroom provides excellent opportunities to develop the sustainability literacy of future seafarers, while developing relevant language and professional skills. This paper discusses the field of ESD and draws parallels to English language teaching in general and Maritime English in particular. It then suggests ways in which ESD content and pedagogies can be integrated into a General Maritime English classroom, to prepare seafarers for participation in a sustainable maritime transport system.

Keywords: *Sustainable development, ESD, GME, Content, Pedagogy, Learning outcomes*

Introduction

The concept of sustainable development has become central to the discourse and activities of governments, industries and organizations representing civil society, worldwide. In the maritime sector, the IMO recently announced “Sustainable shipping for a sustainable planet" as the World Maritime theme for 2020 (IMO, 2019), and affirmed the commitment of the organization and its member states to raising awareness and actively working toward the achievement of the United Nations Sustainable Development Goals (UNSDGs). The UNSDGs are relevant to all maritime sectors, and Goal 4, Quality Education, is of particular relevance to Maritime Education and Training (MET), with a target to “ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through Education for Sustainable development [ESD]…” (UNESCO, 2014). The principles

of ESD, including critical and systems thinking, problem-solving and lifelong learning mirror the competences largely expected to be required from future seafarers, who both contribute to and benefit from sustainable development goals. Moreover, the learner-centred, interactive ESD pedagogy reflects the teaching and learning approach strongly associated with ESL/EFL classrooms in general, and Maritime English (ME) in particular. On that basis, the General Maritime English (GME) classroom provides excellent opportunities to develop the sustainability literacy of future seafarers, contributing to the achievement of UN SDG 4, while developing relevant language and professional skills. This paper discusses the field of ESD and draws parallels to English language teaching in general and Maritime English in particular. It then suggests ways in which sustainable development principles and ESD pedagogies can be integrated into a General Maritime English classroom.

Overview of Sustainable Development and ESD

The concept of Sustainable Development grew out of widespread social and political concern about the negative impacts of human activity on the planet along with fears for the future if historical patterns of growth and development continued unchecked. The term was first coined in the report of the World Commission on Environment and Development (WCED), Our Common Future, and assigned the widely recognized definition: *"development that meets the needs of the present without compromising the ability of future generations to meet their own needs"* (Brundtland et al., 1987). The notion was further developed at the 1991 United Nations Conference on Environment and Development in Rio de Janeiro, and its three interconnected dimensions or economic, social and environmental pillars were defined. Following decades of work reaffirming and building upon global commitment and action toward sustainability, the 2012 United Nations Conference on Sustainable Development in Rio (Rio +20) launched the process that culminated, in 2015, with the adoption by all UN member states of the 2030 Agenda for Sustainable Development, including 17 Sustainable Development Goals. The achievement of the 17 Goals is widely understood to require multidisciplinary and transdisciplinary efforts across all sectors of government, industry and civil society.

On the back of Rio 20+, then IMO Secretary General, Koji Sekimizu, launched the concept of a "Sustainable Maritime Transport System". In the document's foreword, the SG highlighted the contribution of shipping in respect of the three pillars of Sustainable Development, noting that shipping contributes to world trade, economic growth and job creation while constantly striving to improve its environmental performance under the IMO's regulatory framework (IMO, 2013).

Further strengthening IMO's commitment to making shipping sustainable, the organization recently declared "Sustainable shipping for a sustainable planet" as the World Maritime theme for 2020. Secretary-General Kitack Lim pointed out that "The shipping industry, with the support of the IMO… has already started the transition towards this sustainable future", including measures to cut greenhouse gas emissions and enhance the participation of women (IMO, 2019). According to the IMO, shipping plays a role in all of the SDGs, but has a more direct connection to specific goals, including SDG 4: Quality Education.

Education is regarded as central to sustainable development. Indeed, Quality Education is both an SDG Goal and a cross-cutting means of achieving the other 16 goals. The concept of ESD is specifically referred to in Goal 4 target **4.7: "***By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development*". ESD is holistic and transformational education that addresses learning content, pedagogy and outcomes. It prioritizes the teaching of key content areas, such as those identified by the UNSDGs, through interactive, learner-centred teaching approaches, requiring a shift in focus from teaching to learning. According to Rieckmann (2018), "such pedagogical approaches are essential for the development of competencies vital for promoting sustainable development." In the following sections the three dimensions of content, pedagogy and learning outcomes will be discussed with parallels drawn to English language teaching theories and approaches, and suggestions will be made for the integration of ESD into General Maritime English classrooms.

Learning Content

Learning content addresses "what to teach" in order to develop learners' knowledge of sustainable development in an interdisciplinary way, addressing socio-cultural, environmental and economic perspectives. Sustainability covers a wide range of thematic areas and issues, ranging from local to global. The UN's Sustainable Development Goals identify 17 relevant topic areas that provide a jumping off point for ESD education. Appropriate locally and nationally relevant topics may be selected or added, and content should be updated to cover new emerging issues (UNESCO, 2017). Alternatively, selected topics may be integrated into existing courses to complement the curriculum. UNESCO has developed learning objectives for each of the 17 SDGs, including possible topics and pedagogical approaches. For example, the following is a partial list of topics suggested in relation to SDG 14, Life Underwater (UNESCO, 2017):

1. The hydrosphere: the water cycle cloud formation, water as the great climate regulator
2. Management and use of marine resources (renewable energy, wind turbines and their controversy)
3. Sea level rise and countries that will experience total or partial loss of land
4. The oceans and international law: international waters, territory disputes, flags of convenience and their related issues
5. Ocean pollutants: plastics, microbeads, sewage, nutrients and chemicals

Goal 14 is central to the IMO's work and to the shipping industry in respect of managing its impact on the marine environment. However, IMO has identified links between its work and the contribution of the maritime community to each of the 17 SDGs.

Sustainability content can be integrated into the General Maritime English syllabus given the flexibility of topics available in language education. Communicative language teaching (CLT) methodologies such as Task-based instruction (TBI) require that learners be involved in accomplishing something (eg/ a task) through the language, wherein learners are "exposed to and engaged in textually rich, genuine, meaningful communication in that language" (Taylor, 1983). To that end, task-oriented activities are frequently based around processing authentic, relevant and engaging content that connects the language classroom to topics and issues in the outside world and provides a framework for the development of language skills, grammar and vocabulary (Richards, 2006). When content is used as a medium for language teaching, students are provided with the opportunity to develop language skills while simultaneously becoming informed and reflecting on global and local issues. With that in mind, ESL/EFL professionals frequently integrate social and environmental issues into their teaching (eg/ Cates, 1990; Hauschild, Poltavtchenko & Stoller, 2012).t

Given the wealth of authentic resources available to GME teachers and the flexibility to select topics on which to base language learning activities, GME courses are ideally positioned for the integration of ESD content. By engaging with, investigating and discussing sustainability content and issues relevant to the maritime industry, future seafarers can increase their sustainability literacy, preparing them to be participants in a sustainable maritime transport system.

Pedagogy and learning activities

ESD is holistic and transformational education that requires learners to go beyond learning "about" sustainability issues to learn "for" sustainability. Learning "for" involves personal growth in respect of the attitudes, values, ethics and behaviours necessary to be a contributor to sustainable development (Leicht, Heiss & Won, 2018). These competences cannot be achieved through the traditional didactic approaches to education that are still prevalent in many higher education institutions. Therefore, a shift to pedagogies that prioritize learner-centred, action-oriented, collaborative learning is fundamental to achieving the outcomes of ESD. Cotton and Winter (2010) (Table 1) summarize the required shifts in thinking and practice for integration of ESD in higher education:

Table 1: Required shifts in pedagogy for ESD

From	To
Transmissive Learning	Learning through discovery (interactivity, collaboration)
Teacher-centred approach	Learner-centred approach
Learning dominated by theory	Praxis-oriented learning linking theory to experience
Emphasis on cognitive objectives	Emphasis on cognitive, affective and skills-related objectives.

Note: adapted from D. Cotton & J. Winter. (2010). It's not just bits of paper and light bulbs: A review of sustainability pedagogies and their potential use for higher education. In P. Jones, D. Selby & S. Sterling (Eds), *Sustainability Education*. New York: Earthscan

Learning activities for ESD encourage higher levels of cognitive learning and enable the active development of knowledge primarily through activities that promote learning by doing. The learners' previous experience and knowledge are the initial building blocks on which new knowledge is built (Reickmann, 2018). Specific activities noted in the ESD literature that enable active and experiential learning include role plays, debates and simulations that enable learners to see different perspectives on issues, understand their complexity and question dominant ways of thinking; stimulus activities, such as videos or texts to encourage critical thinking and discussion (Cotton &Winter, 2010); and problem-based and vision-building activities that stimulate problem-solving, decision-making and future orientation (Reickmann, 2018).

Readers familiar with language teaching pedagogies will note a parallel between the recommended ESD approaches and those widely used in ESL/EFL classrooms. Moreover, the paradigm shift toward communicative language teaching (CLT) that transformed second language pedagogy in the 1970s strongly mirrors the approach required for successful ESD as noted above. The transformation in ESL/EFL was predicated on criticism of the dominant teacher-centred approaches that centred around grammatical accuracy, such as Grammar-translation and Audiolingual method and their associated methodologies. Consequently, the adoption of new pedagogies that prioritized communicative over grammatical competence shifted the focus from what language is (eg/ grammatical structures) to how it is used.

Two core assumptions underpin CLT: learning is "facilitated when learners are involved in interaction and meaningful communication" (Richards, 2006) and "language is best learned when used as a vehicle for something else" (Taylor, 1983). This new way of thinking about language led to major changes in teaching approaches. Jacob and Farrell (2003) identified eight emergent values, including learner autonomy and the social nature of learning, curricular integration of English with other subjects, and focus on meaning and thinking, noting that "language should serve as a means of developing higher order thinking skills also known as critical thinking skills". Language learning activities changed from those promoting strict grammatical accuracy to ones that emphasise collaborative learning, such as role plays, debates, information gap activities, peer teaching and jigsaws, while the role of the teacher became that of facilitator. More recently Content-Based Instruction (CBT) and Task-Based Instruction (CBI) have become widely used by language teachers to provide opportunities for meaningful and purposeful interaction and critical thinking.

Maritime English instructors are well acquainted with the Communicative approach to language teaching. The developers of IMO Model Course 3.17, Maritime English, 2015 Edition, selected the Communicative Approach as the primary means of instruction based on the requirement of STCW that "seafarers are required to be competent in using English for professional purposes" (p. 109). Moreover, the model course describes and recommends task-based learning, active learning and pair and group work approaches along with communicative activities such as debates and role plays. Such approaches have been developed, demonstrated and practiced in IMO's Maritime English Instructors' Training Course (MEITC), and by numerous presenters at previous IMEC Conferences. On this background, the Maritime English classroom in respect of its pedagogical approaches and learning activities is compatible with the integration of ESD pedagogy.

Learning Outcomes

As a vehicle for transformational learning, ESD focusses not only on the cognitive domain (learning about sustainability), but on the socio-emotional and behavioural domains (teaching for sustainability). That is, it aims to develop skills, values and attitudes to enable learners to be responsible actors in the creation of sustainable societies (Rieckmann, 2018). To that end, it is considered the responsibility of educational institutions to support the development of key sustainability competencies. Reickmann (2018) reviewed the ESD literature, and found eight agreed upon key competencies, namely systems thinking competency; anticipatory (future-orientation) competency; normative competency; strategic competency; collaborative competency; critical thinking competency; self-awareness competency and integrated problem solving competency. In addition, communication skills were highlighted as an essential cross-cutting competency for dealing with sustainability.

Many of the key competences associated with ESD are closely aligned with those anticipated to be required from future maritime professionals in response to the industry's rapidly changing landscape. The International Association of Maritime Universities (IAMU) (2019), representing 67 high level member universities worldwide, developed a profile of the Global Maritime Professional (GMP). In light of the anticipated needs of the industry, evolving educational context and individual professional development needs of seafarers, The GMP is described as:

> *An individual who is a professional in the maritime industry and who is equipped with all the relevant technical competencies relevant to their specific operational role in the industry and as required by international requirements with high level academic skills including logical and critical thinking and who – in addition to their technical competency – exhibits a high level of professionalism and ethical behaviour, human relations skills, emotional intelligence and multicultural/diversity awareness and sensitivity. Such an individual exhibits significant leadership skill and is able to optimally work with teams and also take personal initiative. They* ***additionally exhibit a high sense of environmental consciousness and the need for sustainable practices and have an excellent grasp of contemporary issues affecting the maritime industry*** (p. viii).

The description refers to knowledge, skills, attitudes and behaviours to be developed within the MET context and suggests the need for a paradigm shift to align MET curricula and pedagogies with the new vision of the maritime professional and to achieve transformational education. This can be an opportunity to integrate ESD with its transformative vision into

maritime education, with the GME classroom as a potential entry point in light of its compatibility with ESD content and pedagogy as discussed in the previous two sections.

Many of the competences described have relevance to the GME classroom. Communication and collaboration are clearly defined learning outcomes of language learning, including GME. In addition, while perhaps not specifically stated in language course learning outcomes, critical thinking is an overarching requirement in most higher education institutions. Moreover, many ESL/EFL researchers consider critical thinking necessary for communicative language learning and believe that the development of critical thinking skills plays a central role in language education (eg/ Jacobs and Farrell, 2003; Correia, 2006; Iakovos, 2011). Finally, CLT approaches and learning activities, such as those discussed in the previous section naturally develop critical and holistic thinking, and collaborative and problem-solving skills even when such competences are not the intended learning outcome. Critical skills and sustainability literacy developed in the GME classroom will be transferable to other MET courses and can enable trainee seafarers with skills for "green jobs" (UNESCO, 2019) and for participation in sustainable development. The following section presents suggestions for the integration of ESD content and pedagogy in GME classrooms for the attainment of learning objectives applicable to the education of maritime professionals.

Suggestions for integration of ESD in GME classrooms

1. Enable self-directed learning by giving learners more freedom in selecting topics and issues relevant to themselves and their local contexts for consideration in the GME classroom. These topics can be the basis of projects, presentations, discussions or debates, with a view to connecting personal experiences and local issues with global issues.
2. Provide opportunities for self-directed learning for sustainability literacy through social media and internet. Maritime English Teachers may not be experts on sustainability topics but can learn alongside students in activities that promote investigation and discovery.
3. Create opportunities through role-plays and scenarios to expose students to different perspectives on maritime issues. Eg/ Instructors in the World Maritime University (WMU)'s English and Study Skills Programme held a stakeholder working group on the topic of ship recycling whereby students represented various stakeholders in a meeting to present issues and negotiate toward agreed upon measures.

4. Introduce thematic units in which students focus on different sustainability themes or issues in the maritime field and explore the issue through language learning activities. For example, lecturers at WMU created a thematic unit on ballast water, considering environmental, social and economic perspectives on the issue through critical reading, listening, discussion, presentation, grammar and vocabulary activities.
5. Promote cross-curricular engagement by encouraging students to consider, discuss, and/or write about the social, environmental and economic dimensions of content areas from their other classes from the perspective of sustainable development. For example, ask students how different disciplines within the maritime field would approach or be interested in the topic of autonomous shipping.
6. Introduce stimulus activities (Cotton & Winter, 2010) such as videos, photos or texts pertaining to maritime sustainability issues to provoke reflection and discussion. Teachers can further stimulate critical thinking by posing questions such as "What is the source of the video / text?"; "Whose viewpoint is it?"; "Is there another perspective"?
7. Invite colleagues from different disciplines to give short lectures on maritime issues. For example, Lectures in WMU's English and Study Skills programme have invited colleagues to lecture on topics such as ballast water, maritime energy management and gender issues in the maritime sector. These lectures are not only an opportunity to practice listening skills, but also contribute to sustainability literacy. The lectures can further form part of a thematic unit or be used as a stimulus activity.
8. Grammar can be taught with a sustainability, for example, teaching past, present, and future tenses (Cates, 2005) becomes more meaningful when students study and practice them in relation to maritime issues, for example the evolving role of women in the maritime industry.
9. Introduce activities that stimulate the development of socio-emotional and behavioural domains in addition to the cognitive domain. Reflexive accounts, for example, "provide opportunities for students to reflect on personal roles, attitudes and responsibilities in relation to sustainability issues" (Cotton & Winter, 2010).

Conclusion

Education for Sustainable Development is holistic education for the transformation of society toward sustainable development. Its aim is to promote sustainability literacy across all

disciplines and levels of education while simultaneously developing key competencies, such as critical and holistic thinking, problem-solving and future orientation, to enable sustainable development. To achieve these outcomes, ESD requires interactive, student-centred, interdisciplinary pedagogies. Accordingly, it addresses the content, pedagogical and learning outcome dimensions of education. This paper has shown that the General Maritime English context is compatible with the integration of ESD in all three dimensions in respect of its flexibility in content, prevailing pedagogies and resulting learning outcomes. Through the declaration of the 2020 Maritime theme, "Sustainable shipping for a sustainable planet", the IMO has affirmed its commitment to work toward sustainable development and the related SDGs. Achieving this vision requires the participation of all maritime stakeholders, including seafarers equipped with key sustainability competences. While achieving success in ESD requires whole institution involvement, integrating an ESD approach in the GME classroom is a small step in the sustainability direction.

References

Brundtland, G. H., Khalid, M., Agnelli, S., Al-Athel, S., & Chidzero, B. (1987). *Our Common Future: Report of the World Commission on Environment and Development*. New York: United Nations.

Cates, K.A. (2005). Teaching for a better world: Global issues and language education. *Human Rights Education in Asian Schools*, 41-52.

Correia, R. (2006). Encouraging Critical Reading in the EFL Classroom. In *English Teaching Forum*, 44 (1).

Cotton, D. & Winter, J. (2010). It's not just bits of paper and light bulbs: A review of sustainability pedagogies and their potential use for higher education. In P. Jones, D. Selby & S. Sterling (Eds), *Sustainability Education*. New York: Earthscan Hauschild, S., Poltavtchenko, E., & Stoller, F. L. (2012). Going Green: Merging Environmental Education and Language Instruction. *English Teaching Forum*, 50(2).

Iakovos, T. (2011). Critical and creative thinking in the English language classroom. *International Journal of Humanities and Social Science*, *1*(8), 82-86.

International Association of Maritime Universities (IAMU). (2019). Global Maritime Professional Body of Knowledge. Tokyo: IAMU.

IMO. (2013). World Maritime Day: A Concept of a Sustainable Maritime Transport System. Retrieved from: http://www.imo.org/en/About/Events/WorldMaritimeDay

IMO (2015). *Model Course: 3.17 Maritime English, 2015 edition*. London: IMO.

IMO. (2019). World Maritime theme for 2020: "Sustainable Shipping for a sustainable planet".

IMO Briefing 17 23/07/2019. Retrieved from http://www.imo.org/en/MediaCentre/PressBriefings/Pages/17--world-maritime-theme-for-2020.aspx

Jacobs, G. M., & Farrell, T. S. (2003). Understanding and implementing the CLT (Communicative Language Teaching) paradigm. *RELC Journal*, *34*(1), 5-30.

McKeown, R., Hopkins, C. A., Rizi, R., & Chrystalbridge, M. (2002). *Education for sustainable development toolkit*. Knoxville: Energy, Environment and Resources Center, University of Tennessee.

Nunan, D. (2004). *Task-based Language Learning*. Cambridge: Cambridge University Press.

Richards, J.C. (2006). *Communicative Language Teaching Today*. New York: Cambridge University Press.

Rieckmann, M. (2018). Key themes in Education for Sustainable Development. In A. Leicht, J. Heiss, & W.J. Byun (Eds), *Issues and trends in Education for Sustainable Development* (pp. 61-85). Paris: UNESCO.

Taylor, B.P. (1983). Teaching ESL: Incorporating a communicative, student-centred component. *TESOL Quarterly*,17(1).

UNESCO. (2014). *Roadmap for Implementing the Global Action Programme on Education for Sustainable Development*. Paris: UNESCO.

Wals, A.E.J., & Kieft, G. (2010). *Education for sustainable development: Research overview.* Stockholm: SIDA.

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A Professionally Oriented Language Project as a Means of Forming a Trainee Seafarer's Language Competences in the Course of Maritime English

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Abstract

Communication is an inseparable part of navigators' professional activity and a compulsory condition of vessels' safety, prevention of marine environment pollution, fulfillment of international and national legislation in the field of marine transport, as well as organization and management of sea transport traffic involving international mixed crews. A professionally orientated project has proved to be one of the most effective methods of developing navigators' professional abilities and skills in the course of Maritime English taught at Admiral Ushakov Maritime State University since it enables deck cadets to model quasi-real professional situations reflecting the variety of professional topics related to the navigator's professional activities and practice Maritime English trying to solve the corresponding professional tasks.

Keywords: *real-life situations, language competence, intercultural competence, educational tool.*

The tasks of the project aimed at developing seafarers' professional competences

The professionally orientated project provides the development and reinforcement of seafarers' language competences understood as an ability to communicate efficiently in professional and social areas using Maritime English fluently as a language of communication at sea.

The challenge of acquiring Maritime English for foreign students is obvious. While native English students of nautical departments simply study maritime subjects without having to overcome the difficulties of mastering the grammatical, word-forming and phonetic specificity of the English language in general, foreign maritime students need to learn practical grammar, general vocabulary and structure through the prism of maritime use. The educational tool under discussion serves to equip maritime students with the language resources for both general and specified use. Its advantage is flexibility that enables foreign maritime students to practice the English language in quasi-real situations which require verbal communication onboard.

The project also involves the embedding of public speech skills with future ship officers as well as readiness to provide operational documentation on board a vessel. By accomplishing the project tasks cadets are offered the opportunity to master the international standard Maritime English necessary to fulfill their professional duties and manage an international crew.

It is essential to emphasize that the project enables the instructors at Admiral Ushakov State University to maintain cadets' language competence in compliance with the requirements of STCW 1978 as amended (2010), SOLAS -74 chapter 5, IMO Model Course 3.17 Maritime English (2015). The topics for the project are conditioned by compulsory standards of competence provided by these documents.

It is common knowledge that the project method in general is aimed at the development of students' cognitive skills, the ability to independently construct their knowledge, navigate the information space, and develop critical thinking. The competencies that are formed and further consolidated in the course of shipboard training practice are a blend of language professional maritime and intercultural competencies.

Professional competence, in this article, is understood as a level of professional background knowledge with a sufficiently large number of value standards in a certain field of knowledge obtained as a result of semantic processing of information from corps of authentic foreign language texts representing a professionally oriented format of education. The linguistic professional maritime competence implies knowledge of Maritime English at the level of everyday professional communication as well as understanding professional maritime terminology. The method of the professionally oriented project enables maritime students to master:

- grammar rules of the English language;
- essential lexical inventory of general and terminological nature;

- methods and techniques for selecting language material in accordance with various purposes of verbal communication;
- ways of establishing linguistic connections between languages;
- main methods of summarizing and translating professional maritime publications.

As our experience has shown this method may also be used to shape cadets' intercultural competence while teaching the course of Maritime English. It provides cadets with an opportunity to project their pragmatic, linguistic, social and psychological strategies in situations where they have to of solve typical or specific professional problems on the basis of their own and foreign culture awareness. By means of this tool they are trained to interpret both their communication partners' cultural diversity and individual emotional and psychological features.

The intercultural competence is considered to be an integral component of the modern training program of the future seaman as an intercultural aspect in seafarers' professional work involves the interaction of representatives of different cultures. It promotes mutual understanding in the course of intercultural communication. However, there is still substantial controversy on the concept of intercultural competence.

Most foreign scholars define intercultural competence as an ability to reach an equally successful understanding of both representatives of other cultures and representatives of one's own culture. According to Wiseman (2001), for example, there are three components in this kind of competence: awareness of models and communicative actions and their interpretation in one's own culture and in a foreign culture; general awareness of relations between culture and communication comprising distinctive features of national mentality; a set of tactics aimed at achieving communication balance.

The majority of Russian scholars define intercultural competence as possessing habits, customs, traditions and social standards which form individual and group norms. Kurkina (2015) defines it as a form of behavior incorporating non-verbal components (facial expressions and body language), national-cultural traditions and systems of values. Considering the intercultural competence as a system of values it is natural to suppose that intercultural training should involve teaching students tolerance of the diversity of other cultures. Bardilovskaya (2014) characterizes the intercultural competence as a person's ability of self-realization in the context of the cross-cultural dialogue. According to the author this ability consists of three components:

- pragmatic (foreign language practical skills);
- cognitive (awareness of one's own and foreign cultures);
- affective (empathy and tolerance).

The presented theoretical insight has enabled us to conclude that the educational means of the language professionally oriented project is aimed at building language maritime professional and intercultural competences simultaneously.

Concept and structure of the professionally oriented project

The professionally oriented project involves a cadet's modelling real-life situations on board within a definite topic in the course of preparation for their first shipboard training practice which is done after the fifth academic term. This educational means involves cadets in solving a professional dilemma preceded by their analysis of all possible scenarios and the drafting of a language inventory in the form of glossaries, term bases and lists of recommendations for future use. The main features of a professionally-oriented project that distinguish it from other types of educational activities applied at Admiral Ushakov Maritime State University are its innovative nature, the narrow focus of a specific professional topic, the focus on modelling professional activities, applied character and availability of the final product.

The inventory of the project's practical tasks include a variety of topics in potential communicative situations such as pilotage, mooring, cargo operations, emergency drills, shifting, bunkering, oil spill response drills, communication with shore services, vessel safety and security drills, etc. Projecting the above-stated communicative situations of professional activities involves the description of several consecutive steps which allow the drafting of communicative formulae applicable in situations corresponding to the project topic and assume the generalization of the strategies which can be applied by seamen while performing professional duties in the context of the project topic.

This activity involves the description of the following basic stages:

Stage 1 involves analyzing publications on a project topic relating to a perspective communicative situation where possible sources of cultural discrepancies can arise.

Stage II includes selecting basic lexical units of Maritime English including the corresponding terminology and IMO phrases.

Stage II1 implies the systematization of grammatical structures of the English language potentially involved in modelling texts related to the project topic.

Stage IV means developing communicative formulae applicable in situations corresponding to the project topic while taking into account intercultural discrepancies.

Stage V assumes the generalization of the communicative language strategies which can be applied by seamen while performing professional duties in the context of the project topic in a mixed crew.

It is necessary to stress that the project contains research elements. Most essentially, it involves obtaining a specific language product as a result of the project.

Structurally, the project consists of analytical and practical components. The introductory part contains the wording of the project relevance, its goals, objectives, methods, grounding of the analytical and practical significance of the project result, description of the expected results and project performance outcome. The analytical part contains the project realization plan, an analytical review of the expected professional issue, including a brief analysis of the problem.

The main results of the project are revealed in the practical part which includes the grounding of the main analytical provisions worded by the author of the project, or a detailed description of the solution to practical tasks. In case of possible cultural discrepancies the author's approach to the solution to the problem must be specified.

The practical component involves the selection of basic lexical units, including terminology and standard IMO Standard Marine Communication phrases related to the issues of the project, the compilation of an electronic terminology database, the systematization of grammatical structures potentially involved in modelling texts on the topic of the project, the establishment of grammatical cross-language correspondence used in a specific professional communication situation relevant to the topic of the project, a synthesis of language strategies necessary when achieving professional communication goals and the presentation of the results.

It is evident from the description of the project structure that a plan of its realization is mandatory. The analytical review reflects the basis for the development of a certain algorithm of professionally determined operations. Unlike the analytical part the practical part is a detailed description of the verbal communication strategies and tactics proposed by the author for real onboard situations.

Cadets present their language projects directly prior to the commencement of their shipboard training practice. The structure of their presentation is shown in Figure 1.

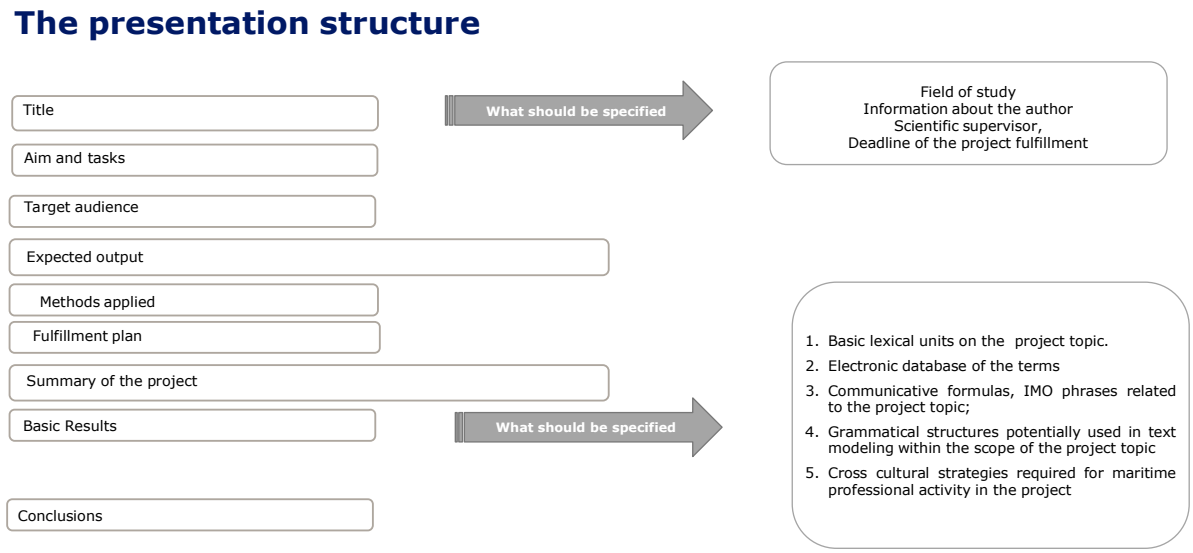

Fig.1 The structure of the presentation for the professionally oriented project

While presenting their projects cadets also offer a specific language product, for example, bridge guide procedures, a video clip or recommendations, and also, participate in a professionally-oriented role play which serves as a sample of their professional activity in the form of, for instance, a VHF communication, pilotage, mooring and towing operations, conference report, etc. Figure 2 below shows a sample of a tangible professionally-oriented project result presenting website text resources delivered by a cadet [fig.2].

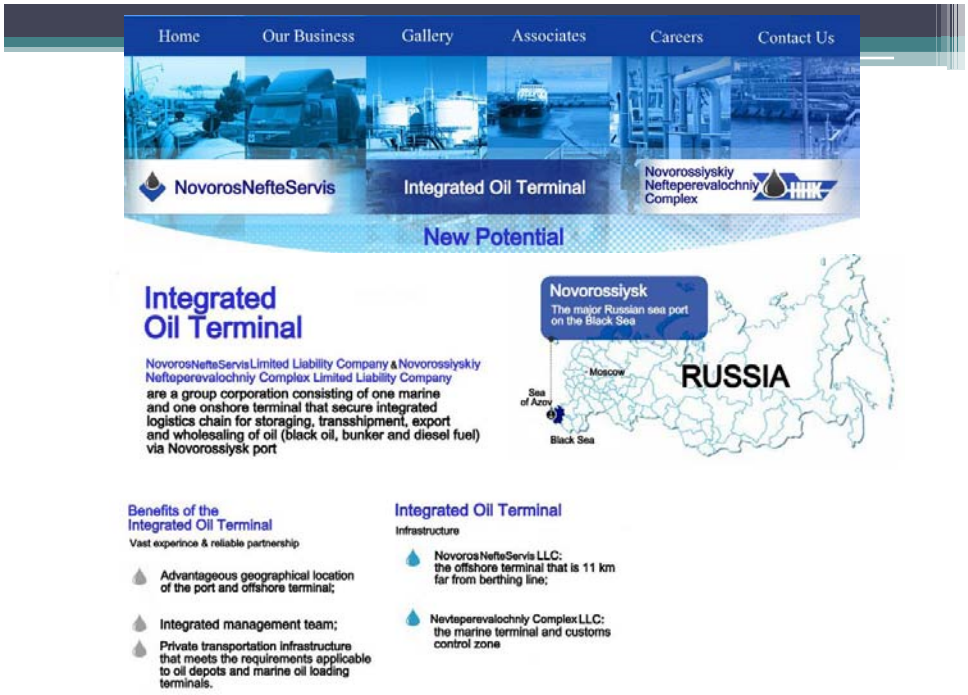

Fig.2 The sample of a tangible professionally-oriented project result

It is important to note that the places selected for cadets' practical training are chosen before the start of the project, which allows immediate use of the results of project activities during the students' shipboard training practice. The professional orientation of this training method is manifested in projects topics, for example,

1. Pilotage and mooring operations in Novorossyisk Port water area.
2. Emergency situations at sea.
3. Emergency drills in the Black Sea sailing area.
4. Cargo works in the oil terminal "Sheskharis".
5. Ensuring ship security in a port.
6. Legal issues of regulating labor relations on board ship: types and contents of contracts.
7. Documents preparation for handling containerized cargo.
8. Modelling a seafarer's professional activities when preparing for a watchkeeping.
9. Modelling a seafarer's professional activities in preparing for altering a passage plan.
10. Modelling a seafarer's professional activities in preparing for berthing and anchoring.

Results

The application of the professionally oriented project in the Maritime English language course has proved that this method provides cadets with specific skills and abilities, allowing them:

- to build up their knowledge on their own;
- to navigate the actual information space;
- to analyze and select the appropriate lexical and grammatical units;
- to cooperate verbally with representatives of foreign cultures whilst considering values, norms and conception diversity;
- to maintain a positive team spirit in a professionally focused dialogue in English;
- to demonstrate communicatively appropriate patterns of verbal behavior in a mixed crew.

The method of the professionally oriented project has been tested in the course of experimental training. It included a diagnostic assessment of cadets' language awareness, the experimental integration of the project in the Maritime English language course at the English Department of Admiral Ushakov Maritime State University and a final assessment of cadets' language competence at the end of the course prior to the commencement of the shipboard training practice.

At the final stage, cadets were given a series of real-professional life scenarios in which they were to apply the acquired language and intercultural knowledge and skills while making decisions leading to a successful communicative outcome. The situations were identical to the situations of the initial assessment. The results of the final control have elicited cadets' improved language awareness as one can see in fig. 3.

The diagram presents cadets' significantly increased language competence after fulfilling the professionally oriented language project. The experiment has shown that the professionally oriented project is an effective vehicle to build up maritime students' preparedness for routine operations and emergency situations at sea.

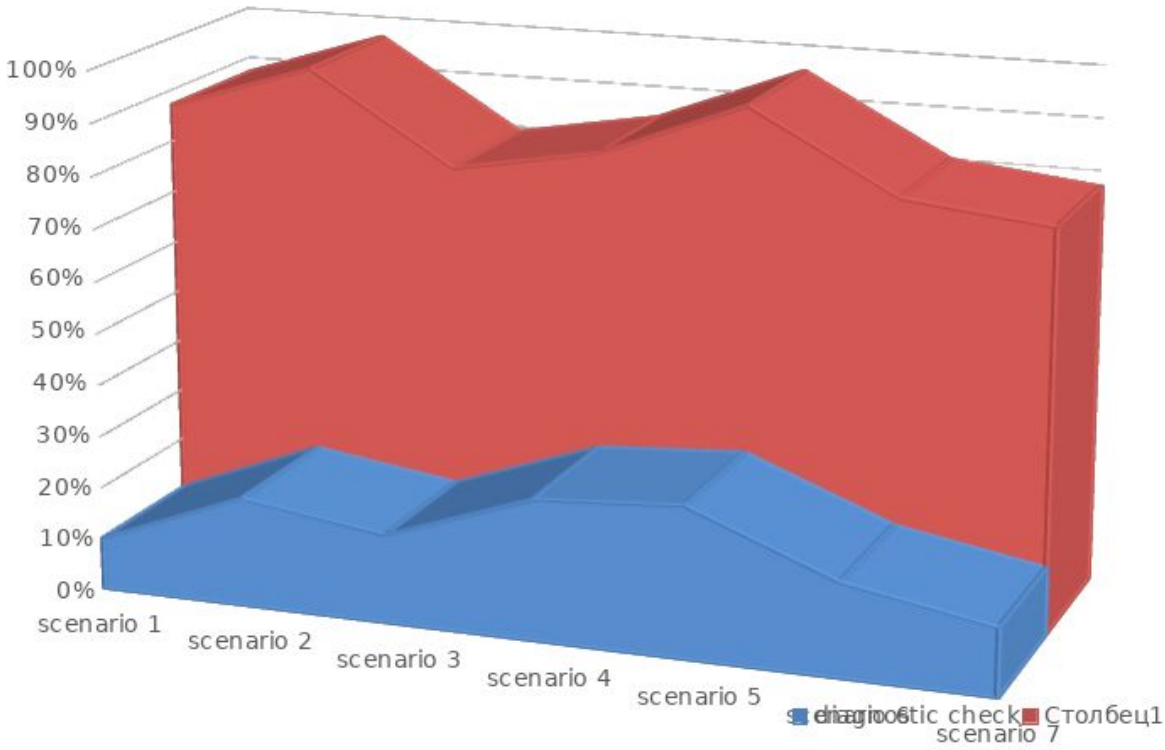

Fig.3 The diagnostic and final assessment results compared

Conclusions

By way of conclusion it is necessary to emphasize that the professionally oriented language project is a creative instrument to train and reinforce Maritime and General English skills with maritime students. It allows them to develop their creative potential in their professional field and motivates them to make more effort into the study of Maritime English. Additionally, modelling verbal communication in a mixed crew in situations of professional interaction on board and ashore promotes intercultural competence development.

It is valuable that within the framework of the language professional competence this tool allows one to form the ability to apply methods and means of cognition, training, and self-control, the ability to critically evaluate one's strengths and weaknesses, and the willingness to constantly develop oneself, whilst improving one's skills and mastery.

This tool has proved to be beneficial since, on the one hand, it can tackle the problem of consolidating and using the abilities necessary for carrying out linguistic activities, and on the other hand, it consolidates the skills of searching and processing information, whilst working with various specialized linguistic tools.

The educational tool described in this article can be successfully applied at language departments of maritime educational and training (MET) institutions since it encourages creative cooperation between cadets and supervisors and develops students' critical and independent thinking. It is hoped that this method of professionally oriented project can contribute to studies of issues related to the area of the human element in navigation.

References

Bardilovskaya, S. and Pakhirko, V. (2014). Intercultural Competence Building. *Management in Social and Economic Systems*: XXIII International Scientific-Practical Conference, Minsk, 15 May 2014– pp.195-196.

International Convention on Standards of Training, Certification and Watchkeeping for seafarers, 1978, as amended. London, UK: IMO

Kurkina, A. (2015) *Methods of intercultural competence developing in teaching foreign cultures' modern press discourse*. Moscow. Moscow State Linguistic University.

International Maritime Organization. (2015). *Model Course 3.17 Maritime English 2015 Edition*. London, UK: IMO

Wiseman, R.L. (2001). Intercultural communication competence. Retrieved December 11, 2001 from http://commfaculty.cullerton.edu/rwiseman/ICCCpaper.htm

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The Use of Simulators in Maritime English Teaching

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Abstract

In 2017 the institute that offers Nautical studies moved from the main university building to a new building that also houses a number of companies in the maritime sector (i.e. Rolls Royce, Inmarsat and GMC Maritime among others). This gave the students taking the BSc in Nautical studies in NTNU in Aalesund access to a number of new simulators on a daily basis. In particular, the Kongsberg Polaris navigation simulator, which comprises five bridges and one control room and is run by the institute itself. This simulator sits right next to student classrooms and students become familiar with this from their first semester onwards. This gave us, the Maritime English (ME) teachers, an opportunity to start integrating the use of simulators into the third semester ME course. There is more than one justification for doing so: students carry out tasks for courses in navigation, communication, dynamic positioning, meteorology and oceanography among others. This work is done through English. The study program emphasizes that the use of simulators is an essential part of the program.

However, teaching in simulators also presented some challenges for us as teachers. For example, technical (which was related to another challenge – manpower in the form of assistants), materials, and assessment. It also raised an important question: should the simulator be used for teaching ME, or should ME be taught for use in the simulator? Over the last two presentations of ME (2017 and 2018) when we had access to the new simulator, we have been adapting and developing how the simulator and ME interact.

This paper presents the processes that we, the teachers, the Maritime English course, and the students are undergoing as a result of our decision to make use of simulators using our own field notes, conversations with teachers from other courses in the BSc program as well as student reflections collected after each simulation session throughout the one semester ME course.

Introduction

Simulators are a common and important feature of training students in maritime education programmes and their use is based on the assumption that students need realistic and practical experiences that help to prepare them for the world of work (Cui, 2010; Popescu, Varsami and Tromiadis, 2013; Stan, 2014). Within foreign language teaching and learning, it has long been understood that engaging in realistic situations and interactions contributes to effective language learning. Common language teaching methodologies such as communicative language learning, the direct method and task-based learning, all of which have been used extensively in the language classroom over recent decades, are underpinned theoretically by this. Within Maritime English (ME) training, activities that mirror a student's future working environment are assumed to be effective (Nadrag, Bizarna-Tihenea and Stan, 2013), while Løhre (2017) found that students learned SMCP phrases more effectively during ME simulator sessions. Simulators are therefore not only useful tools for navigation and operational training, but also in teaching Maritime English. New technologies, particularly those that focus on augmented or virtual realities have already been adopted within language teaching for their ability to combine language learning with situations encountered in the real world (Scrivner et al, 2019) and provide students opportunities to understand and contextualize their learning for specific work environments (Arnó-Macià, 2012).

In spite of the necessity of using simulators in maritime training and education, simulator sessions are bound by several considerations, such as technology, access, knowledge, manpower, among others. These considerations may have an impact on the effectiveness of the sessions. While the Maritime English (ME) course we run at NTNU, Aalesund has been part of the curriculum for many years, our decision to use simulators in the course was not an easy one to act upon for the reasons mentioned above.

In this exploratory paper, we first describe our situation at NTNU, Aalesund: the Maritime English course, the students and the simulators. We then look at justifications for using simulators in ME teaching, as well as considerations for doing so. We then discuss the challenges we faced, how these affected our use of simulators, and how students reported their experiences through reflective texts written after the two first ME simulator sessions.

The Maritime English Course

The Maritime English course at NTNU in Aalesund is a 5-credit course that belongs in the third semester of the BSc in Nautical studies of the Department of Ocean Operations and Civil Engineering. We have developed it over the last few years, from being a course comprising mainly of traditional lectures, to becoming a student-centred course with students engaged in different activities every session. The activities vary, but one goal is to engage the students in discussions or presentations every class, as talking in English seems to be a great barrier for many of them even though their English is at a relatively high level.

Students

Our class normally consists of 35-40 students between 20-25 years. Most of them are men while 10-20 % are women. Their nautical experience varies, but many have completed their national service with the Navy and are now interested in pursuing a career at sea. Some have informal experience with life at sea, while a small number are inexperienced. Overall, the groups are fairly homogenous and disciplined; attendance is obligatory. They also share a common goal of pursuing a career in the maritime sector.

The simulators

In 2017, the Department of Ocean Operations and Civil Engineering moved from the main university building to a new building that also houses a number of companies in the maritime sector (i.e. Rolls Royce, Inmarsat and GMC Maritime among others). This gave students taking the BSc in Nautical studies in NTNU in Aalesund access to a number of new simulators on a daily basis. In particular, the Kongsberg Polaris navigation simulator, which comprises five bridges and one control room and is run by the department itself. This simulator sits right next to student classrooms and students become familiar with this from their first semester onwards.

This gave us, the ME teachers, an opportunity to start integrating the use of simulators into the third semester ME course. There is more than one justification for doing so: students carry out tasks for courses in navigation, communication, dynamic positioning, meteorology and oceanography among others. This medium for all this work is English. The description of the study program emphasizes that the use of simulators is an essential part of the program. “By using simulators, you experience the consequences of your decisions and actions. Thus, you acquire both skills and understanding” (NTNU, 2019).

Using simulators in Maritime English Teaching

There has been little work done on how simulators are used in ME courses, nor how students' ME needs might be best served through the use of language training in a simulator. Read and Dobbs (2016) suggest that as for other ESPs, particularly within the business sector, the wider needs of the maritime industry for ME require similar training methods such as task-based role-plays, simulations, reflection and developmental feedback. They also emphasise the importance of English for intercultural communication within the industry. Popescu, Varsami and Tromiadis (2013) see bridge simulators as a place to practice communication in a setting that emulates reality and calls for work to be done on how to properly implement an ME syllabus into a simulated environment. They suggest that communication within an ME environment comprises also "understanding cultural differences; Situational awareness; Close loop communication; Briefing and debriefing; and Communication procedures" (p.254). This is supported by James et al (2018), who highlight the need for better use of new technologies (including simulators) in creating authentic activities and assessments as well as further research to provide evidence for the greater success of these in teaching and learning than traditional teaching situations.

Some scholars have considered the boundaries of simulators as a learning environment. Sellberg (2018) points out that simulator technology in itself does not teach students how or why they should be carrying out a particular task and in this respect the simulation goes far beyond the limits of the simulator. John, Noble and Björkroth (2016) go as far as to suggest that the environment of a simulator does not always produce the kind of interaction and decision making required on the bridge of a vessel. It is clear that being in a simulator is not the same as being offshore, so the simulator is important as an alternative to offshore experience rather than a replacement. John, Noble and Björkroth's study also highlights the fact that the technological capacity of a simulator is only one aspect of the simulation.

It is clear that there are several factors with the potential to activate learning during a simulation. In sociocultural learning theory (SCT), Davin and Donato (2013) say that learning processes are activated through learner interaction in small-group work as well as through language as mediation. They suggest that language interaction includes interacting with oneself as well as other people where that interaction allows planning, coordinating and reviewing actions. This seems particularly apt for this situation because learning can be understood as occurring through students' participation in a particular social context. In this case, the context is that of a bridge and/or a simulator bridge. This context shapes the symbolic tools (Vygotsky

cited in Lantolf, 1994), such as language, as well as the physical tools (e.g. the simulator, the virtual world of the task) that are necessary to complete a simulator task. These tools are also shaped by the context. The actors involved mediate these tools.

Davin and Donato (2013) suggest that mediation, as a key element within SCT, leads to a learner's being better able to carry out a specific task, but also results in "a qualitative transformation of the structures of one's mental functioning" (p.7). This means that learners develop a conceptual understanding of how elements such as language relate to the context. A key mediator within the context of the simulator bridge is the teacher or instructor. In terms of actual learning within a simulator, instructors and the quality of the instructors are of much importance (Cui, 2010; Sellberg, 2018). An instructor must have the ability to create relevant activities that are within the scope of the technology and then use these activities to achieve learning outcomes. The teacher is vital in helping students to see the events within the simulation in "professionally relevant ways" (Sellberg, 2018, p.51).

Simulators can be rich learning environments and are likely to be so when it comes to language learning because simulator tasks can be realistic and encourage interaction through small-group work. Through using simulators, students develop an understanding of the context of the simulator bridge within their training and for their future workplace, although when it comes to Maritime English, there appears to be a need to explicitly integrate simulator use into ME training making language a clear part of this context. This cannot be done without teachers, and these teachers have to be part of the language context of the bridge simulators rather than part of only the language context or only the technological context.

The practical challenges

Staffing

One practical challenge for us (well known in the field of ME teaching) is that we come from the field of teaching and not from the Maritime sector (Cole, Pritchard, and Trenkner, 2007). Thus, our knowledge of the technical aspects of the use of simulators is limited. As Sellberg (2018) argues, it is vital to the learning outcome to have competent instructors facilitating the simulation. That means that in order for us to run a simulation with our students we depend on staff from the nautical department to set everything up and man the control room for the entire time the simulation runs, normally 4-5 hours. As there are four to five bridges running

simultaneously, experience has shown that it is necessary to have two people manning the control room. Thus, the activity itself is fairly labour intensive.

This challenge is intensified by the fact that we do not work at the Department of Ocean Operations and Civil Engineering, but rather at the Department of International Business. As we are not insiders in this department, we do not feel we have the authority to make demands.

Another challenge we have met is in regard to material. How do we find and use teaching material that can provide a meaningful learning session for the students? As Popescu, Varsami and Tromiadis (2013) argue, meaningful communication is created in an environment where appropriate learning material is an important factor. Again, we require the help of colleagues from the Department of Ocean Operations and Civil Engineering to provide us with background information on relevant scenarios and to program these scenarios.

Timetabling

The simulators are an invaluable resource for a department that teaches nautical science. In addition to the students' use of these at both bachelor and master's level, the simulators are hired by different groups and companies for staff training. The department welcomes this, as it generates income as well as an increased reputation.

This means that between the courses scheduled and the external groups using the simulator it is difficult to get access to the simulators during our scheduled class time. Maritime English is scheduled for four hours on Fridays, timetabling chosen by the Department of Ocean Operations and Civil Engineering, and this is a popular day for external groups to book the simulator. Thus, we only have three sessions in the simulator per semester. We could theoretically use the simulators on other days, but then the students have other courses, as do we for our department.

Student reflections over two simulator sessions

It was important to us, at this stage, to understand how our students, who all had some experience using simulators in other courses, understood the use of simulators in ME and whether they perceived these as useful within their language training. Sellberg (2018) points out that technologies that make it possible to reflect have potential for skills training and developing professional knowledge. Students had been introduced to writing reflections in Norwegian as a learning tool for developing professional competence. We therefore gave the students a short training session in writing reflections in English so that they could develop a conceptual understanding of writing reflection in English focusing on communication and language. All the students then wrote short reflections after each of the simulator sessions and

we used these as an indication of students' perceptions of language use and learning within a simulator.

In the first simulator session, several issues came up in the student reflections that related to some of the challenges we experienced in running simulator sessions, showing how these might impact on students. These did not appear to relate to students' perceptions of learning. For example, several students commented on the fact that they had had no opportunity to use English in the simulator in other courses that semester and that this had a negative effect on their performance. This suggested students felt uncomfortable using English in this context at this point in the course:

> *He [Lecturer] was pretty strict in the first semester, that only English was allowed in the simulator. But second semester it was totally absent. And when you don't operate in English on a regular basis, its not weird that it was hard and unfamiliar. (1)*

Many students made comments that suggested that one of the main outcomes of the simulator task was that it confirmed or demonstrated to themselves their competence in communication and English:

> *The English was good and we had no problem understanding the others. I felt the ship handling went very well. (2)*
>
> *It's pretty easy to speak English throughout, but I reckon my vocabulary isn't as big it should be. (3)*

This was also true about students' assessments of competence in communication in general and their ability to use the equipment. For example, several talked about the difficulty of using the radio due to lack of training, as well as the difficulty of using the radio in English.

> *Also, the guys that never have been on a boat before, many of them have never touched a radio. So, that would have been a good start. To go through the radio lab first. (3)*

Several students also felt that they were not able to prepare efficiently, and this criticism often referred to the how and when the students received the task.

> *Communication would have been made easier if we were give more time to prepare before the exercise. During the presentation there were a lot of questions about the scenario. If information had been clearer about the scenario we were about to play more focus during the preparations could have been on scripting radio messages. (4)*

This related to challenges identified earlier that it was difficult to ensure the right task was given early enough with instructions that were relevant to the task. One of the most frequent comments concerned the importance students attached to preparation.

> *Maybe a bit more preparations had made it even better when speaking in the VHF. (5)*
>
> *To make the next simulation task more successful I can maybe prepare better. Think through what scenarios that can happen. Try to be one step ahead all the time. (5)*

In terms of learning, some students appeared to see this simulator session as preparation for the next, so that what they learned was how to do better next time:

> *I think it will be easier to understand what to do in the next simulator session. (6)*
>
> *We know now how the recent sailing went. That will be helpful in the next session, since we know what to do and how the communication with Port Control or Pilot is like. (6)*

Many students expressed a wish to do more simulator exercises in the class. Given other comments, it was unlikely that this was as a result of the students feeling that they had learned or improved during the exercise, but rather because they felt that they were likely to learn in the simulator under other conditions.

> *Continue with these simulations, but we should maybe concentrate more on the maritime English than maneuvering the ship. (7)*

In the second simulator session, the feedback in the reflections focused more on students' perceptions of learning and this was linked to better organization and planning:

> *I think this was a great simulator exercise. It was a bit short with only 22-23 minutes of sailing, but it was a very educational experience […] One more thing that's good, was that the information of the session was published on Blackboard a day beforehand. (6)*
>
> *First, I have to say that I am very satisfied with today's lesson. It was realistic, and everyone had the opportunity to participate. This had a huge impact on my motivation. I wanted to get the boat from A to B and this required clear communication. The exercise was well explained. This made it easier to do it correct (compared to last time when we used a lot of time waiting or hesitating). Because of this, we had no trouble to maintain English throughout. (2)*

Several students suggested how to improve the task given, in terms of what they felt would support the next stage in their learning, rather than because the task itself was insufficient.

> *This was a good exercise, which felt very relevant. It was a smart move to make two bridges cooperate as this made for more communication than the previous task,*

although there could have been made room for even more challenges where we would need to discuss our situation. (8)

We made the communication flow really good maybe too good. But even because it went very well I think the intense grade could be a couple of levels higher. Maybe doing this exercise inside the harbour while docking. (7)

These reflections suggest that the usefulness of the task relied on its providing an opportunity to develop professional and contextual knowledge. Our roles as teachers are important in that creating the exercise was our responsibility, but this also depended on the support of the institute. We needed them to operate the simulators as well as providing some of the tools (e.g. control room/shore personnel) and indeed ensuring the simulators themselves were free.

Conclusion

Using simulators specifically to teach ME is rather new in our institution. An individual in the Department of Ocean Operations and Civil Engineering has suggested the possibility of integrating ME into other classes, specifically those that use simulator tasks. As this discussion was not started at the level of the department, it moves rather slowly. In many ways, doing this would not change much for us as we have little control over timetabling and programming. However, we do have control over the tasks we give our students and we are learning to choose these with specific language and communication outcomes in mind. From our experience over the last two years, as well as some of the previous research in this area, we see some benefits from running simulator sessions where the students focus on language and some of the students' comments appear to support this. However, according to the literature, providing students with a clear opportunity to focus on all their bridge skills (technical, leadership, intercultural skills as well as communication and language) also enables learning. Therefore, it may be beneficial for us to continue with short ME simulation sessions, but we should also participate in longer simulator sessions run as part of other courses. For us the next stage is to provide evidence that such a model enhances our students learning and brings about a qualitative improvement in there English. This will require both our department and the Department of Ocean Operations and Civil Engineering to make finding this evidence practically possible.

References

Arnó-Maciá, E., The Role of technology in teaching languages for specific purposes courses, *The Modern Language Journal,* 96, (2012) 82-104.

Cole, C., Pritchard, B. and Trenkner, P., Maritime English instruction – ensuring instructors' competence, *Ibérica,* 14, (2007) 123-148.

Cui, Z., On the application of modern educational technology in maritime English teaching from the perspective of constructivism, *English Language Teaching,* 3(3), (2010) 244-248.

Davin, K.J. and Donato, R., Student collaboration and teacher-directed classroom dynamic assessment: a complementary pairing, *Foreign Language Annals,* 46(1), (2013) 5-22.

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

Lantolf, J.P., Sociocultural learning and second language learning, *The Modern Language Journal,* 78(4), (1994) 418-420.

Løhre, ALearning maritime English in simulators, *Necesse. Royal Norwegian Academy Monographic series*, 2(2), (2017).

Nadrag, L., Buzarna-Tihenea, (Galbeaza) A. and Stan, A., Methods for improving maritime English teaching and learning: an experimental case study, *Constanta University's Annals,* 17, (2013) 229-234.

NTNU, Studiets-oppbygging, (2019) https://www.ntnu.no/studier/353mn/studiets-oppbygging

Popescu, C., Varsami, A. and Tromiadis, R., Maritime English practice on simulators, *Constanta University's Annals,* 18, (2013) 251-254.

Read, P. and Dobbs, B., Teaching English for the maritime sector, *www.modernenglishteacher.com,* 25(4), (2016) 68-72.

Scrivner, O., Madewell, J., Buckley, C. and Perez, N., Best practices in the use of augmented and virtual reality technologies for SLA: design, implementation and feedback, in Carrió-Pastor, M.I. (ed.) *Teaching Language and Teaching Literature in virtual Environments.* Singapore: Springer Nature Singapore Pte Ltd. (2019) 55-72.

Sellberg, C., From briefing, through scenario, to debriefing: the maritime instructor's work during simulator based training. *Cognition, Technology and Work,* 20, (2018) 49-62.

Stan, L.C., Online teaching technique in maritime learning process, *Procedia – Social and Behavioral Sciences,* 116, (2014) 4517-4520.

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A Framework of a Hub and Spoke Model for Sustainable Cooperation in Maritime English Training: The Case study of Kenya

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Abstract

Cooperation between Maritime Education and Training (MET) institutions (METIs) has largely existed between the institutions with the scope biased to the traditional technical domains with a shallow scope on Maritime English. While this cooperation has largely included METIs, the engagement of the general maritime industry cluster is largely insufficient . METIs in developing countries such as Kenya need to harness the expertise of established global maritime institutions and the maritime cluster in general. This can only be achieved through well-structured cooperation framework that benefits the partners. The paper seeks to establish a framework for cooperation of Maritime Education and Training (MET) institutions (METIs) in Kenya with the global maritime cluster for sustained quality in MET. This is proposed through (1) adapting a hub and spokes model for cooperation and (2) an enhanced community of practise model that addresses the key domain of Maritime English. The paper approaches the proposed framework through reviewing literature in communities of practice and educational collaborations to establish a robust framework for international cooperation. This is augmented by the authors' experience within Kenya's MET framework to achieve a balanced opinion that addresses the country's specific challenges in teaching Maritime English.

Keywords: *MET, Maritime English, Seafarers, STCW, English for specific purpose*

Introduction

Cooperation between educational institutions and among associations of educational institutions is a common practice to serve different interests of the institutions (Wiriyachitra, 2002; Yang, 2003; Chan, 2004; Virkus & Tammaro, 2005; Knight, 2008). The cooperation frameworks have been primarily on defined components with major concentration on engineering and technical training. Kenya's MET space has been defined by such existing

common practise. Cooperation between Maritime Education and Training (MET) institutions (METIs) has largely existed between the institutions with the scope biased to the traditional technical domains with a shallow scope on Maritime English. Kenya's pedagogical lingua is primarily English and as such Maritime English is approached relative to marine communications in the STCW competencies. While this cooperation has largely included METIs, the engagement of the general maritime industry cluster is largely vague. The benefits of the engagement of the maritime industry cluster is to realise the timely incorporation of emerging trends and new technologies from the industry into the educational structures. While this can be criticised as the effect of globalisation and the corresponding pressures of globalisation is driving education to industry satisfaction , it is worthwhile to note that the educational and training institutions do not train for internal consumption.

Design and methodological approach

The paper analyses the results of literature in cooperation between educational institutions and global cooperation networks. This is based on the generality of cooperation and specifically looks into the frameworks of cooperation between METIs. This seeks to highlight relevant frameworks in educational and educational management in addition to the professional development platform. The paper approaches the proposed framework through reviewing literature in communities of practice and educational collaborations to establish a robust framework for international cooperation in Maritime English. This is augmented by the authors experience within Kenya's MET framework to achieve a balanced opinion that addresses the country's specific challenges. Key to the experience of the author is the establishment of the Maritime Industry Advisory Committee at the Technical University of Mombasa. The paper thus reviews literature in international cooperation for academic purposes, academic response to globalisation and international curricula development. The paper further addresses the following research questions:

1. What is the level of cooperation between METIs in Kenya relative to MET?
2. What are the challenges of cognisance of maritime lingual training within the MET framework in Kenya?
3. What is the model of cooperation and rapport with specific approach to Maritime English?
4. Is the Communities of practise concept actively employed by METIs

5. Can the HUB and Spokes model be harnessed and exploited to strengthen the delivery of Maritime English in Kenya

Frameworks and Concept Review

The paper explores a new approach to maritime communications training specifically maritime English training collaboration at the national level in Kenya and through a regional in addition to global network framework. It focuses on exploiting the benefits of the communities of practice model in a hub and spokes model to address the challenges of resources through an international collaboration network.

Hub and Spokes Model

The hub and spokes system is a paradigm of a system that facilitates flow and flexibility within the system and beyond. Hub and spokes model is a system that is commonly referred to as the 'network system' (Rodrigue, 2017). In transport topology it is a system of centrality and concentrated flows. Adapting the system of centrality and concentrated flows to the Maritime English cooperation framework, we find that it is challenged by the modalities of cooperation amongst institutions. MoUs signed by institutions are bilateral agreements between the partner institutions. This depicts the point-to-point connections (Figure 1).

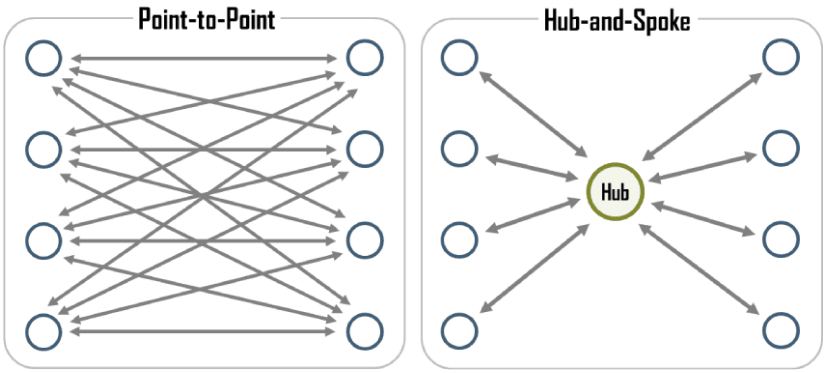

Figure 1: Illustration of point-to-point and Hubs and Spoke Models (Rodrigue, 2017)

The hub and spoke model has attracted the attention of scholarly work globally albeit student focused (McCallum, Greig, & Darbyshire, 2014; Millar, Conlon, & McGirr, 2017; McClimens & Brewster, 2017). However, Cui (2011), investigated the potential of the hub-and-spoke model as an effective strategy in organising of Secondary School in Queensland Australia, to support

integration of education and training geared at smooth transition of young adults' post-secondary school education in to the industry specific training. Such literature is non-existent in Kenya's scenario.

Applying the models in Figure 1, we find that the normal practise of institution to institution cooperation within a common geopolitical cluster inherits the chaos associated with the point-to-point network Figure 2 (a).

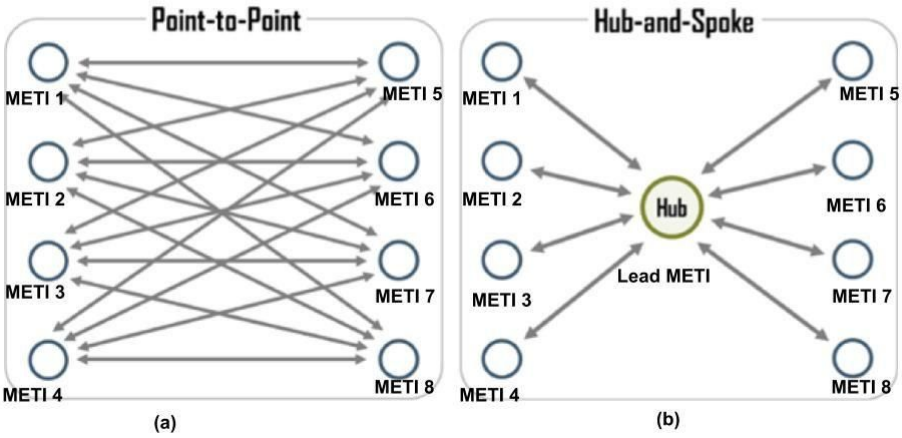

Figure 2: METI Collaborations

With the Hub and spoke model we are able to arrange the practice of knowledge organisation and management with respect to Maritime English teaching and development. This necessitates the designation of an institution as a lead institution and the hub for the community of practise for maritime English where the centrality of resources within the defined scope of cooperation is maximised and duplication of efforts is eliminated in addition to rationalisation of efforts relative to resources as shown in Figure 2 (b).

Hence, we find that we can model the network as shown in the figure below which rationalises integration of networks with professional bodies and institutions associated with Maritime English in addition to industry-academia relations.

Communities of Practice

Wenger (1998) introduced the concept of communities of practise (CoP). Wenger-Trayner and Wenger-Trayner (2015) further defines CoPs as "*groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly*." This highlights three important points; the existence of a mutual agreement, development and design

of a joint enterprise that give rise to shared identity and a framework for interaction that enhances learning. In Higher Education (HE) this can be illustrated as shown in the figure below (Figure 3).

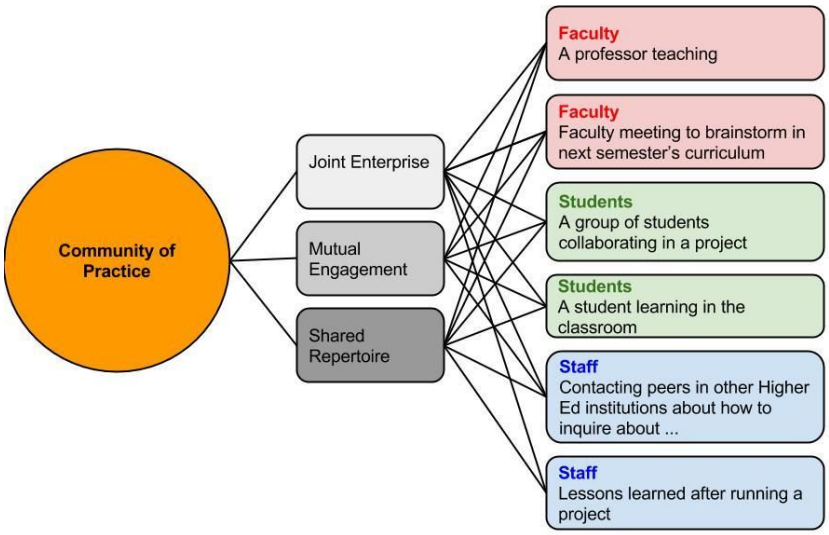

Figure 3: illustration of Community of Practice for Higher Education
(State University of New York at Stony Brook (Stony Brook University (SBU)), 2019)

Thus applying the concept to Maritime English we find that the CoPs include the maritime industry cluster in general, the METIs, and the maritime regulatory framework. Thus, with the introduction of professional assessment and certification in the CoP we can deduce a framework in the Kenyan context.

The Maritime Industry Interactive Network

The Technical University of Mombasa has adopted a strategic alliance framework through collaboration with the industry. This framework has been tilted as 'The Maritime Industry Advisory Committee'. Among the key functions of the committee is advisory and resource mapping for the University. The composition of the university has been specific to incorporate the maritime clusters and servicing sectors to the maritime industry. Such a framework presents the following benefits:

1. Resource mapping and aggregation
2. Experience and updated technical know-how from the experts
3. Existence of a knowledge pool from the aggregated communities of practice.

Such industry–academia relations are key to the realisation of knowledge transfer. This further strengthens identification of Research Priority Areas (RPAs) and as a result a direct benefit to

the industry and policy makers in addressing key challenges to adaptation, policy reforms and human capacity development.

The Framework as a Knowledge Management Tool

Defining both knowledge and knowledge management is challenging in definitive context (Barclay & Murray, 1997; Earl, 2001; Alvesson & Kärreman, 2001). Virkus & Tammaro (2005) in analysing the models of academic cooperation of Library and Information Science (LIS) education in Europe, argues that while the cooperation is a result of response to the desire to improve and strengthen the LIS curricula, other factors are central to the response. These factors include the desire to cooperate on research projects, creating a forum for stronger members to support weaker members in addition to encouraging mutual recognition of curricula or parts of curricula. To achieve such a goal, knowledge is the foundation upon which a lasting cooperative framework is premised. Knowledge organisation and management has thus been identified by (Virkus & Tammaro, 2005) as key to the process of academic cooperation. Accordingly, to realise synergistic cooperation in Maritime English for the Kenyan MET scenario, availability of information is key to the cooperation framework.

Recommended Directions and Strategies

The recommended direction and strategy for developing the framework is premised three (3) dimensions; the intrinsic and instrumental worth of the proposed knowledge framework, the function of the different actors within the framework as agents of knowledge management and the channel of interaction within the framework (McCowan, 2016). The framework is built around a research theme modelled as a Research Priority Area (RPA). This RPA is preliminarily titled as ‘The Maritime Communications Skills Network’ with Maritime English, Language Proficiency and Marine Communication Skills as topic areas.

National Caucus for Maritime English, Communication and Language

The Kenyan education system is primarily English based. The MET framework follows suit (Mohammed, 2019) and as such the availability of a foundation for a national caucus in Maritime English and thereafter a wider regional interaction. In Kenya four (4) major institutions offer MET leading to seafarer qualifications; the Jomo Kenyatta University of Agriculture and Technology (JKUAT), The Technical University of Mombasa (TUM), the

Kenya Coast National Polytechnic (KCNP) and the Bandari Maritime Academy (BMA)[1]. Looking at the proximity of the METIs to the maritime industry, majority of the instructions are based at the Kenyan coast, the principal environment for maritime activities. Thus we find that an integrated approach through pooled resources is most convenient to the Kenyan cause where development in MET is challenged by sparse resources. Joint activities as a cooperative approach is particularly supported by (Virkus & Tammaro, 2005) in addressing challenges of curricula implementation in teaching and research.

The expected challenges for delivery of maritime English in Kenya include lack of trained instructors, inappropriate and inadequate teaching materials, different styles of teaching and knowledge pool for experiential learning[2].

Regional Interaction and Network

The East Africa Community (EAC) comprises Kenya, Tanzania, Uganda, Burundi, Rwanda and South Sudan. EAC's MET environment is populated with institutions in Kenya and Tanzania[3].

Figure 5: The Map of East Africa Community

Source: (Wandera & Niyibizi, 2018)

1 The Bandari Maritime Academy is formally the Bandari College run by the Kenya Ports Authority. The college was upgraded to a Maritime Academy through an Executive Order from the Presidency in November 2018.

2 This is particularly highlighted with the non-existent framework for delivery of Maritime English course units in maritime courses. Thus it is important that the training institutions are sensitised on the importance of maritime English (Mohammed, 2019).

3 This includes mainland Tanzania and Zanzibar.

While the cooperation is largely political, the region shares geography with Ethiopia and Somalia which have METIs. Regional cooperation in education is common practise (Nguyen, 2009). To realise the regional framework, it is important that participating countries have the right awareness and framework. (Nguyen, 2009) argues that continuous campaigns and activities are key ingredients to awareness and in this case the awareness for regional cooperation and integration in the Maritime English Domain. To realise this, a systematic approach is required to:

1 clearly recognize, define and understand the rationales to the caucus

2 formulate the objectives of the cooperation in Maritime English Domain

3 pre-empt the benefits that can be gained from such a framework.

The EAC beyond multiple ethnicity shares a common heritage based on the Swahili language, it further shares the lingua franca in education with the exception of Burundi[4]. Nevertheless the framework shall need to take into account localised culture, prevailing politics and pedagogical traditions to realise harmonised practical and institutional practise (Ball, 1998) in Maritime English teaching.

Global Integration and Connectivity

Globalisation and internationalisation of education through international cooperation between educational institutions (Chan, 2004) has realised influence visibility, market share in the international scene (Chan, 2004; Stafford & Taylor, 2016) in addition to exposure to qualified, experienced, professional and industry resources (Androushchak, 2014) . Such excellence and influence as argued by (Chan, 2004) is also determinant on the individual strategy of the institutions (Sandler, 2014). Such a cooperation can easily provide a framework for reciprocal recognition where course have common convergence points and therefore solve challenges of quality assurance (Damme, 2001; Yang, 2003).

Structural illustration of the framework

National caucuses share distinct philosophical directions influenced by the national education policy of the country. thus such political influences not only hinder man integration approach but poses irreconcilable challenges in the long run.

4 Rwanda and Burundi were French speaking countries, however Rwanda added the English language and opined the commonwealth and as such the English language proves the main communication language with Kinyarwanda as the first language.

Proposed actors and agents

Defining the actors and agents of the framework is key to the success of the collaboration. Defining the actors and agents further defines roles and responsibilities within the structure. Key to the structure are the maritime industry cluster, maritime administrative and regulatory organs, affiliated service industry to education and the general language caucus made up of the literature and languages forum. Core to the structure is the METIs (Figure 6).

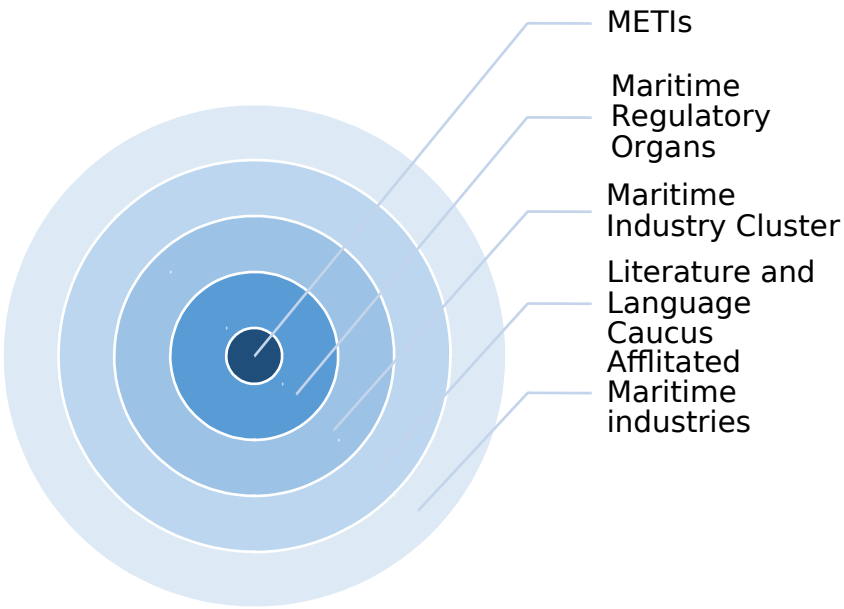

Figure 5: Conceptual Illustration of relationship between the Actors

The different actors are thus organised to complement each other's resources with the METIs providing the necessary tools and means to disseminate knowledge and in this case Maritime English knowledge. To achieve this efficiently and effectively, there is a need to structure a Maritime English framework (ME Framework) to establish a coherent environment.

The ME framework

Using the proposed actors and agents, we can illustrate the framework for cooperation into a hub and spoke network architecture with focal points (Figure 6).

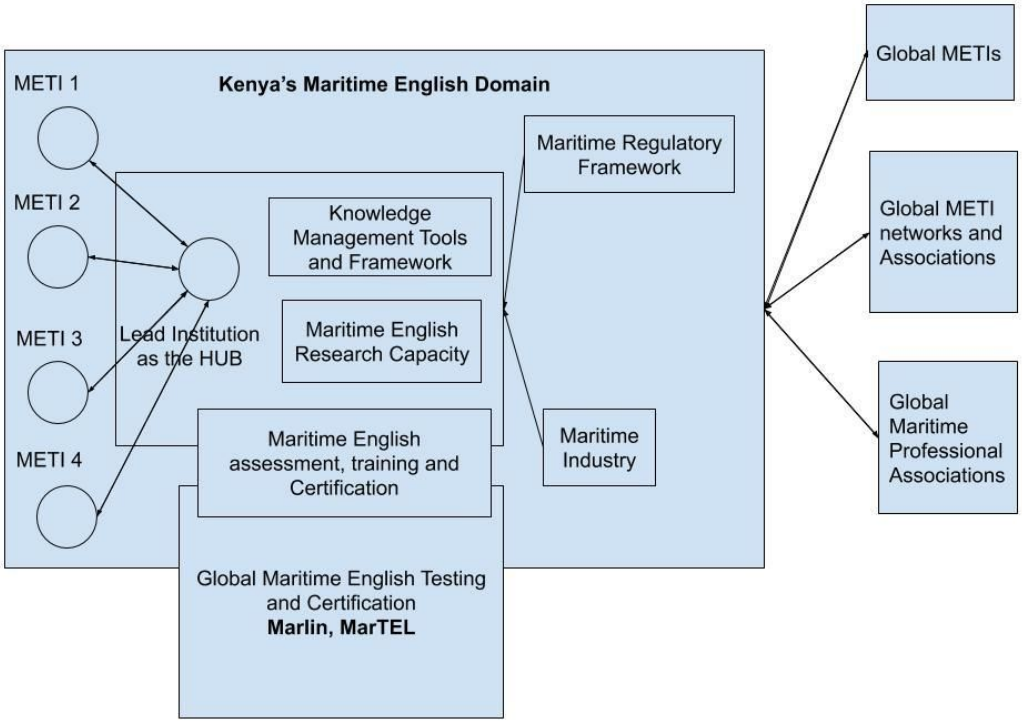

Figure 6: A Framework for enhancing Kenya's METIs Maritime English Network

Summary and Conclusions

With the world becoming more of a small town, national and geographical boundaries have been largely eliminated through transnational employments. This is particularly true for the maritime industry. It is therefore important that institutions cooperate and collaborate to address the challenges of communication in the maritime industry. With such frameworks, duplication of effort is largely eliminated and as such maritime English and communication benefit from extensive and experienced opinions in content development and review. Therefore, the adoption of focal points along a cross cutting network within the community of practise of MET, pooling of efforts and resources to address the challenges of lack of resources, especially human resource with expertise and professional competence to address challenges in Maritime Communications pedagogy.

References

Alvesson, M., & Kärreman, D. (2001). Odd Couple: Making Sense of the Curious Concept of Knowledge Management. *Journal of management studies, 38*(7), 995-1018.

Androushchak, G. (2014). Evolution of higher education policy: From national renovation towards global competitiveness of Russian universities. *HERB: – Higher Education in Russia and Beyond, 1, pp. 10–11., 1*, 10–11.

Ball, S. J. (1998). Big Policies/Small World: An introduction to international perspectives in education policy. *Comparative Education, 34*(2), 119-130.

Barclay, R. O., & Murray, P. C. (1997). What is knowledge management. *Knowledge praxis, 19*(1), 1-10.

Chan, W. W. (2004). International Cooperation in Higher Education: Theory and Practice. *Journal of Studies in International Education, 8*(1), 32-55.

Cui, G. (2011). Organising Senior Learning through a hub-and-spoke model: The integration of vocational education and training across Queensland secondary schools. Western Sydney University.

Damme, D. V. (2001). Quality issues in the internationalisation of higher education. *Higher Education, 41*(4), 415–441.

Earl, M. (2001). Knowledge Management Strategies: Toward a Taxonomy. *Journal of Management Information Systems, 18*(1), 215-233.

Knight, J. (2008). Higher Education in Turmoil: The Changing World of Internationalization. *Global Perspectives on Higher Education*. (P. G. Altbach, Ed.) Rotterdam: Sense Publishers.

Kuroda, K. (2009). *Possibilities and challenges in constructing a new regional collaborative educational framework in Asia.* . Waseda University Global COE Program, Global Institute for Asian Regional Integration.

McCallum, J., Greig, J., & Darbyshire, C. (2014). *The development, implementation and evaluation of a hub and spoke model for practice learning.* Edinburgh: Glasgow Caledonian University.

McClimens, A., & Brewster, J. (2017). Using the hub and spoke student placement model in learning disability settings. *Learning Disability Practice, 20*(3), 34-38.

McCowan, T. (2016). Universities and the post-2015 development agenda: an analytical framework. *Higher Education, 72*(4), 505–523.

Millar, L., Conlon, M., & McGirr, D. (2017). Students' perspectives of using the hub and spoke model to support and develop learning in practice. *Nursing Standard, 32*(9), 41-49. doi:http://dx.doi.org/10.7748/ns.2017.e10389

Mohammed, T. I. (2019). Cognisance of the Maritime Lingual Training within the structure and framework of National Maritime Education and Training Policy in Kenya.

Nguyen, A. T. (2009). The Role of Regional Organizations in East Asian Regional Cooperation. *Asian Regional Integration Review, 1*, 69-82.

Rodrigue, J.-P. (2017). *The Geography of Transport Systems.* New York: Routledge.

Sandler, D. (2014). How Can a University Find Its Own Path to Excellence? *HERB - Higher Education in Russia and Beyond, 1*, 17-18.

Stafford, S., & Taylor, J. (2016). Transnational education as an internationalisation strategy: meeting the institutional management challenges. *Journal of higher education policy and management, 38*(6), 625-636.

State University of New York at Stony Brook (Stony Brook University (SBU)). (2019). *Disruptive Technologies : Community of Practice.* Retrieved March 24, 2019, from Stony Brook University (SBU): https://you.stonybrook.edu/disruptive/tag/community-of-practice/

Stewart, F. (1996). Globalisation and education. *International Journal of Educational Development, 16*(4), 327-333.

Virkus, S., & Tammaro, A. (2005). Models of academic cooperation in European LIS education. *Proceedings of the EADTU Annual Conference 2005 towards Lisbon 2010: Collaboration for Innovative Content in Lifelong Open and Flexible Learning, Rome, 10-11 November 2005.* Rome: EADTU.

Wandera, C., & Niyibizi, A. (2018). Potential Benefits of adoption of Laser Materials Processing in East Africa's Manufacturing Industry.

Wenger, E. (1998). *Communities of practice: Learning, meaning and identity.* Cambridge University Press.

Wenger-Trayner, E., & Wenger-Trayner, B. (2015). *Introduction to communities of practice.* Retrieved March 24, 2019, from https://wenger-trayner.com: https://wenger-trayner.com/introduction-to-communities-of-practice/

Wiriyachitra, A. (2002). English language teaching and learning in Thailand in this decade. *Thai TESOL focus, 15*(1), pp. 4-9.

Yang, R. (2003). Globalisation and Higher Education Development: A Critical Analysis. *International Review of Education, 49*(3–4), 269–291.

International Maritime English Conference
IMEC 31 (30 September — 3 October 2019)
Åland Islands, Finland

My Practice: English at Sea — Practical, Can-do Assessment

Kimberly Beckwith – Royal Netherlands Naval College (for the Dutch Defense Language Center)

Background

With operational pressure increasing as the world becomes more chaotic and navies' increasing role in supporting the safe passage of commercial shipping the number of recruits to the Royal Netherlands Naval College has been increasing. However, decades of budget cuts have led to staff shortages, especially in the language teaching staff. The naval college wanted to increase the level of English for future officers passing through its doors by increasing the number of contact hours, however difficulties in scheduling classes with limited student availability and limited language teaching staff coupled with an increase in educational diversity of the aspirant officer has posed a practical problem in serving all the students appropriately without burning out staff. A practical approach to a practical problem was necessary: what do we need the junior officer to be able to do in English when they enter the fleet and how do we get them there?

As the Dutch say: "Meten is weten," measuring is knowing, but the RNLN and the TCD could not find a satisfactory commercial solution to the Navy's specific needs. So I proposed a practical intake assessment that would be inspired by validated testing methods from the STANAG OPI and IELTS combined with over 10 years of experience in the field (or sea) with my navy colleagues and guided by the junior officer communications competencies.

This session gives a brief overview of the challenges of assessment and teaching in a fast-paced educational setting where rapid through-put of officers is a priority and where the diversity of backgrounds of new recruits can pose additional challenges). It shows the building blocks of the Royal Netherlands Naval College's English language assessment and teaching program and how a practical, but effective solution has been developed for a complex environment.

Audience

Program directors, managers and teachers who need fast, practical assessment and teaching solutions for addressing students with widely-divergent language competencies upon arrival at the institute.

Materials needed

Powerpoint, large screen, white board.

International Maritime English Conference
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My Practice: Formative Assessment with Google's G Suite for Education

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Abstract

The G Suite applications are well suited for formative assessment, i.e. cooperation with students while they are working with their assignments. Successfully performed it can facilitate learning in several ways such as trust building and the possibility of giving feedback at the right time. The learning styles of the millennium generation are compatible with many of the features in the G Suite. Sharing, commenting, chatting, linking, using visual elements etc. are a few of them. Its compatibility with Google in general and the fact that is free for educational purposes makes it ideal for international cooperation between students and faculty. In addition, it is cloud based and easy to learn to use.

Keywords: *Formative assessment, millennium generation, sharing, commenting, cloud based, word processing*

Introduction

Formative assessment means cooperating/communicating with students while they are in the middle of a task as part of the learning process (achieving learning outcomes supposedly). As technology evolves and as new generations pass through our classrooms, it is necessary to refine our teaching methods.

While some deplore tendencies such as shorter attention span and reduced writing skills in today's youth, it needs to be pointed out that other skills have improved substantially. Among these count information retrieval, oral production skills, general IT skills, and use of visual elements in communication ("4 Skills Millennials Bring To Leadership Positions," 2019).

> *Millennials grew up in an electronics-filled and increasingly online and socially-networked world. They are the generation that has received the most marketing attention. As the most ethnically diverse generation, Millennials tend to be tolerant of*

> *difference. Having been raised under the mantra "follow your dreams" and being told they were special, they tend to be confident. While largely a positive trait, the millennial generation's confidence has been argued to spill over into the realms of entitlement and narcissism (Rouse, 2014)*

Since the institution where I work has acquired Google's G Suite for Education (free of charge for schools) and a large number of Chromebook computers, I have started to use these tools. It is clear that the G Suite facilitates sharing and cooperation between students. It makes reviewing and giving feedback natural and unintrusive. Nothing is perfect, but I want to point out a number of interesting advantages with this setup.

Google Drive

Everything the student produces is saved in the cloud in the student's personal folder, called Drive. The student is the owner of her work and can allow others to view, comment or edit it. This is extremely important, since:

a) it is in the cloud - not in anyone's computer memory, hence always accessible,

b) there is only one copy of each file (unless another person makes a copy of course),

c) the files are web pages in essence, hence allowing for hypertext linking.

The Drive is linked to an email account. It needs to be a Google email account. All students receive one such account from our university. Hence, this account is of central importance as we shall see ("G Suite: Företagsappar för samarbete och produktivitet," n.d.).

Once the student has learned to organise her files and to manage the various sharing settings it gives a feeling of control of what and when to share, and sharing comes easier for today's students than for earlier generations (Rouse, 2014).

Google Docs

Higher learning has a lot to do with production and reception of written language. To succeed means managing texts (creating, editing, processing, discussing, evaluating, etc.). How can a teacher facilitate the learning of these skills? I have concluded that what is popularly called formative assessment is a dynamic method of giving feedback to students while they are in the

process of writing (Great Schools Partnership, 2013). Typically, this is done by the student granting the teacher and fellow students the rights to view and comment on their work. This is done before the text is finished, often more than once.

Commenting

A comment by a trusted colleague is placed outside of the virtual page (by marking up the word to which the comment pertains), so as not to be intrusive. In addition, the owner of the document can reply and ask for more information if necessary. This function encourages non-hierarchical exchanges, which builds trust. Carl Rogers identified trust as one of the three most important elements in facilitating learning (Zimring, 1994).

Some people dislike showing unfinished texts to others, so here it is necessary to be tactful. A person who receives the rights to comment on the work of others is notified by email, and including a link to the document in the cloud.

Giving and receiving feedback is part of the learning process. It is a skill that needs to be trained of course, so some students are not good at it from the outset. It can also be challenging to receive feedback, but the benefits of introducing this practice are many. Most importantly, it is how working life operates, and how people evolve professionally and personally (Seiter, 2018). Figure 1 can be used as advice to students how to give feedback.

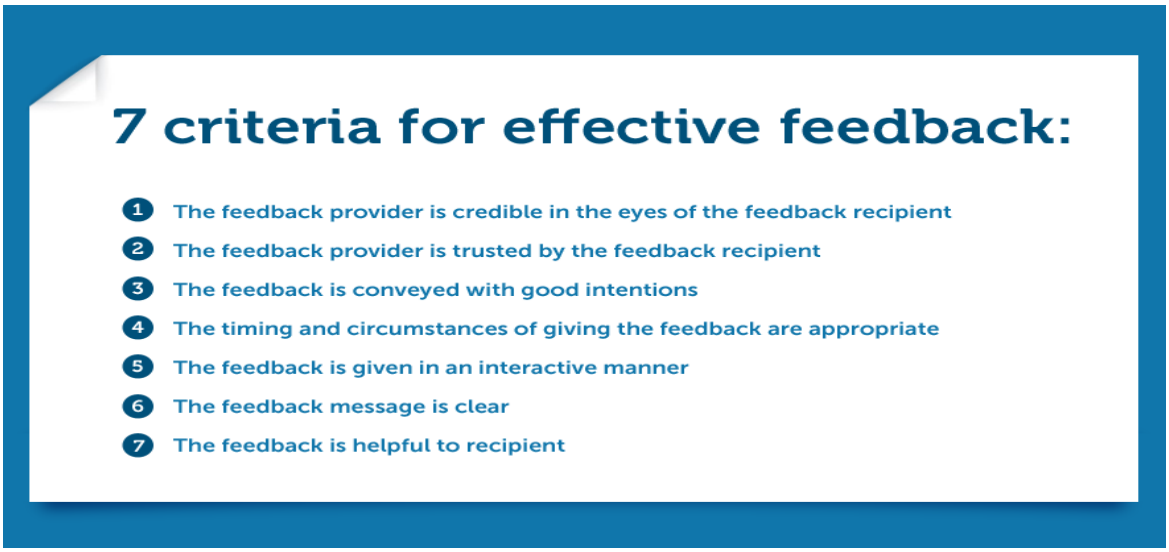

Figure 1. Feedback criteria (Seiter, 2018)

Voice Typing

In addition to many of the marvellous functions we have grown used to from MS Word and other word processors, Google Docs has Voice Typing in many languages. This feature is very useful in language learning, since it relies on the relationship between pronunciation and spelling. It requires grammar skills and good pronunciation, so much of what writing tasks are used for is provided, albeit with greater speed and less effort.

It can provide relief from typing for dyslexic and similar students. It does not eliminate the need for revising layout, sentence structure and punctuation, but it does demand proper pronunciation. The user gets instantaneous feedback, which is the most efficient feedback there is (Lipman, 2015).

Co-writing with shared editing rights

Obviously writing a collective document is much easier with only one copy to keep track of. There is no need for saving files and renaming versions. Neither need one worry about losing work. What is typed is saved automatically. If something is deleted it can be retrieved by searching the version history. If the document is collective, it can be seen by whom the changes were made.

An interesting, interactive learning activity can be to allow all students to co-edit a common document where they add information, translations, or answers to pertinent questions. It is exciting to watch the screen when many people write at the same time. If a sophomoric joke appears, the version history reveals by whom is was entered.

As we design our course work increasingly in harmony with what is required in working life, the lonely writing is losing ground to group work and constructive feedback systems. Teachers can focus on these processes and take them up for discussions departing from a shared document - if this is announced in the description of the assignment.

Google Classroom

All written communication between a teacher and a group can be collected on the Classroom platform. It is a quite simple website to which all students are invited with their Google email addresses. It synchronises with the email system so students are reminded of tasks. When a

student submits an assignment she loses her editing rights and cannot see comments made in the document – until the teacher gives her work back – or opens the whole folder for all students to view.

This gives the teacher the power of synchronising the work that students do, in suitable stages, so that not all challenges come simultaneously. It is then also possible to assign groups of students to the task of commenting on each other's work.

Google Chrome

The G Suite works best with the Google Chrome web browser. Two add-ons that are helpful are Google Translate and Lightshot (an app for taking screenshots of preselected parts of the screen). Since Chrome is Google's own web browser, it is natural that it is ideal for searching information with the Google search engine.

Google Translate

At the same rate as the internet expands, the English language share of it is reduced. Not ever accessing information in other languages is simply not reasonable. Google Translate translates web pages automatically in Chrome. If they are translated into English, the quality of the translation is higher. It will not be perfect, but sufficiently reliable for making sense of its contents.

By encouraging students to use information in other languages (and translating it into English), important steps are taken towards familiarisation with key languages of the field of expertise the student is studying. In a longer perspective, this might lead to certain levels of proficiency and added value on the labour market.

Lightshot

A screenshot of a table or diagram is produced in a second and eliminates the need for copying or retyping and the ensuing formatting. When inserting the screenshot into the file it is very clear to the user that s/he is borrowing information, so academic dishonesty cannot be an option. Creating a number and a caption for the screenshot picture is trained, as well as inserting a reference.

The screenshot is cropped naturally, as the copied area of the screen is selected. This helps when the student works on the layout to make her text harmonious and appealing.

Google Slides

Google Slides is simple but can be elegant. The absence of many options makes it faster to use than MS PowerPoint. Its greatest strength is the way it is compatible with YouTube. Video is not to be avoided when it comes to communicating with the Millennials. It is best to run videos without sound, so as to allow for the presenters to narrate themselves, custom made for their audience.

Again, G Suite files are web pages in essence, so they stay accessible and compatible with other software much more than MS PowerPoint. Just as with other presentation software, the teacher needs to remind students of the simple facts that the number of words should be very limited and that the pictures should be high resolution and large in size. As for myself, I show a PechaKucha as a point of reference (“PechaKucha 20x20,” n.d.).

Google Forms

Google Forms is for making questionnaires, surveys, tests, quizzes, registration forms, etc. It is very easy and does not contain many options, which is a drawback and an advantage at the same time. As with all G Suite applications, it is very reliable, in particular when Google Chrome is the browser. Questions can be expanded with pictures, videos and links to texts etc.

With Forms one can interact with a group in class or between sessions. The results are processed automatically and can be seen as diagrams. This makes for good discussion materials in class - perhaps after an initial survey of opinions has been done and displayed for the participants to react to.

Chromebooks

Chromebooks are small computers without hard disks. This makes them light, quick to start, and cheap. Using them takes a bit of getting used to, but young people generally like new gadgets. With Chromebooks, it is only possible to save materials in the cloud - i.e. on the

Google Drive. This allows people to use any device to continue working on tasks and to find all the tools and resources they need.

Conclusion

As with all technology, the Google G Suite comes with advantages and disadvantages. This article argues that it is well suited for the Millennium generation and for undergraduate studies. It is designed for business use, so learning to use the applications is a good preparation for the labour market. Its compatibility with Google in general and the fact that is free for educational purposes makes it ideal for international cooperation between students and faculty. In addition, it is cloud based and easy to learn to use.

References

4 Skills Millennials Bring To Leadership Positions. (2019). Retrieved July 29, 2019, from Simon Sinek website: https://simonsinek.com/discover/4-skills-millennials-bring-to-leadership-positions/

Great Schools Partnership. (2013). Formative Assessment Definition. Retrieved July 18, 2019, from The Glossary of Education Reform website: https://www.edglossary.org/formative-assessment/

G Suite: Företagsappar för samarbete och produktivitet. (n.d.). Retrieved July 18, 2019, from https://gsuite.google.com/

Lipman, V. (2015). Giving Feedback Is Fundamental - Why Is It so Hard? Psychology Today. Retrieved from https://www.psychologytoday.com/blog/mind-the-manager/201509/giving-feedback-is-fundamental-why-is-it-so-hard

PechaKucha 20x20. (n.d.). Retrieved July 29, 2019, from PechaKucha 20x20 website: https://www.pechakucha.com/

Rouse, M. (2014). What is Millennials (Generation Y)? - Definition from WhatIs.com. Retrieved July 22, 2019, from WhatIs.com website: https://whatis.techtarget.com/definition/millennials-millennial-generation

Seiter, C. (2018). Step-by-Step: How to Give and Receive Feedback at Work. Retrieved July 18, 2019, from Open website: https://open.buffer.com/how-to-give-receive-feedback-work/

Zimring, F. (1994). Carl Rogers. Prospects, XXIV(3/4), 411–422.

My practice: English elearning course for engineers at elementary language level

Catherine Logie – Marlins

In this session, we will demonstrate Marlins' new English language elearning course, tailored specifically to the needs of marine engineer officers and ratings at elementary (A2) language level.

From Marlins' experience testing seafarers' Maritime English globally, we are aware that engineers in particular can require some support to develop their English language skills. The English language level of engineers can often be lower than that of seafarers in the navigational department. Companies employing seafarers have approached Marlins describing two challenges that their Crew Management departments encounter:

6. identifying sufficient numbers of engineer officers at intermediate (B2) language level
7. deciding whether to promote engineers in rank when technical competence is strong but English levels are low.

Through this innovative elearning course, we want to help engineers starting at elementary language level (A2) to achieve lower intermediate level (B1).

This new elearning course consists of five units centred on a fictional crew and ship, each unit having a different theme. Each unit follows an integrated syllabus: the learner revises and consolidates grammar, maritime vocabulary, IMO's Standard Maritime Communication Phrases and pronunciation. To practise communication skills, the elearning course also combines a range of speaking, listening and reading tasks in each unit.

To engage and motivate the learner throughout, we have created some custom-built interactions. These include an in-built speech recording facility allowing learners to compare their own speech with that of a native speaker and record dialogues with an interlocutor. The speech recording facility is used for both pronunciation and fluency practice; listening tasks are based on a range of international accents.

By taking this course, seafarers will improve the English language skills they need for communicating within multi-national crews, during inspections and in ship /shore

communications. The course fulfils part of the IMO Model Course 3.17, Maritime English (General Maritime English) requirements.

The course is intended for companies offering elearning via LMS or offline to support crews by allowing them to study at their own pace, in their own time at home or at sea. Maritime training providers and individuals may also find this of benefit.

This session will be a practical demonstration and participants will have the opportunity to trial some of the course.

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My Practice: Using Tailor-Made Exercise Sequences Provided Online to Improve, Practice and Consolidate the Use of the SMCP at VTS and MRC and Port Control Centres

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Abstract

This session will present the preliminary results of the implementation of an online/distant-learning based solution for the individual training of SMCP for MRCC, VTS Centres, Port Control Centres and other authorities in the shipping business. The methodical approach will be explained. The limitations of this approach will be shown. Examples for the implementation will be given.

Keywords: *communication tasks, communication skills, VTS, MRCC, Port Control, workshop, SMCP, VHF, exercises, target activity, methodical approach, comprehending, acquiring, imprinting, using*

Starting Point

In 2014 I was invited by the Spanish Maritime Safety Agency (Sociedad de Salvamento y Seguridad Marítima (SASEMAR)) to carry out workshops at their Control Centres to improve the participants' skills in making proper use of the Standard Marine Communication Phrases. The Spanish Maritime Safety Agency runs 19 Centres along the Spanish coast with a different set of jobs being either sole MRCCs or MRCCs handling a number of VTS or even Port Control jobs. Initially, I held two 40-hour workshops with altogether twenty participants at the Agency's central training institution. The participants volunteered to take part in the workshop. After their return to the Centres they were supposed to be the contact person regarding English language problems when communicating with vessels over radio. In 2015, I was invited to hold workshops at each of the 19 VTS/MRC Centres. The job was to help all participants to improve their English radio communication skills during a two-day workshop. It was agreed to focus on the correct use of the required word corpus and grammatical structures as well as the proper use of means to avoid misunderstandings during VHF communication. The workshops were held from 2015 to 2016. Each workshop lasted for two days during which I worked with as many

participants as possible. Using the information which I got during the workshops I put together a list of typical “single-purpose” VHF communications, i.e. communications with one clearly defined communication target, e.g. getting the necessary information after a vessel arrived on the anchorage, informing the vessel about a pilot’s delay at the pilot station or informing a vessel about a hampered vessel in the fairway approach etc. This list of “single-purpose” communications contained 107 situations. I selected those ones which occurred most frequently in most Centres’ areas and created sample communications. I sent them to the Centres (via SASEMAR’s) training centre so everybody interested could rerun the situations and make sure the results of the workshops would be sustainable. In 2017 I was contacted by SASEMAR again and was invited to continue the successful workshop approach by providing refresher workshops. I visited the Centres from 2017 to 2018. I used the findings of the first workshop tour to prepare a refreshment program which had the same focus as the first workshop program but provided more demanding exercises. I focused on the Centre-relevant single-purpose communications and always finished the workshop by staging “as if real-life” walkie-talkie communications with me as the Master of vessel and the participants as themselves as controllers/operators at the Centres. I adjusted the list of single-purpose communications and changed some of the sample communications. I made them available to everybody interested again.

At the beginning of 2018 I agreed with SASEMAR to develop a special online/distant-learning program to ensure the sustainability of the workshop results. The considerations during implementing this task and its first results are the focus of this paper.

Step 1: Identifying and Arranging the Contents

The 107 single-purpose communications were checked and evaluated again. Then they were arranged into 28 scenarios. A scenario is a sequence of communications which might occur in a real area controlled by a MRCC, a VTS Centre or a Port Control Centre over a certain period of time. The final arrangement is:

4 Port Approach (VTS): 4 scenarios

5 Anchorage (VTS): 5 scenarios

6 On Berth (Port Control): 2 scenarios

7 Leaving Port (VTS): 1 scenario

8 Off-Port-Limit Operations (VTS): 1 scenario

9 Traffic Separation Scheme (VTS): 5 scenarios

10 MRCC: 10 scenarios

The ten MRCC scenarios are basically single-purpose in-depth communications, e.g. preparing a medical transfer of an injured person from a passenger vessel, or the conduction of a search-and-rescue operation after a person fell overboard or requesting the assistance of a vessel in the vicinity of a located boat with refugees.

Each of the 18 other scenarios present, as a rule, between 4 and 6 single-purpose communications over an "assumed" period of time. Scenario 4 of the four Port Approach scenarios implements, for example, the following single-purpose communications (over an assumed time period of approx. 2 hours):

4. The approaching vessel A is informed about dredging operations on the limit of the fairway.

5. The approaching vessel A is contacted when her track diverges from the reference line.

6. An outgoing difficult tow B is informed about fishing vessels engaged in fishing in its vicinity – therefore a wide berth is requested.

7. Traffic in the area is informed about survey operations outside the fairway by hampered vessel C.

8. Vessel D enters the fairway to leave the port. That is why vessel A (which has not entered the fairway yet) is advised to decrease her speed because vessel D carries IMO Class cargo in bulk – that is why (according to the port regulations) no other vessel has permission to enter the fairway then.

9. Vessel E (proceeding behind vessel A) is advised to decrease her speed, not to overtake vessel A and proceed at slow speed until the fairway is not closed to other vessels than vessel D any more.

Step 2: Methodical Approach

A possible approach to the acquisition of a second language can be simplified to four stages:

5) **Comprehending Stage**: The learner understands a new word or a new structure which is presented in a context (a source text). The context should not interfere with an

unambiguous understanding of the meaning of the new word and the function of the new structure.

Example: The learner listens to an audio file and identifies/guesses the meaning of the new word easily. The learner listens to the file again and reads along on the tape script.

6) **Imprinting Stage**: The new word or structure is isolated and "imprinted" into the learner's memory. The pronunciation and the written form and of a new word and its placing habits in a context are established. The new structure is used in a clear context with a clear function.

Example: The learner repeats the single word aloud or in typical word groups or short sentences. The teacher comments on pronunciation or spelling difficulties. The use of the word is "drilled".

7) **Acquiring Stage**: The learner develops "automatic" procedures to make use of the word or the structure by practicing it in an isolated environment through practice.

Example: The learner answers questions and uses the new word or the new structure, fills a gapped text, translates simple statements with the only "difficult" word being the new one.

8) **Using Stage**: The learner carries out simple or complex communicative tasks during which he or she uses the new word or structure. Ideally, this task should be a kind of target activity, i.e. all other exercises during the three stages before are focussed on the final target activity. The favoured target activity should always be a "real-world" dialogue. Other target activities can also be a monologue, a writing task, a reading task and a demanding listening comprehension task.

Step 3: Implementing the Methodical Approach

A problem arises if one intends to keep close to the four stages when preparing an online/distant-learning solution: The Using Stage is very difficult to implement because if done properly there should be a "real-world" communication during which the teacher makes the learner use the newly acquired words or structures in a manner which is "unpredictable" for the learner. If this idea is transferred to the task discussed here, there should be a VHF/walkie-talkie communication (based on a traffic situation clearly defined before) which forces the learner to use the words and structures acquired before. The teacher/instructor should be very flexible in guiding the learner which could be very difficult to implement in an online/distant-learning approach.

Therefore, the methodical approach is adjusted as follows:

- The **Comprehending Stage** is a sequence of staged communications based on single-purpose communications in the scenario. The learner has to solve exercises (multiple choice, true/false, gaps fill) while listening. After solving each exercise, the learner listens to the communication again and reads along the tape script.
- The **Imprinting Stage** is a sequence of exercises during which the learner's focus is directed to the specific meaning of words used before (hampered, diverging, fairway limit, dredging, survey, reference line). Explanations are also given; examples from the SMCP (or COLREGS) are quoted to illustrate the unique meaning of the words. Secondly, means to control a VHF communication are practiced (e.g. message markers, phrases like "say again", "correction" etc.) The correct use of tense forms is practiced as well as the proper use of prepositions (which is especially challenging for Spanish speakers). All exercises are based on one message (said by a "controller/operator") which was used during the Comprehending Stage. The learner is always invited to listen to the message after finishing the exercise and to repeat it as a practice for the pronunciation.
- The **Acquiring Stage** is reduced to only one type of exercise: the learner repeats the complete message after a native speaker has read it to give the perfect pronunciation example.
- The **Using Stage** is not a real Using Stage (as explained above) due to the lack of flexible "real-world" communication opportunities. In the approach explained here it is a sole translation exercise: the learner translates from his or her mother tongue (here from Spanish, read by a native speaker) the messages used in all three stages before.

Step 4: Creating the Online/Distant Learning Experience

Here is how the methodical approach is implemented: One scenario (for the learner called Module) is split into four parts – following the methodical basis:

Part A: Comprehending Stage

This Part is implemented using 1) the *Lectora E-Learning Software* by Trivantis and 2) using *Moodle*.

- The map of a (fictional) port is shown with vessels positioned on the map.
- A listening exercise is presented, e.g.: Choose the correct ending for this message.

It is possible that MV Blue is a) dragging anchor, b) dredging anchor, c) swinging at anchor

- The learner listens to the communication and solves the exercise.
- He listens to the communication again and reads along the tape script.

Part B: Imprinting Stage

This Part is also implemented by using 1) the *Lectora E-Larning Software* by Trivantis and 2) using *Moodle*. Among others, exercises like the following ones are solved by the learner.

- Fill in an appropriate message marker.

" …….. : Drop anchor in advised position."

- Fill the gap with one of the following three phrases: it is (not) possible, must, have (no) permission.

"Information: According to my radar it …….. that you are dragging anchor."

- Choose one phrase to complete the following message: intend, will intend, intends

"Intention received: You …….. to remain in your present position."

- Complete the following message with a preposition from the list: at, to, after, until, within, from.

"Information: Wind is expected to increase to Beaufort 7 …….. the next 4 hours."

Comments are given, e.g. for the recommended use of ADVICE and INSTRUCTION.

Each message processed can be listened to after solving the exercise. The learner can repeat the message.

Part C: Acquiring Stage

This Part is a downloadable audio file and a downloadable pdf file containing the tape script. (The tape script should only be used if anything is unclear when repeating the messages or after the audio file has been listened to in order to make sure all meanings are clear.)

Part D: Using Stage

This Part is a downloadable audio file and a downloadable pdf file containing the tape script (the Spanish and English version of the messages). Ideally, the leaner does not need the tape script to do the exercise.

To sum the procedure up, the leaner logs in on a virtual campus, chooses a Module (one out of 28) which is a scenario combining between 4 and 6 single-purpose communications. He or she works through Part A (the Comprehending Stage) which takes approx. between 20 and 30

minutes. After finishing Part A, the learner can download an audio file which contains all single-purpose communications and a pdf file which contains the tape script. The running time of this audio file is between 15 and 20 minutes. Then the learner goes on to do Part B (the Imprinting Stage) which takes approx. between 30 and 40 minutes. Then he or she downloads Part C (the Acquiring Stage) - the audio file for pronunciation practice which has a running time of approx. 30 minutes. Ideally, the learner will not need the tape script (the pdf file). Finally, the learner downloads Part D (the Using Stage) - the audio file for the translation practice which has also a running time of approx. 30 minutes.

All Modules (scenarios) are described on the virtual campus so the learner can make an informed choice. There is virtually no limit as to how often he or she can listen to the audio files of Part A, Part C and Part D. The intention for them is to be used as permanently available tools to refresh one's SMCP based communication skills.

Referring to the information given above, each Module (scenario) has an estimated learner's processing time of 2 hours (if Parts C and D are worked through only once). Summing this up, a learner who intends to work through all planned 28 Modules (107 single-purpose communications) can spend at least approx. 56 hours of time working through all Modules. This can increase to approx. at least 62 hours working time if the learner also includes listening to Part A's audio files.

Conclusion

So far, four Modules are available for learners with access to the virtual campus of the Spanish Maritime Safety Agency. Another access to an "open to everybody" virtual campus will be available via **www.smcp-for-vts.com** after paying a fee in the future (from the beginning of 2020 on). Organisations and individuals in this line of work (VTS, MRCC, Port Control, Training Instututions etc.) will be welcome to take this opportunity provided for a continuous improvement, practice and consolidation of communication skills based on the use of the SMCP.

International Maritime English Conference

IMEC 31 (30 September — 3 October 2019)

Åland Islands, Finland

Round table session: Use of message markers in European navy communication

Kimberly Beckwith – Royal Netherlands Naval College (for the Dutch Defense Language Center)

Background/purpose

Message markers have been designed to help both the sender and the receiver of a radio message more quickly and accurately decode radio communications. By announcing the intent of a message before it is sent, the listener is already "primed" to listen for certain key information. However, after observing a NATO exercise in June 2018 among Dutch, French, Polish and Lithuanian ships, I noticed that communications were often muddled and accents interfered in comprehension of spoken transmissions, leading to misunderstanding and frustration among the ships' crews and widening the cultural gap between European naval ships. *Through this roundtable, I would like to discuss the importance of the use of message markers with fellow naval English instructors. Should we emphasize the use of message markers in our classrooms? How? What other elements of our organizations have to be "brought on board", so to speak, to make sure the use of message markers becomes embedded in our organizations. What is the best way to ensure message markers are implemented in naval communications?*

Audience

Program managers and teachers at defense naval schools and academies.

International Maritime English Conference

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Workshop: Save Lives and Lessen the Suffering. Using simulations and blended learning to teach Naval Officers' English

Kimberly Beckwith – Royal Netherlands Naval College (for the Dutch Defense Language Center)

Background

The RNLN requires that new officers (sub-Lieutenant level) are equipped to communicate on a STANAG 2/3 level in English upon graduation from the Naval College. However, there is a conflict between the desired end state and the number of teaching hours available for our students to reliably achieve that level . The situation is further complicated by the need for our students to master a number of types of English for special purposes, from radio communications for watch officers, to negotiations for logisticians, to effective communication with NGOs and traumatized civilians when lending humanitarian aid. In order to achieve multiple goals in a very compact program (20 contact hours, 10 self-study hours), use is being made of a simulation also used to train and certify ships' crews prior to embarking on missions with a humanitarian element. The simulation makes use of role-playing and language coaching in the class and self-study via on-line materials delivered via an open-source electronic learning environment.

Audience

Teachers of naval English with students at CEFR B2 or better, others who may be interested in blended learning or teaching via simulations.

Materials needed

Internet access, large screen, loudspeakers, white board.

International Maritime English Conference

IMEC 31 (30 September — 3 October 2019)

Åland Islands, Finland

Workshop: Development of ME Teaching Material for Yacht and Marina Management Students

Adelija Čulić-Viskota, Faculty of Maritime Studies, (Croatia)

Introduction

The aim of the workshop is to familiarise ME teachers with the newly developed material for Yacht and Marina Management students, as used at the Faculty of Maritime Studies, University of Split, Croatia. Since the materials developed for nautical students preparing to become merchant ship's officers or engineers were considered only partly appropriate, the need was felt to develop a more suitable material tailored to the requirements of teaching ME to the specific niche of future skippers of sailboats and powerboats as well as yacht masters. The need has been emphasised by the increasing nautical tourism market. For a number of years, this market has been experiencing an increasing tendency, with an ever larger number of participants in the maritime traffic. Archipelago and coastal waters are seeing an increasing number of boats and yachts, especially during the high season. Therefore, in order to reduce the number of accidents in this type of navigation, and to equip the students with the specific necessary knowledge, a ME teaching aid has been produced. The workshop participants will get to know how the material has been produced, what contents are included, and possible suggestions for improvements or cooperation will be welcome.

Part 1 (5 min.)

This part of the workshop will begin with a short presentation of the Faculty of Maritime Studies' in Split programme Yacht and Marina Management. The participants will be asked to share their possible experiences of similar study programmes at other higher education institutions.

Part 2 (10 min)

When the idea of producing a Maritime English material for students of Yacht and Marina Management occurred, some essential 'designer' requirements had to be considered. The

participants divided in groups will be asked to list the requirements they can think of and, once listed, to arrange them in a logical sequence.

Part 3 (10 min)

The participants will now be asked to discuss:

a) the topics to include

b) the methodology to employ in the development of the teaching material.

Part 4 (5 min)

In this part the Maritime English teaching material for Yacht and Marina Management students will shortly be presented. The participants will be asked to quickly go through the material and find out the pattern In which it is organised.

Part 5 (20 min)

Then, several copies of the material will be distributed to the participants who will be asked to consider it, find specificities, say what they like about the material or give suggestions as to how to improve what they do not like.

Part 6 (15 min)

In order to extend the material further by a number of new topics, the participants will be asked to produce exercises they would prefer to see included in the additional units. The participants will be asked to support their choices methodologically.

Part 7 (15 min)

The participants will be asked to provide their views of how the material they have produced would best be employed in the classroom. At this stage, new insights into teaching and learning will be discussed, and the colleagues will be asked to share the experiences.

Part 8 (10 min)

Finally, the activities, ideas, and conclusions reached during the workshop will be revised, and an invitation for further contributions to the teaching material will be extended.

International Maritime English Conference
IMEC 31 (30 September — 3 October 2019)
Åland Islands, Finland

Workshop: Context for Discourse

Ludwina Van Son, Antwerp Maritime Academy (Belgium), ludwina.van.son@hzs.be

In this workshop I would like to explore the pedagogical benefits of contextualizing discourse and the corresponding tools. The reason for exploring the relation between discourse and context requires little explanation. As Ishihara (2016 p) states: "(I)in assessing the acceptability or sociocultural appropriateness of certain linguistic expressions, it is crucial to consider the impact and constraints of the local context since the context influences language choices while language use itself simultaneously shapes the context as interactants negotiate meaning". In this approach I will primary address the influence of context on language.

The aim of every language teacher is to enhance the student's language proficiency. However, pure linguistic competence plays only a minor part in developing this proficiency. If communication is meant to be successful, namely when the message delivered provokes the reaction or is interpreted according to the sender's expectations or intentions, linguistic proficiency needs to be complemented, if not preceded, by discursive competence. A key element of this competence is to achieve the perfect combination of text and context, or in other words, to match the appropriateness of the discourse to the setting in which it takes place.

Although the term "setting' is sometimes used as a mere synonym for 'context', I'd like to use this concept to introduce various elements. In addition to the physical (space and time) and the sociocultural (social status and role) context, other parameters such as the participation framework formulated by Goffman (1981), the medium or physical channel as defined by Jakobson (1981) or the type of speech act need also to be taken into account. This broad notion of setting will allow us to address linguistic issues like language register, the use of softeners, (in)directness, etc.

After a brief introduction and demonstration of the approach to be followed, we will start by analysing a diverse set of utterances and formulating hypotheses on their potential context (who, when, where, how, etc.) This insight into non-linguistic elements, essential for constructing discourse, will subsequently be put into practice during the exercises which follow.

The first activity will analyse a discursive activity in General English, while the second will focus on Maritime English. Topics will be furnished but can also be proposed by the

participants. At the end of these exercises, a group discussion will be organised on the relevance of context awareness for designing discursive activities in the Maritime English class.

References

Goffman, E. (1981). Forms of Talk, University of Pennsylvania Press

Ishihara, N. (December 2016). Researchgate.net. Softening or intensifying your language in oppositional talk: Disagreeing agreeably or defiantly. Retrieved on 20 May 2019 from https://www.researchgate.net/publication/285004255_Softening_or_intensifying_your_language_in_oppositional_talk_Disagreeing_agreeably_or_defiantly/link/5714715e08aeff315ba35f0b/download

Jakobson, R. (1981). “Linguistics and Poetics”. Poetry of Grammar and Grammar of Poetry. Vol. 3 of Selected Writings. 7 Vols. The Hague: Mouton, 18-51.