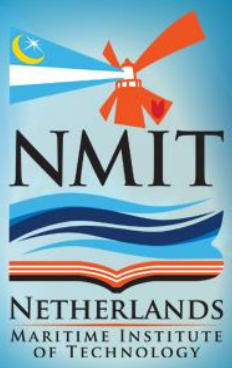


INTERNATIONAL MARITIME ENGLISH CONFERENCE

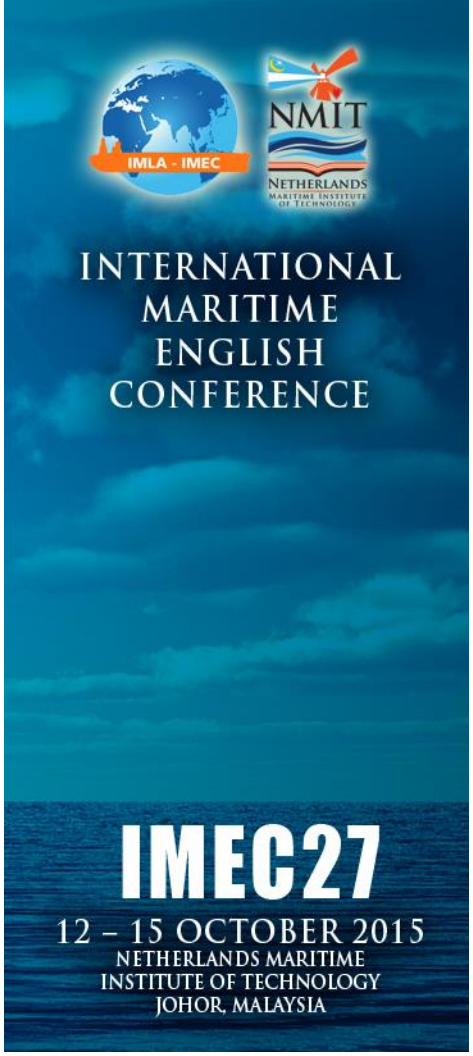
PROCEEDINGS

IMEC27

12 – 15 OCTOBER 2015

NETHERLANDS MARITIME INSTITUTE OF TECHNOLOGY

JOHOR, MALAYSIA



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FOREWORD

The IMEC-IMLA conference serves as a unique platform for Maritime English instructors from all over the world to come together to conduct discussions on issues and advancements related to maritime communication. It proves to be an exceptional opportunity for educators to experience first-hand dialogues that will help shape the structure and direction intended to develop Maritime English. The papers and workshops presented at IMEC-IMLA conferences have always served as guidelines for what is to be expected by Maritime English instructors.

The Netherlands Maritime Institute of Technology, the first maritime institute to be established in Johor, Malaysia, was established in 2011. One of NMIT's mission is to produce graduates that are well-equipped to serve the global maritime industry. Therefore, hosting the 27th IMEC-IMLA is another mark towards its commitment in welcoming innovative and thought-provoking insights related to the Maritime English field. IMEC-IMLA has been a long-standing contributor towards the development of global maritime communication and we are humbled to be a part of this event as we invite delegates to be a part of the discussions with delegates from all over the world.

The Local Organizing Committee would like to thank Prof. Peter Trenkner and the Steering Committee for their constant support and guidance throughout the IMLA-IMEC journey. We would also like to express our gratitude towards the NMIT management for their unwavering belief in the success of this conference. On behalf of the local organizing committee, please enjoy the presentations and papers that will be presented at the 27th IMEC and we hope your stay in tropical Johor will be a memorable one.

Thank you and *terima kasih.*

Zafirah Ab Rahim

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Piloting Pilots in a Full Mission Simulator – Practicing Non-Technical Skills

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Abstract

Novia UAS provides tailor made continuing education for maritime professionals. During the spring 2015 a course for Finnpilot, the governmental provider of pilot services in Finland, was planned. Communication was mentioned as one priority when discussing the content of the course. A further wish was to include the communication issues in the simulations that were to be part of the training. The process of planning and executing simulations in a full-mission simulator, emphasizing different communication related questions was new for us, but at the same time something we had been planning for some time at the UAS.

When doing background research for the training, communication related issues were put in the spotlight. The research was an eye-opener. The IMO (Resolution A.960, Recommendations on Training and Certification and Operational Procedures for Maritime Pilots other than Deep-Sea Pilots) and the International Maritime Pilot Association (ibid.) stress the importance of both communication in general and English – including the SMCP - in particular. Recent research also underpins the importance of successful communication during pilotage, not least because of accidents where communication breakdowns have occurred. This paper investigates the background for planning a course in communication for pilots and it gives insights into reasons for unsuccessful communication. It also describes the process of planning the training and the simulations. Finally the paper discusses the results as well as the background research and the execution of the simulations.

keywords: s*imulation, English, communication, briefing, pilot, exercise planning*

Introduction

Different simulators have been used for long time in maritime training. Radar simulators were already being used, for example, in Turku, Finland in the 1980s. The maritime school in Turku, Finland, (Aboa Mare), acquired the first visual simulators in the mid-90s, and since then the technology has developed, become less expensive and thus more simulators have been acquired. Aboa Mare has ten bridges all of which are visual, i.e. "you can look out from the window" ①. The image displayed, and seen from the navigating bridge, is shown in real-time. The bridges can be connected with each other, in-house or even Finland – The Philippines, so learners can see other vessels (learners' vessels or simulated) in the area. Swell, corresponding with the prevailing wind conditions, fog, rain or darkness can be simulated, and islands, the on-shore buildings and marine marks correspond to the reality.

figure 1. View in the visual simulator: the pilot boat (left) to pick up the pilot on his own ship. Second simulation. (author's photo)

A realistic picture of the surroundings supports the feeling of reality, but for maritime professionals it is more important that the equipment and the ship's features correspond with

① http://www.aboamare.fi/simulators/

their experiences of the same. Aboa Mare, has a simulator bridge exactly like the bridge of passenger vessel m/*s Viking Grace*[①], it is i.e. a replica. Also the ship model, i.e. the simulated vessel's maneuvering characteristics, is identical with the vessel. The fairways are of course also identical with real fairways. All these technical solutions made it possible for the ship's officers to train maneuvers and procedures even before the vessel was built! It is self evident that such practice is desirable from a safety perspective.

In safety-critical areas such as maritime and air transport, it is important to practice also so called non-technical skills, i.e. cognitive and social skills such as situational awareness, and communication [1]. It is often claimed that up to 80% of accidents happen due to the "human factor", i.e. factors that include the above-mentioned skills. It is thus crucial to develop simulator pedagogy in an interdisciplinary direction where both technical and non-technical skills are developed. An opportunity to do this emerged for Aboa Mare when *Finn Pilot Pilotage Ltd* (Finnpilot), the government owned company providing pilotage in Finland, turned to Aboa Mare for further training covering e.g. communication.

This paper investigates the background for planning a course in communication for pilots and it gives some insights into reasons for unsuccessful communication. It also describes the process of planning the training and the simulations. Finally the paper discusses the execution of the simulations, the feedback received in the course evaluation form, and some thoughts about the results of the training.

The pilots, communication and training

The pilot functions as an advisor to the master and the crew. The pilot brings aboard absolutely essential local knowledge, which is needed, for example, when navigating in an archipelago with narrow channels, such as is the case in the congested stretch of water off the coast of Turku. The master is responsible for his ship, and must be aware of the pilot's decisions, instructions and plans. In order for the master to be aware of the aforementioned, communication is required. Communication in Finnish waters happens in different languages, Finnish, Swedish and English. The pilot communicates in either Finnish or Swedish with local actors, such as other pilots, ships, VTS or an icebreaker. The communication between pilot and non-local crew often takes place in English. A similar linguistic diversity is commonplace

① https://youtu.be/JuF1trrylCs?t=2m20s

everywhere in the world, maybe with the exception of English-language countries and e.g. South America where Spanish supposedly is used. It can however be assumed that, for example, local dialects, accents, slang etc. make it difficult for foreign listeners to understand the talk of non-standard English speakers. Such a situation is not favorable for communication, and difficulties have been detected. In Finland, for example, The Accident Investigation Board has pointed out that there are communication problems related to pilotage. Communication between master or crew, pilot and VTS may have been scarce and/or inaccurate [2] or has been totally absent on the bridge [3] (See also [4] Wederhorn 2014.). Maybe this is the reason for *Finnpilot* to include also communication in their further training of their pilots?

Finnpilot-pilots use simulators to keep up their skills for less frequently used routes. Communication is wise to practice in connection with such routine exercises in order to make optimal use of simulator time - two birds, one stone. This is one reason to design further training in on board communication so that at least a part of the training would be realized in a simulator. Another reason for us to realize communication practice in simulators was our wish to work in a more interdisciplinary way in our simulators.

Briefings were chosen to be the focus of the communication exercises. Pilots could for example use briefings to describe the current situation (c.f. situational awareness), to issue instructions or give information. The topic is of utmost importance since a pilot, when boarding, brings with him issues that he must share with the vessel's crew. When, on the other hand, the pilot leaves the vessel to continue out to open sea, the pilot will give instructions for possible future measures that will need to be taken.

These two situations were taken as a basis for the simulator exercises to be planned: pilot embarking and disembarking. Four sea captains, a maritime English teacher (the present author) participated in designing the course and simulator exercises. One of the captains was an active pilot and the three remaining seafarers were teachers/instructors.

Theory and practice

When real-life work is simulated communication is often involved, be it simulated communication in navigation, aviation or healthcare. Communication, I would claim, is rarely the focus of the full-mission simulator exercises in maritime training; it is considered as something that takes place on the side, like a little extra so to speak. If problems in

communication occur, they might be registered and then they might be addressed in de-briefings after the exercise. The communication that occurs is thus not something that first is taught and practiced in class and then further consolidated in a simulator. Having said this it must be pointed out that, of course, students learn and practice the SMCP, radio procedures and so on, but the point is exactly this: those skills are rarely the focus in full-mission simulators! [5] We thus did not have much experience in planning exercises on communication.

figure 2. The course's first simulation in the visual "replica simulator": A new pilot on the bridge (author's photo)

Theory provides a means to study communication and to teach it. The same theory can be applied e.g. to all of the above-mentioned fields – navigation, aviation and healthcare - even if the realizations of the theory of course are different from each other. Since we were rather inexperience in planning communication-simulations, I used theory, or "experiences from other fields", as a starting point for my planning. Manser & al. [6] discusses team communication with focus on briefings in situations where a patient after surgery is handed over from the operation room team to aftercare. A different team takes over the care of the patient and it is obviously crucial for information to be transferred. This transfer is done in a briefing, and the resemblance with pilotage is easily seen – in both cases the responsibility for the continuously

safely executed task is handed over to another team. It is different in that the pilot and the crew either have been, or are going to be together for some time, but the briefing should, in any case, succeed. Manser & al's article [6] describes briefings and puts the emphasis on the interaction between the briefer and the briefed: both should actively participate and questions and discussions are recommended [6]. Another important technique for briefings is assessing the situation and anticipating future problems [6]. To me it seems that including thoughts on possible future occurrences in briefings, is a more sparsely used method in a maritime setting and it would have been important at least in one of the cases described in Wederhorn's study [4] (c.f. [7]).

I decided to use Mansner & al's [6] suggested model for briefings as a starting point. We did not feel the need for longer studies since we had no chance of comparing the credibility of different theories with our own experiences. I designed a lecture on the briefing techniques mentioned in the article and the simulator exercises were planned with the lecture serving as a basis. The lecture aimed at presenting different possible elements to be used during a briefing. Such elements are e.g. information giving and seeking, confirmatory talk, assessing, planning and so on. Since interaction and anticipation were found to be important in a successful briefing, these were given slightly more emphasis a slight emphasis was put on them. Emphasizing these elements was further supported by the fact that scarcity of communication and the lack of anticipation were cited as partial reasons for two of the accidents mentioned at the beginning of this text. I tried to give examples relating to a maritime context (see figure 3).

figure 3: Slide from author's lecture on pilots' briefings

Part of Briefing	Explanation	Example
Assessmeant	Impression	"OK, looks good..." "The passage is not wide enough... ..."
	Foretelling	When you get there, this and this will happen there...
	Assessing present situation	How is the pilotage /journey proceeding?
	Uncertainties	What do we not know Why ..?
	The situation total	I think the situation seems....safe ... too tight

After the lecture on briefings followed computer-based training① on communication in a broader sense. This was followed by simulation exercises.

The simulations

The idea with the simulations was to give the participants an opportunity to: a) observe their own communication and b) practice skills learned in the lecture. The participants were divided into groups of two or three persons. There were 2-3 persons on the bridge; master and pilot and in some cases, an OOW. The vessels were thus manned as they would be under normal circumstances. The focus of the first simulation was a pilot exchange – this is normal practice in some longer fairways in Finland. Since it was the first simulation and the pilots needed time to get used to the equipment and vessels, it was designed to be just a normal, non-dramatic, case.

Figure 4: Excerpt from simulation plan (Aboa Mare)

Exercise briefing **Student**

Course	Luotsien jatkokoulutus
Exercise	R2 Pilot disemb Hanko
Bridge team	Pilot, Master, mate
Date / Time LT	6.6. 1200
Ship	Carolina
Position	59° 48,5' N 022° 54,5' E
Voyage	Hanko - sea
Speed	12 kts
Heading	356°
Wind	SSE 15 m/s
Current	Nil
Wave height	1,3 m
Visibility	2 M
VHF channels	16
UHF ch (internal com)	01
Charts	ECDIS
Training objectives	Communication at pilot disembarking

① https://en.wikipedia.org/wiki/Maritime_Resource_Management#Computer_Based_Training_.28CBT.29

The second simulation was planned to be more challenging – pilot disembarking. The scenario was planned so that the pilot, due to weather conditions, had to leave the vessel before the actual pilot station, thus creating a need for more thorough briefing. There was also more traffic.

Figure 5: Excerpt from simulation plan (Aboa Mare)

Events in the exercise
Other traffic: Stena Forerunner outbound from West Harbor, Chemstar westbound, Madame Butterfly inbound north of Hanko 1, pusher Rautaruukki NW of Russarö eastbound, tug Artemis waiting E of Gustavsvärn, pilot boat waiting NW of Gustavsvärn

Figure 6. The second simulation: more traffic and rougher sea.

Experiences, observations and difficulties

The participants were satisfied with the course content. In the course evaluation form the statement “The themes are or will be important for my work” received an average of 8 on a scale from 1-10 (10 = I totally agree). One must keep in mind though, that the training was two days long and the second day dealt with technical matters rather than with communication. This

might have influenced the score. Having said that, it is doubtful that four participants of 18 would have given a 10 on the statement, if only the second day were to have been of importance to them. The participants thus seem to have been content, but what learning took place is harder to say.

As the colleague primarily responsible for the communication part of the course, I did ponder on how successful the simulator exercises really were. In my experience the first simulation was too simple and I do not think the participants learned a lot since they were so totally within their comfort zone. Here two pedagogical principles seem to collide. One is to keep simulations as close to reality as possible, i.e. not to force participants to deal with unrealistically complex situations. The other principle could be to design simulations in a way that would force the students to use what has been taught e.g. about briefings. The latter would seem to be more useful for communication and language training.

Another problem is that communication can be difficult to assess, since an exercise in a full-mission simulator can run smoothly even though the communication is far from perfect or even far from good. Poor communication can often be compensated through e.g. individual efforts such as a course change or similar. And if a vessel has safely reached open sea or its berth, can one claim that communication was not sufficient? In this case also the fact that the course-participants knew each other made it more difficult to assess the communication. It is hard to change communication patterns they have developed through familiarity with the other, and participants thus communicated in a kind of local slang, like “mates” would. Further the first simulation took place in well-known waters for the pilots, making the exercise even more routine, minimizing communication.

Conclusions and recommendations

Planning simulations for training communication has challenges. It would seem that the simulations must be planned not to be as realistic as possible, but instead to force the participants to use the vocabulary and/or language patterns or structures that are the objectives of the training. This might go against what maritime simulator instructors in general might think, making it more difficult for language teachers to realize their ideas. Thus the following recommendations could be interesting to discuss with maritime simulator instructors. I here discuss briefings, but the same applies to any communication exercise in a simulator.

1. In order to force the participants out of their comfort zone, all exercises should be carried out in English;

2. It would have been good to have e.g. more experienced students to perform the parts of the crew in the simulations, thus enabling the participating pilots to focus only on their own roles and eliminating the "mate-factor";

3. The participants should be given a script for the briefings, already in connection with the first familiarization-simulations. This would force the participants to do the briefing in the way presented in lectures. Having practiced the script once, it could underpin the usage of the script in the following simulations as well;

4. Simulations should be planned to maximize oral communication, disregarding the authenticity (realistic factor) claim;

5. A debriefing session after the simulation must be held. The experiences from the simulations are the most important source for learning. If a good discussion can be created in the de-briefing that follows a simulation, the participants will analyze and reflect on their performance. They will in other words reach the highest levels of Bloom's taxonomy [8]. If and when this happens, the simulation can be considered successful. How reflecting over own communication can be supported needs to be further practiced.

There has been some research into interaction with the pilot on the bridge leading to case studies [9] [10] about the pilot-master relationship, but in-depth research with the focus purely on communication would be interesting and welcome.

The workshop presentation is available at: https://youtu.be/VES1A7gW9qg

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SWOT Analysis on Cultural Awareness Training for Seafarers

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Abstract

When we think of a leader, our first thought may be of someone in a highly visible and powerful position. The IMO Model Course 1.39 *Leadership and Teamwork* is intended to "*provide a person with the knowledge, skill and understanding of leadership and teamwork at the operational level on board a ship ….for the application of leadership and team working skills*" Taking into account the previous researches on Intercultural Communication skills and teamwork, the IMO Model Course 1.39 *Leadership and Teamwork* [1] needs to get back to basics for its curriculum performance in order to avoid the creation of a giant with feet of clay, as ***application*** by definition is "*the quality of being usable for a particular purpose or in a special way* ", and ***skills*** are "*the ability, coming from one's knowledge , practice, attitude, etc., to do something well*".

Therefore this paper aims to highlight educational challenges to this dilemma. The topics of *Leadership and Teamwork Course* framework, especially those related to "*Teaching working knowledge of shipboard personnel management and training*", and the empirical findings of the author of this paper from conversations with Constanta Maritime University's students and faculty during the ***Developing English Language Competencies and Intercultural Communication on Board a Ship Course***, are used by the author to conduct an analysis of their productivity and potential success. The SWOT analysis is applied to the current cultural awareness and diversity training practices to evaluate effectiveness, efficiency and profitability.

keywords: *leadership, teamwork, intercultural communication on board a ship, diversity training*

International Maritime English Conference
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Introduction

"*No man is an island, entire of itself; every man is a piece of a continent".*

(John Donne, English poet, 1572–1631)

Culture refers to the language, values, perceptions, norms, interpersonal expectations and concepts shared within a community or organization. Often unspoken rules and expectations determine if community or organization members excel or fail.

An overarching component in multilingual crew is communication. Diverse values, beliefs, attitudes, customs, and thoughts are brought by the crewmembers. Therefore, understanding other crewmember's intentions, messages and expectations, as well as clearly expressing their own, is fundamental not only for the effectiveness of the team, but for its very existence. Expectations about leadership, decision making and communication are culturally defined. Although leadership is modelled differently among cultures, those that lead are always major players in making and communicating decisions. Cultural preferences affect how people view leaders and interpret their actions in decision making and communication①. Taking time to prepare for cross-cultural

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① see **Carmen Chirea-Ungureanu**, *Intercultural education-a response to contemporary multilingual societies and a new chllenge for Maritime Education and Training(MET)institutions*, Procedia Social and Behavioral Sciences Journal, Volume 116, 21 February 2014, Pages 4260–4263, Published by Elsevier B.V Ltd. ISSN: 1877-0428, indexed in Scopus and ScienceDirect and submitted to Thomson Reuters Conference Proceedings Citation Index-Science (ISI Web of Science),

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Carmen Chirea-Ungureanu,, *Good Intentions are not Enough: Cross-Cultural Training for seafarers, a Must-Have of Intercultural Education***,** 20th International Conference on Maritime Education and Training, IMLA 20

communication has merit whether the interaction will be short or long-term. Understanding whether a culture is high-context or low-context, monochronic or polychronic, and how the culture views space, will help in preparing for a cross-cultural communication experience. Leaders who are prepared will enjoy more effective cross-cultural communication, and thus be more likely to get the results they desire①. [2]

Cognitive Concepts and Cross-Cultural Awareness

No topics, probably, have been quite as exhaustively examined, studied, dissected, and discussed as cultural awareness, intercultural communication, effective communication, and leadership and teamwork. But much of the focus must be on how the maritime industry defines ***intercultural communication/leadership and teamwork on board a ship***. What works in some parts of the world may or may not work in intercultural communication on board a ship in other parts of the world.

Researchers were interested in intercultural communication that developed cognition skills needed to understand life within multilingual crew②. The basic part of a "Cultural Awareness" Course (no matter how well-designed) was intended to heighten the participant's awareness of

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"Back to Basics", 1-5 July, 2012, Maritime Institute Willem Barentsz, West-Terschelling, The Netherlands.

① Bordas, Juana. *Salsa, Soul, and Spirit: Leadership for a Multicultural Age*. San Francisco: Berrett-Koehler, 2007.

② See **Jan Horck, Diversity Management: A Course for STCW and a Challenge in Pedagogy ,** Proc. of IMEC 23, The 23rd International Maritime English Conference, 10 Oct-14 Oct 2011, Constanta Maritime University, Constanta, Romania; **Smorochynska Olena, Developing socio-cultural competence as a key for improving cultural awareness of future seafarer**, Proc. of IMEC 23, The 23rd International Maritime English Conference, 10 Oct-14 Oct 2011, Constanta Maritime University, Constanta, Romania

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his or her own "home-culture"; the latter part of such a Cultural Awareness Course concentrated on assumptions, values, and behaviours of the "target-culture". The topics were divided into different sections by various researchers, but the main parts of such a course share the same framework: Part 1: "Considering Parameters"; "Defining Culture"; "Human Needs"; "Cultural Expectations and Behaviours"; "Identity Symbols"; "Rituals"; "Methodology: The Students Teach the Teacher"; Part 2: Understanding Target-Culture Behaviour"; "Nonverbal Communication"; "Basic Reality-Assumptions"; "Home-Culture Values--Proverbs"; "Cultural Heroes"; "Cognition as Culturally Determined"; "Stereotyping--Roadblocks to Understanding"; "Culture Shock and Adjustment"; "Critical Incidents"; and "Pedagogical Approach" etc. etc.

As the author of the framework of *Developing English Language Competencies and Intercultural Communication on Board a Ship* Course①, I tried a different approach to discuss the establishment of a connection between cognitive concepts and knowledge acquired through English-as-a-Second-Language teaching and learning. Modern thinking focuses on effective application of common global knowledge and language skills appropriate for culturally diverse students. That suggests that a cognitive conceptual approach to language learning gives students the responsibility to explore language and themselves, as well as their surroundings in order to work cooperatively with peers and teachers. Teaching culture-specific differences may have far-reaching consequences, because it can lead to self-aware, environmentally-aware relationships which may increase students' awareness of intellectual issues. Successful intellectual communication becomes increasingly important as it improves on access to high quality international experiences.

To increase our knowledge, we need to be mindful of what is going on in our own thinking, feelings, and experiencing. The concept of “mindfulness” can serve as the first effective step in raising our awareness of our own systems of thinking and judging② [3]. Additionally, through mindfulness, we can learn to be more aware of the commonalities and differences that exist between dissimilar individuals and groups.

Robert J. House director of the Global Leadership and Organizational Behaviour Effectiveness Research Program at the Wharton School has spent the past ten years studying how differ-

① See **Carmen Chirea-Ungureanu, „** *Developing English Communication and Understandimg Skills on Board Ship*”, Editura Crizon, Constanta, 2013, ISBN 978-606-8476-09-4

② “Mind Tools”, 2012. Hofstede’s *Cultural Dimensions Understanding Workplace Values Around the World.* Available at: http://www.mindtools.com/pages/article/newLDR_66.htm (Accessed August 18, 2015).

ent cultures throughout the world define *leadership*. He and his colleagues have found that definitions and perceptions of leadership vary considerably from culture to culture. In the global business world, organizations and executives face a growing need to understand the subtleties and nuances of leadership as it is exercised in different cultures① [4].

Culture includes the shared beliefs, norms and values within an organization. It sets the foundation for strategy. For a strategy within an organization/institution to develop and be implemented successfully, it must fully align with culture. Thus, initiatives and goals must be established within an organization/institution to support and establish a Culture of "Everyone does Support".

Flexibility and Adaptability

Organizations that remain flexible are more likely to embrace change and create an environment that remains open to production and communication. This provides a model that welcomes diversity and helps clarify strategy implementation. Culture within an organization can serve many purposes, including to unify members within an organization and help create a set of common norms or rules within an organization that employees follow② [5].

Characteristics of Stability

A stable culture, one that will systematically support strategy implementation, is one that fosters a culture of partnership, unity, teamwork and cooperation among employees. This type of corporate culture will enhance commitment among employees and focus on productivity within the organization rather than resistance to rules and regulations or external factors that prohibit success.

Goal Unification

Flexible, strong and unified cultures will approach strategy implementation and affect implementation in a positive manner by aligning goals. Goals can come into alignment when culture

① House R.J. et al. (eds.), *Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies*. Thousand Oaks, CA: Sage, 2004

② Schwartz, S.H., *A Theory of Cultural Values and Some Implications for Work*. *Applied Psychology*, 1999, 48(1), pp. 23-47

works to focus on productivity and getting the organization's primary mission accomplished. Maritime shipping operates within a complex operational setting and incorporates many types of workplaces and work roles. The maritime domain has been a bit slower than other complex domains in its research and development of human factors and ergonomics application. The problem remains that the operator is continuously being excluded from the loop, which increases the probability of shipboard errors and accidents.

There is a domino effect in the organization that ensures that all work performed by each individual in the company and work group focuses on performance and on the strategic importance of the company. This allows culture to align with strategy implementation at the most basic level. For this level of unification to work, goal setting must align with and be supported by systems, policies, procedures and processes within the organization, thereby helping to achieve strategy implementation and continuing the cultural integrity of the organization.

Process Implementation

Part of cultural alignment and strategy implementation involves process implementation. Processes include utilizing technology to facilitate goal attainment and the results a company is looking for when working with employees to meet their needs. While most of the time the hard problems and needs of an organization get met, culture becomes neglected in the process. That is where processes come into place and strategy implementation gradually comes into existence to uphold and maintain culture and strategies.

Cultural Alignment

When culture aligns with strategy implementation, an organization is able to more efficiently operate in the global marketplace. Culture allows leaders to work both individually and as teams to develop strategic initiatives within the organization. These may include building new partnerships and re-establishing old ones to continue delivering the best possible goods and services to a global market① [6].

① Lahey, Patrick, Mary Trant, Rudolph F. Verderber and Kathleen S. Verderber. *Communicating Across Cultures. Communicate!* Nelson Education Ltd. First edition, 2005. Available at: http://www.communicate!e.nelson.com/chapter09.pdf (Accessed August 18, 2015).

Brainstorming & SWOT Analysis

A SWOT analysis, which evaluates **S**trengths, **W**eaknesses, **O**pportunities, and **T**hreats, gives a community or organization a snapshot of its current position among others. To construct your own SWOT analysis to set a course on Cultural Awareness, examine your current situation. What are your strengths and weaknesses? How can you capitalize on your strengths and overcome your weaknesses? What are the external opportunities and threats in your chosen framework of the course?

An example: in order to perform brainstorming and SWOT Analysis of your academic course, there are some steps to be taken:

Assembling a Group

To get as many perspectives as possible when brainstorming your SWOT analysis, assemble a group of diverse students from across your class.

Strengths and Weaknesses

Ask the students in your group to brainstorm as many of your course's strengths as they can. Strengths are areas of your course that you control and that can give you an advantage, such as the course's activities. Then ask the group to list off as many weaknesses as possible. Your weaknesses are any areas of your course that you control, but that put you at a disadvantage, such as poor topics chain management. Write all these strengths and weaknesses down for later use.

Opportunities and Threats

Ask the group to brainstorm as many opportunities for your course as they can. Opportunities are external conditions that you can take advantage of. Then ask your group to list as many threats as possible. Threats are also external conditions, but ones that can potentially harm your position. Write all of these suggestions for later use.

INTERNAL ASPECTS	**Strengths** Internal positive aspects that are under control and upon which you may capitalize in planning of activities: ·Work Experience ·Education, including value-added features ·Strong knowledge within your field (e.g. research projects) ·Specific transferable skills (e.g., communication, teamwork, leadership skills) ·Personal characteristics (e.g., strong work ethic, self-discipline, ability to work under pressure, creativity, optimism, or a high level of energy) ·Good contacts/successful networking ·Interaction with professional organizations	**Weaknesses** Internal negative aspects that are under your control and that you may plan to improve: ·Lack of Work Experience ·Lack of goals, lack of self-knowledge, lack of specific knowledge ·Weak technical knowledge ·Weak skills (leadership, interpersonal, communication, teamwork) ·Negative personal characteristics (e.g., poor work ethic, lack of discipline, lack of motivation, indecisiveness, shyness, too emotional)
EXTERNAL ASPECTS	**Opportunities** Positive external conditions that you do not control but of which you can plan to take advantage: ·Positive trends in your field (e.g., growth, globalization, technological advances) ·Opportunities you could have in the field by enhancing your education ·Field is particularly in need of your set of skills ·Opportunities you could have through greater self-knowledge ·Opportunities for advancement in your field ·Opportunities for professional development in your field ·Career path you've chosen provides unique opportunities ·Geography ·Strong network	**Threats** Negative external conditions that you do not control but the effect of which you may be able to lessen: ·Negative trends in your field that diminish jobs (downsizing) ·Competition from your cohort of college graduates ·Competitors with superior skills, experience, knowledge ·Competitors who went to schools with better reputations. ·Obstacles in your way (e.g., lack of the advanced education/training you need to take advantage of opportunities) ·Limited advancement in your field, advancement is cut-throat and competitive ·Limited professional development in your field, so it's hard to stay marketable · Companies are not hiring people with your major/degree

Solutions

After assessing the ***s****trengths*, ***w****eaknesses*, ***o****pportunities* and ***t****hreats* to your course on "cultural-awareness", you should have the group review them and brainstorm possible solutions or actions to take. Ask the group for suggestions on how to use your strengths to take advantage of opportunities, and how to avoid threats that can harm your weaknesses. Write down all of the suggestions no matter how far-fetched or unrealistic they may seem.

In a general sense, the SWOT analysis can identify areas within the community or organization's culture that benefit or harm the community or organization. How a community/organization performs is directly tied to its culture; therefore, a SWOT analysis is beneficial to see the areas that are working for and against the organization's best interests.

What is the Objective of a SWOT Analysis on Cultural Awareness Training for Seafarers?

First, it discloses competitive advantages:

Second, it explores hopes for effective communication and communication skills development

Last, but not least, it organizes "cultural awareness " training for setback.

A SWOT analysis is a method to recognize where the designed course on "cultural awareness" training is vulnerable and strong, and where it ought to protect and attack. The outcome of the practice is an "action plan", or "plan of action". The analysis can be carried out on the way we are delivering academic courses to our students/trainees.

How to carry out a SWOT Analysis?

Step 1: *Information gathering*; record all strengths that exist currently. Then consequently record all weaknesses that exist currently.

Step 2: *What may be*: record all opportunities that subsist at some point. Opportunities are like future strengths. After that, record all threats that subsist at some point. Threats are likely potential weaknesses.

Step 3: *Plan of action*: assess the SWOT matrixes with an outlook to making an action plan to deal with each of the four parts.

A SWOT analysis centres wholly on the four components incorporated in the short form, permitting in our case, maritime education and training institutions/shipping companies, to recognize the powers influencing a plan, action or proposal. Recognizing these negative or positive impact aspects, can assist companies more efficiently communicate what components of a plan should be identified. While planning a SWOT analysis, persons normally make a table divided into four columns in order to list every impacting aspect alongside for contrast. Strengths and weaknesses will not normally match scheduled threats and opportunities, even if some correlation ought to exist because they are joined together somehow.

- *Count the Internal factors*: the initial two letters in the short form, Strengths and Weaknesses, denote internal factors, which imply the experience and resources readily accessible: Human resources, employees, employee programs, on board ship hierarchies etc.

- *Don't forget the External factors*: Each company, individual or institution is affected and influenced by outside forces. Whether linked indirectly or directly to a threat or opportunity, each of these aspects is vital to take notice of or file: market trends, for instance new technology and products or changes in crew requirements; crew features, for instance age, culture and gender, race etc.[①][7]

SWOT Analysis of Developing English Language Competencies and Intercultural Communication on Board Ship Course

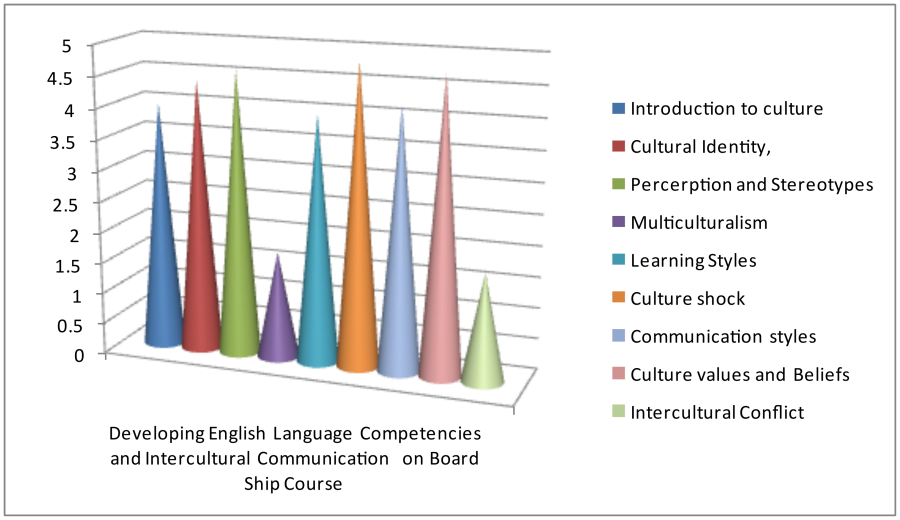
In this paper, an example of SWOT Analysis is carried out as an attempt to judge the effectiveness of the content and methods of the "Cultural Awareness" Course in preparing students for joining multilingual crew on board ship In other words, it is an attempt to discover if the *Developing English Language Competencies and Intercultural Communication on Board a Ship Course* objectives were met. The research was carried out during the fall and spring semester of the academic year 2014-2015 in Constanta Maritime University. Participants-350 students enrolled in their 3rd full-time year of study, Navigation, and Marine Engineering specializations-were asked to answer questions concerning the usefulness of the topics covered in the course as well as the various educational methods used in the course in an attempt to discern if students

① Silzer, Sheryl and Sunny E. Hong. *The Biggest Challenge of Multicultural Teams*. Tokyo: 2010, May 13, 2010. Available at: http://www.tokyo2010.org/resources/Tokyo2010_Silzer.pdf (Accessed September 01, 2015).

acquired cultural awareness abilities that are construed as necessary for creating successful relationships. Cultural awareness abilities viewed as being necessary include communication, knowledge, and skills, and were incorporated into the foundation of the course activities① [8]. It should be noted that students were given questionnaires at the end of the course as well to evaluate the course overall and that generally, feedback was positive. In fact, course evaluations indicated that most students who took the course felt that they gained valuable knowledge and skills in the course that would be helpful to them when they went on board a ship as well as in the future after they returned.

The students found the topics and activities of the course to be useful tools they could use during their study-abroad experiences (e.g. ERASMUS mobility for studies) or practice on boardship within multilingual crew. Examining the effectiveness of the topics covered in the course and the activities individually, one can see aspects which students found most useful. Figure 1 shows the usefulness of individual topics. Students found all of the topics useful, but knowledge and awareness of culture/transition shock was deemed to be the most useful. This was followed closely by perceptions and stereotypes, cultural values and beliefs, cultural identity, and intercultural conflict styles.

Fig.1. How useful was what you learned from the following topics in your onboard experience/study abroad?



① Hofstede, G. (1997). *Cultures and organizations: Software of the mind.* New York: McGraw-Hill.

Grove, C., & Torbiorn, I. (1993). *A new conceptualization of intercultural adjustment and the goals of training.* In M. Paige (Ed.), *Education for the intercultural experience* (pp. 73-108). Yarmouth, ME: Intercultural Press,1993

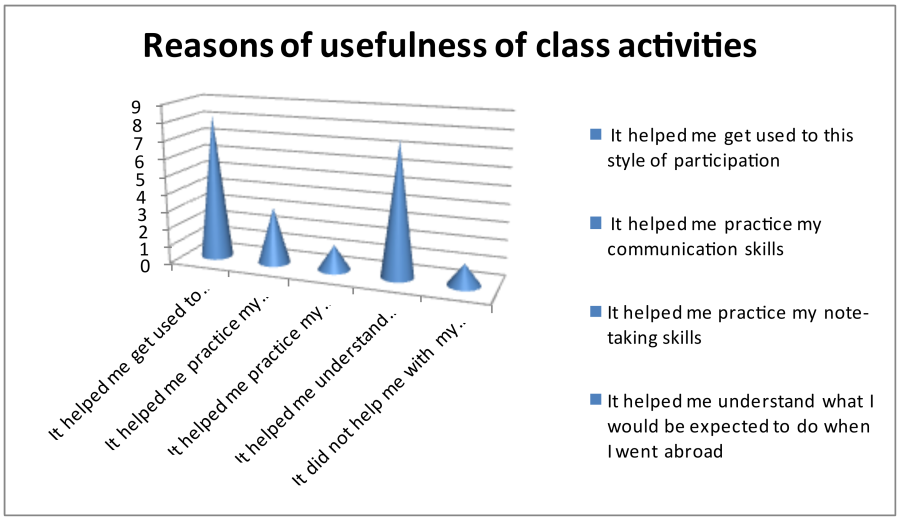
The activities of the *Developing English Language Competencies and Intercultural Communication on Board Ship Course* were:

- Small group discussion
- Study of cases & discussion
- Personal surveys and questionnaires
- Textbook
- Lecture
- Videos
- Large group discussion
- Mid-Term test (short answers)
- Final paper

Figure 2 shows the main reasons students found these activities useful in preparing for their study abroad/ practice on boardship experiences. For most activities, most of the respondents answered that they were in improving their communication skills. This was followed by the view that activities helped them to know what to expect when they went on board ship/abroad, and that it helped them get accustomed to this participation style:

- *It helped me get used to this style of participation*
- *It helped me practice my communication skills.*
- *It helped me practice my note-taking skills*
- *It helped me understand what I would be expected to do when I went abroad (Erasmus student mobility for study) or onboard the ship.*
- *It did not help me with my study abroad /onboard experience.*

figure 2



After examining the survey results and comments made by research participants, it can be said that the *Developing English Language Competencies and Intercultural Communication on Board Ship Course* was largely effective in preparing them for their study-abroad /practice on boardship experiences. Many of the comments made by students show a clear awareness of ideas studied in the course and their relations to what they actually experienced while abroad (Erasmus student mobility for study)/onboard ship. It can be assumed from some of the comments that the students have actually been capable of using the tools they learned in the course to analyze their experiences. However, it is uncertain whether this ability was used during the time they actually had the experiences, or whether they simply analyzed and synthesized these experiences partly in response to doing the questionnaire for this course. This may somewhat cast doubt on the actual effectiveness of the course as a pre-departure training device. More importantly, it has given at least some of the students who took the course skills, awareness, and knowledge that they can have access to during their lifetimes, and not only while they are participating in this course.

Culture-driven Leadership

As teachers, we spend a lot of time training students to become leaders, teaching skills and increasing knowledge aimed at turning smart, young people into effective leaders. Company training programs pick up where the schools leave off. Consider, for example, programs on workplace diversity, with their emphasis on communication and team building. A critical component

of team building is culture, because if teams are to work effectively all employees must understand and embrace the culture of the particular group and business. There's no doubt that today, a leader's success depends on how he or she moulds and develops that culture. Shipping is global, but each shipping organization has a culture shaped by the maritime business it is in and the people who run the business. Executives are themselves products of the unique cultures in which they have learned and conducted business. To see how culture might come into play, we can easily imagine a situation in which a British executive who was trained at an American maritime school is asked to run the Argentine shipping branch of a Japanese shipping company. What leadership attributes should this executive work to develop: Japanese? Argentine? American? British? This executive needs to understand both the unique culture within which he works and, in addition, how his employees perceive leadership from their individual cultural standpoint: "*One size does not fit all*". An executive needs to develop bespoke leadership attributes, tailored to the unique culture within which he or she works.

Paradoxes in leadership abound. Instant communications and easy accessibility may shrink this world, but distinct cultures have always and will always continue to exist throughout the global economy. The most successful companies will be those that not only understand the nuances that exist among different cultures, but train their executives to lead in ways that demonstrate an understanding and appreciation of distinct cultures. The global executive's leadership style will need to be protean, changing from situation to situation. Sensitivity to the unique culture within which the executive works may well be the most important leadership attribute in the global economy.

Is Your Team Too Big or Too Small? What's the Right Number?

When it comes to athletics, sports teams have a specific number of team players: A basketball team needs five, baseball nine, and soccer 11. But when it comes to the on board ship workplace, where teamwork is increasingly widespread throughout complex and expanding organizations, there is no hard-and-fast rule to determine the optimal number to have on each team. Each person counts. Size is not necessarily the first consideration when putting together an effective team.

First, it is important to ask *what type of task the team will engage in*. Answering that question will define whom you want to hire, what type of skills you are looking for. The interdependence

matters, because it is one of the mechanisms that you use to determine if people are getting along.

Second, *what is the team composition*? What are the skills of the people needed to be translated into action? That would include everything from work style to personal style to knowledge base and making sure that they are appropriate to the task.

And third, *you want to consider size*; when it comes to team size each person counts. We get to know each other and share individual core values so we can come up with team values. But is there an optimal team size?

Diversity: Bad for Cohesion?

Recent researches have looked at another confusing area when it comes to teams — the *value of diversity*①. Various theories suggest that diversity represented by gender, race and age leads to conflict and poor social integration — while various other studies suggest just the opposite. "The general assumption is that people like people who are similar to themselves, so there is a theory to suggest that a lot of diversity is bad for cohesion…But there is also a theory that says diversity is great, that it creates more ideas, more perspectives and more creativity for better solutions."② [9]

Within a company, individual teams often begin to compete against each other, which can be troublesome. "One of the problems is the in-group, out-group problem"③[10]. Depending on how we identify ourselves, we can be part of a group or separate from a group. At many ship-

① **Alison Noble, Lieve Vangehuchten, Willy Van Parys**, *Intercultural competence and effective communication,* Proc. of IMEC 23, The 23rd International Maritime English Conference, 10 Oct-14 Oct 2011, Constanta Maritime University, Constanta, Romania; **Jie Gu, How to Improve Chinese Seafarers' Communication Skills in International Maritime World**, Proc. of IMEC 23, The 23rd International Maritime English Conference, 10 Oct-14 Oct 2011, **Olena Smorochynska,** *Developing sociocultural competence as a key for improving cultural awareness of future seafarers,* Proc. of IMEC 23, The 23rd International Maritime English Conference, 10 Oct-14 Oct 2011, **Jan Horck,** *Cultural awareness: a pedagogic challenge!,* Proc. of IMEC 23, The 23rd International Maritime English Conference, 10 Oct-14 Oct 2011; **Carmen Chirea-Ungureanu**, *Good Intentions are not Enough: CROSS-CULTURAL TRAINING for seafarers, a MUST-HAVE of Intercultural education*– **ALERT!, The International Maritime Human Element Bulletin**, The Nautical Institute under the sponsorship of Lloyd's Register Foundation., HE01180, Publish date: 10/10/2013

② Katherine J. Klein, *Team Mental Models and Team Performance*, Nanyang Technological University, Singapore, January 2006 , *Journal of Organizational Behaviour.*

ping companies, the engineering group and the navigation group are very much at odds. But at the same time, if you talked about that company vs. another company, the teams are together, they are more alike than the people at the other company. Teams are sometimes *silo mentality* within a company and they think they are competing with each other instead of being incentivized to work together.

While teams are hard to create, they are also hard to fix when they don't function properly. So how does one mend a broken team? "You go back to your basics,"① [11]. Does the team have a clear goal? Are the right members assigned to the right task? Is the team task focused? Leadership in a group is very important. The team goals cannot be arbitrary. The task has to be meaningful in order for people to feel good about doing it, to commit to the task.

Effective leadership, strong communication, and a common core culture—that includes to some extent a shared organizational identity and assumptions about mission, strategy, and goals—are the building blocks of a successful organization and are necessary if programs in the organization are to be implemented successfully. Without those elements, programmatic efforts in any organization—including workforce resilience programs—will not succeed② [12]. Leadership, communication, and culture are intimately intertwined.

Leadership and Cultural Awareness: Helping Cultures to Connect

Leadership is not status or position. Leadership is all about achievement of the right results. Leaders are doers, who take responsibility and make a difference. —Peter Drucker

People bring their cultural background with them when they participate in multicultural teams. To be successful, it is imperative that the members move beyond their cultural preferences and seek to understand how their team members see and understand the world around

③ See House R.J. et al. (eds.), *Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies*. Thousand Oaks, CA: Sage, 2004.

① Mueller, J. S. (2012). *Why individuals in larger teams perform worse*. Organizational Behaviour and Human Decision Processes, 117(1), 111-124.

② Beer M, Eisenstat RA, Spector B. *Why change programs don't produce change*. Harvard Business Review.1990;68(6):9; Kotter JP. *Leading change: Why transformation efforts fail*. Harvard Business Review. 2007; 85(1):96.

them. This is even more important for the person or persons who lead the team. The values held by leaders as well as members of the team are a major influence on their relationship.

Culture is a major factor in the development of the individual as a person so it is not surprising that cultural background heavily influences leadership styles and behaviours. Leadership involves influence, vision, and motivation to bring people together to focus on a common goal. Lingenfelter proposes *that cultural differences on multicultural teams are a catalyst for conflict and disagreement*① [13]. Therefore, a major responsibility of cross-cultural leadership is to help team members coming from different cultural backgrounds have a common vision and to build an environment of trust. Merely trying to reduce cross cultural tensions will not be enough to help people work together effectively. Procedures and practices that help change attitudes and dissipate apprehension, suspicion and doubt are needed. Trust is not built in a vacuum but requires intentional effort that incrementally builds understanding, appreciation and confidence. The leader must provide a vision of trust but it is the responsibility of the team as a whole to build a community of trust.

Summary, Conclusions, and Recommendations

Effective leaders constantly re-examine their own personality traits, skills, and weaknesses in order to prepare a successful strategy for becoming a leader. Each situation or work environment may vary greatly and rely on a different plan of attack. Several inventories exist that may help leaders categorize their style. Learning about one's inherent leadership style can help develop a strategy for improving skills. In addition, a better understanding of how others react to various situations will help improve communication skills.

Management vs. Leadership

People do not immediately transform into leaders simply by gaining an administrative job title such as "supervisor" or "manager." Moravec and Manley [14] developed a list of terms that differentiates management and leadership traits. Their list of contrasting terms has been widely distributed and republished②.

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① Lingenfelter, Sherwood G. *Leading Cross-culturally:Covenant Relationships for Effective Christian Leadership.* Grand Rapids: Baker Academic, 2008.

② Moravec, Milan and Richard Manley, *Reinventing Leadership*, PM Network, September 1995, pp. 15-18.

One method of self-analysis begins by comparing personal style to this list of contrasting terms. For example, the list notes that managers "administer" while leaders "innovate." If these two terms represent opposite ends of a management-leadership continuum, where do you fall? A similar analysis may be conducted for each set of terms. Apersonal skills inventory may fluctuate with changes in career, education, or responsibilities.

Effective leaders take the inventory of their style one step further by understanding the consequences of their actions. Successful leaders will fluctuate between the "manager" style and "leadership" style in order to ensure the overall success of the organization, project, or situation① [5]. As a result, successful leaders probably fall in the middle of the scale in most categories.

SWOT Analysis

Anyone with experience in strategic planning has probably conducted a SWOT analysis. SWOT analysis provides a summary of the Strengths, Weaknesses, Opportunities, and Threats of an organization, but a person may conduct a similar analysis on herself/himself. Begin by listing your leadership skills that are strong and that provide a foundation for your leadership style. Second, list your leadership weaknesses or deficiencies. Opportunities would consist of two categories: chances to improve weak skills and chances to utilize skills you have been ignoring in leadership situations. Threats can include others' perceptions of your skills or your neglecting to maintain a skill set over time.

In order to be efficient and harness the abilities of participants, a leader must first know her/his strengths. Leaders must constantly improve and look for educational opportunities that focus on personal weaknesses that may inhibit their ability to lead. As a result of a personal SWOT analysis, a leader can develop an educational plan, a personal vision for leadership, and a toolkit of skills.

SWOT Analysis is an uncomplicated however, helpful structure for analysing life on board a ship that concentrates on strengths, reduces threats, and takes the utmost possible benefit of opportunities accessible to trainee.

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① Tony Bush, *Theories of Educational Leadership and Management*, 3rd Edition, 2003, SAGE Publication Ltd, London.

SWOT analysis can be utilized to "beginning" plan formulation, or in more refined approach as a sober policy tool. It can be made use of to gain perception of opponents, which can present the insights required to come up with a successful and coherent viable position. While doing the SWOT Analysis, one should be rigorous and realistic. Use it at the correct stage, and complement it with other alternative-production tools where fitting. One makes use of SWOT like a guide and not a recommendation.

Improvement in leadership, communication, and culture on board a ship is an investment in the organization and the workforce that will fulfil the shipping company's mission. It is important to remember that leaders create the culture and that culture drives organizational results.

The complexities of communication are magnified in multicultural team situations. Each member, including those in leadership, brings their cultural preferences with them to the team. Cultural differences can create discord among members or provide an opportunity to learn from each other. Therefore, understanding and participating in the exchange of cultural information through intercultural communication with those of other cultures is critical for positive team relationships and effective productivity as a group. Leadership and decision making are affected by cultural values and practices, which require both leaders and team members to practice flexibility, patience and a willingness to adapt to new paradigms and actively participate in meaningful ways in the development of the team.

Team members as well as leaders must strive to be positive in their interactions, work to build trust, acknowledge cultural influences on leadership and decision making styles, and learn new skills that will help them to build a team environment that will be satisfying and effective.

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Lingua Franca Core for Maritime English Pronounciation Teaching

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Abstract

As the IMO model course for Maritime English has been recently revised and updated, the requirements of current changes to both the 2010 STCW Manila Amendments and English education have been actively reflected on and largely encompassed. In order to provide practical guidelines for language teaching, a wide range of new pedagogical approaches and their theoretical backgrounds are also suggested. Considering the current spread of Business English as a Lingua Franca (BELF) and its critical importance in maritime communication, however, the pedagogical approaches need to be re-evaluated, specifically in terms of teaching pronunciation in such a way as to emphasize clear and effective communication among international interlocutors. In this regard, the core pedagogical elements of pronunciation should be clearly set and provided with consideration for Lingua Franca Core (LFC), which places importance on mutual intelligibility rather than following the rules of native speakers. In this presentation, therefore, the current trends of BELF in the maritime industry will be introduced. Following this, the importance of LFC in maritime communication will be outlined, and its key features discussed in terms of effectiveness and clarity of international maritime communications. Finally, the close comparison between LFC and the pronunciation guidelines suggested by the IMO Maritime English model course 3.17 will be conducted, and its pedagogical implications will be suggested.

keywords: *IMO English Model Course 3.17, Lingua Franca Core, Business English as a Lingua Franca, effective and clear communication at sea*

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Introduction

Successful communication at sea is directly linked to clear and complete delivery and receipt of the target message between interlocutors. It can be said that speakers' effective delivery of their intended message, and listeners' precise decoding and accurate understanding, are the keys to successful maritime communication. In terms of effective and clear delivery of the message, therefore, the key communicative features, which are directly linked to intelligibility, need to be reconceptualized from a practical point of view, considering several factors in the current international maritime industry, such as that: the distribution of seafarers from non-native-English regions, such as Asia and Eastern Europe, are considerably high; the number of crew members belonging to these areas is expected to increase in the future (BIMCO, 2010); and, therefore, those from non-native-English countries will constitute a majority group within international sea communication.

In order to provide clear guidelines for teaching key communicative features at sea, IMO English Model Course 3.17 has been published and recently updated by accommodating a wide range of traditional and up-to-date language teaching and/or training theories and pedagogies. In terms of teaching speaking, however, more weight still seems to have been put on traditional views, which focus on "nativeness", rather than global intelligibility. From this perspective, the guidelines included in these sections, such as teaching pronunciation, connected speech, word stress and stress-/syllable- timed language needs to be re-evaluated under the consideration of Business English as Lingua Franca (BELF) and Lingua Franca Core (LFC), which are the current mainstream forms of English communication in the international business context and focus on mutual intelligibility between international interlocutors, regardless of their language backgrounds.

In this paper, therefore, these two theories, BELF and LFC, will be briefly introduced, and their key linguistic features outlined. After that, the theories and practical pedagogical approaches suggested by IMO English Model Course 3.17 will be closely analyzed and compared with those of LFC. Following this, the theories will be analyzed in detail in order to draw pedagogical implications and provide a desirable future direction of teaching speaking in a way that will meet the practical language needs of the international maritime industry.

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English in a Global Business Context

Business English as a Lingua Franca

English as a Lingua Franca (ELF) has been widely accepted as a practical communicative tool in world communication between speakers 'who share neither a common native tongue nor a common (national) culture, and for whom English is the chosen foreign language of communication' (Firth, 1996, p.240). When narrowing its focus down specifically to business interaction in a lingua franca setting, the term 'Business English as a Lingua Franca' (BELF) can also be used as a similar concept (Louhiala-Salminen, Charles & Kankaanranta, 2005). No matter which is used, these terms can be seen as representing a functional language system intended to facilitate effective communication between non-native speakers in multi-cultural settings. However, (B)ELF is not necessarily confined to non-native speakers' communication, but rather can be expanded to communication between native and non-native speakers (Seidlhofer, 2009), even though this takes a small portion of (B)ELF interactions considering that native speakers only account for 25% of the world's English users (Crystal, 2003). The distribution of speakers in the BELF environment is very similar to that of the world maritime industry; as BIMCO (2010) clearly suggests in its BIMCO/ICS manpower report, the supply of seafarers are largely from non-native-English countries, such as Asia and Eastern Europe, and this phenomenon is expected to be maintained in the future. Considering the global seafarer supply by geographical area, therefore, the majority group of English maritime communication is expected to no longer be native speakers, but rather non-native speakers who speak a wide range of variations of English (e.g. so-called Konglish, Chinglish and Indoglish).

IMO English Model Course 3.17 also recognizes the BELF nature of the international maritime shipping industry by emphasizing the importance of the multi-culturalarity and linguistic variations in real sea communication, as clearly stated below:

... It is certainly not necessary to aspire to speak 'the Queen's English'. There are more people now speaking English as their second language than there are native speakers. We also have to remember that there are a range of 'Englishes', i.e. accepted variations of English with particular accents and linguistic styles e.g. Indian English, Sri Lankan English, Malaysian English, Australian English; this is a very pertinent discussion area in EFL in this era of global communication.

Considering this arising phenomenon of English communication in the global business context, accordingly, the future focus should be on effective and clear communication for the achievement of given communicative goals based on mutual intelligibility in a multicultural setting, as emphasized by the IMO STCW convention (2010). That is, the traditional paradigm in language teaching and education whereby the aim is to conform to and follow the norms of native-English speakers have been greatly challenged, giving rise to the belief that the time has now come to change this paradigm (Kachru & Nelson, 2001; Björkman, 2008; Firth, 2009; Koester, 2010).

Lingua Franca Core

In order meet the practical needs of global English communication in which a variety of 'Englishes' are spoken in real business interactions, the concept of LFC was created. The key value of LFC is a mutual intelligibility between BELF speakers in a verbal communicative environment. Given that around 90% of miscommunication has been reported as arising from speakers' pronunciation problems, rather than syntactic structures and/or choice of lexis (IMO Model Course 3.17), the importance of this in English education cannot be underestimated. However, LFC throws a question to the traditional language teaching methodologies in speaking, in that the native speakers' pronunciation, accents and intonation can be accepted as a norm of current English education, specifically where mutual intelligibility in cross-cultural communication should be regarded as a key element to be considered. Research on this has been actively conducted by many linguists around the world, and has challenged the strong beliefs and expectations of the past that native speakers are the best listeners and the most intelligible speakers in global communication. In the early 1990s, Smith (1992) posed a question on this issue and reported that native speakers' phonology was no more intelligible than that of non-native speakers, and that their understanding of other English varieties was not high enough in the global context.

From this perspective, the core of communication in the BELF setting was suggested by Jenkins (2005), wherein the focus is on mutual intelligibility in cross-cultural communication. The key features of LFC compared to the traditional ELT are suggested in Table 1 (Zoghbor, 2011).

	Aspects of pronunciation	EFL targets	ELF targets	Influence on intelligibility
1	The consonantal inventory	All sounds RP non-rhotic /r/ GA rhotic /r/ RP intervocalic [t] GA intervocalic [t]	All sounds except / θ/ and /ð/ Rhotic /r/ only Intervocalic [t] only	Yes but not all
2	Phonetic requirements	Rarely specified	Aspiration after /p/, /t/, and /k/ Appropriate vowel length before fortis/lenis consonants	Yes but not all
3	Consonant cluster	All word positions	Word initially, word medially	Yes but not all
4	Vowel quantity	Long-short contrast	Long-short contrast	Yes
5	Vowel quality	Close to RP or GA	L2 (consistent) regional qualities	No
6	Weak forms	Essential	Unhelpful to intelligibility	No
7	Features of connected speech	All	Inconsequential or unhelpful	No
8	Stress-time rhythm	Important	Does not exist	No
9	Word stress	Critical	Unnecessary/ can reduce flexibility	No
10	Nuclear stress	Important	Critical	Yes

When the linguistic features of LFC are carefully examined, their distinctive characteristics can be summarized as follows (Walker, 2010): Core features and non-core features that are divided into the categories of no impact and negative impact on ELF intelligibility.

- **The four core features of LFC are as follows:**

  - Every consonant sound excluding / θ/ and /ð/
  - Consonant cluster (e.g. speed, straight, distress)
  - Vowels specifically for long-short differences
  - Nuclear stress placement

- **Non-core features of LFC are as follows:**

  Group 1) No impact on ELF intelligibility

  - Pitch movement (tone)
  - Word stress
  - Stress-timing

  Group 2) Negative impact on ELF intelligibility

  - Vowel reduction, schwa and weak forms
  - Connected speech

As can be observed from Table 1 and the summary suggested above, the core features of LFC focus neither on the nativeness nor on a specific variety of native Englishes, or the General America (GA) or British Received Pronunciation (RP). Regardless of their origins, what LFC pays attention to is largely which sounds would be more intelligible and which features can be phonetically more distinguishable from one another in global communication (e.g. /r/ in GA and /t/ in RP). This could be a reasonable criteria to define the tolerable and acceptable limit of 'deviations both segmental and supra-segmental aspects of pronunciation' that the IMO maritime English model course considers (IMO Model Course 3.17, p.265).

In the next section, the guidelines for teaching pronunciation in IMO model course 3.17 will be briefly reviewed and compared with the features of LFC in order to explore practical implications for teaching and discuss the future direction of designing a pronunciation class

under the consideration of current geographical distribution of seafarers in the international shipping industry.

IMO Maritime English Model Course 3.17 – Teaching Speaking

The IMO Maritime English Model Course 3.17 has been recently revised, reflecting the systematic development of learners' English competencies from General Maritime English to Specialized Maritime English. To aid maritime English instructors with practical classroom design, a teachers' manual has been also provided in Part D, with several sub-categories. Of these, teaching pronunciation is one of the major sections, together with grammar and vocabulary, in providing a teaching guideline to English language systems. In the updated version, the importance of pronunciation and its multi-culturality at sea is highly appreciated, and its flexibility to incorporate a range of English varieties is also well recognized. In this regard, it shares quite similar views with those of LFC in terms of situational awareness to teaching pronunciation in the global context. With regards to the theoretical background from which to approach this issue, however, the detailed suggestions do not seem to be aligned with those of LFC detailed in Table 1. The guideline provided by IMO Maritime English Model Course 3.17 for teaching pronunciation can be largely summarized as follows:

1. Individual sounds
2. Connected speech
    - Linking (e.g. The shi**p** i**s** ol**d** an**d** unsafe.)
    - Contractions (e.g. My **name's** Ivan, **I've** got two children)
    - The schwa
    - Strong vs weak structure words (e.g. **Where** are you **going to**?)
    - Elision (e.g. What's (h)er name?, Why's (h)e late?)
    - Assimilation: (e.g. on Monday (om Monday))
3. Word stress
4. Intonation and pitch

As listed above, the linguistic features to be taught to language learners according to the model course seem outdated, as they are highly oriented toward the native speakers' side. That is, even though the model course fully acknowledges the new paradigm of English education in a global maritime context, the response to enhancing communication through speaking in this environment seems to move in the opposite direction.

There are several issues to be discussed in this regard. First, the types of individual sounds to be particularly emphasized to learners for the enhancement of mutual intelligibility need to be more clearly defined, as in LFC. Even though a wide range of useful pedagogical approaches (e.g. chain drills and minimal pairs) that can be directly applied to actual classrooms are suggested in detail, and this could be utilized as a helpful tool for language instructors in managing their pronunciation classes, guidelines regarding which phonemes (or which means of pronunciation) can be the most intelligible in an actual international communication scenario (e.g. /r/ in GA and /t/ in RP) need to be more clearly defined and suggested. These efforts could be an answer to the following statement specified in the model course (p.265):

> *Much of the spoken English that seafarers encounter is informal and is spoken in a range of international and regional accents. As accent forms part of the speaker's identity and is acceptable* ***so long as it does not prevent the speaker being understood***.

In this regard, the following questions could be considered as responses to the above statement: What are the critical phonological factors to enhance intelligibility in the global context? How many varieties of accents are tolerable in general? How can the speaker be helped to be understood regardless of his/her own accent? How this can be achieved through classroom activities or self-study? When the answers to these questions are more carefully elaborated in detail like in LFC, this part of the guideline can be evaluated as more practical and useful, and ultimately leading maritime English instructors to approach English pronunciation teaching in a more comprehensive and systematic manner.

Secondly, out of four major components suggested in the model course above, the latter three, such as *connected speech*, *word stress*, *intonation* and *pitch* have not been regarded as critical or necessary in terms of mutual intelligibility. Rather, some of these features, such as weak forms, stress-time rhythm and word stress, have been reported to be unhelpful, as they hinder listeners' understanding of others in a BELF communicative context, and should therefore be avoided.

The linguistic features regarded as negative in cross-cultural communication but included in the model course are summarized below.

	Aspects of pronunciation	**IMO model course**	ELF targets	Influence on intelligibility
1	Features of connected speech	To be taught	Inconsequential or unhelpful	Negative
2	Word stress	To be taught	Unnecessary/ can reduce flexibility	No
3	Intonation and pitch	To be taught	Nuero-linguistically inaccessible/ pedagogically unreachable/ possibly meaningless (Walker, 2011, p.39)	No

As shown above, the most of the pronunciation features suggested by IMO model course is something that the speakers in BELF environment refrain from adopting, since those are all directly connected to the negative sides of communication in terms of intelligibility. Walker (2010) emphasizes that the applying the features of connected speech such as schwa, assimilation, or coalescence, specifically at maintaining the rapid speech level like native speakers do decrease and even hamper the ELF intelligibility. This insistence seems to be quite contrary to the guideline made by IMO model course 3.17, which encourages the instructors to teach connected speech features to enhance learners' competencies in speaking:

> *Leaners often complain that they find native speakers difficult to understand because they speak too quickly. This statement often reflects the fact that students are not accustomed to listening to native speakers and that they have difficulty identifying word boundaries in connected speech.*

Besides this, a large number of discrepancies between the two guidelines, or Lingua Franca Core and IMO Maritime English model course, still exist in other areas of teaching speaking such as word stress, intonation and pitch. Each element of these also need to be closely analysed and compared in order to make a more effective and clearer guideline.

Conclusions and Suggestions

In this paper, in order to provide more practical guidelines for teaching speaking in maritime English classes, the characteristics of BELF and its pronunciation guide, or LFC, have been closely examined, and compared with those of the updated Maritime English Model Course 3.17. These two systems share a common ground for teaching English in multi-cultural environments, and cater to a diversity of English-language users and their different origins. However, their practical approaches in terms of which elements should be taught to enhance competencies in speaking differ considerably: LFC reflects the practical considerations of ELF speakers in the global business community, and absolutely do not emphasize the means used by native speakers, while focusing on mutual intelligibility as the key of effective communication; IMO Model Course 3.17, on the other hand, largely focuses on traditional methods of teaching speaking by focusing on skills that mimic nativeness. Whichever approach is adopted for teaching speaking in the future, however, the thing that must be kept in mind is that the environment in which English is used for communication is considerably changing, and the maritime industry is at the forefront of these changes considering the current and future supply of seafarers and their geographical distributions. Therefore, new theories and approaches that fully encompass these on-going phenomena need to be carefully considered and applied in the future instruction of maritime English and provision of related guidelines.

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Limits and Considerations in Communicating Effectively on Board Ship – the View of Leadership & Teamwork

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Abstract

The Amendments to the STCW Convention, 2010 established a Leadership & Teamwork Course by amending BRM/ERM to provide the knowledge, skill and understanding of leadership and teamwork. Particularly, crews on board modern ships consist of different nationalities and communication skills have played important roles in forming fine teamwork on board ships. However, the communication among multinational seafarers might not be only interrupted and weakened by external factors such as an individual's English skills and particular accent but also by internal factors such as personal attitude, cultural differences and human elements. This paper reviews the limits in forming the effective communication environment to build proper teamwork. Also, it suggests further improvments regarding communication effectiveness and safety culture in the light of leadership & Teamwork.

keywords: *leadership & teamwork, STCW 2010, communication, Maritime English*

Introduction

The newly adopted Amendment to STCW Convention (International Convention on Standards of Training, Certification and Watchkeeping for Seafarers) in 2010 introduces a number of important changes and new mandatory trainings for seafarers. In the significant changes, the specific training issue is Leadership & Teamwork referred to Human element or Human factor,

which is required for all management level and operational level officers on board. The previous STCW Convention also required non-skill training such as Bridge Resource Management or Engine-room Resource Management in order to prevent the recurrence of management errors and maximize the effectiveness of the resources in Bridge and Engine-room. However Leadership & Teamwork mainly focuses on human to human activities. Communication is playing the core role in human activities and it could be affected by external and internal environment on board, also it could affect the environments. Therefore, in terms of Leadership & Teamwork, the identification concerning how and what element affect activities on board is the important issue. In order to find out the influence on each factor and the environment, a questionnaire survey targeting 105 Korean and Filipino officers was carried out based on the Leadership & Teamwork specified in the model course1.39.

table 1: Numbers of participants according to Nationality and Level

Nationality	Management level	Operational level	Total
Korean	18	58	76
Filipino	13	16	29
Total	31	74	105

Contents of Model Course

The Model Course is designed to consist with STCW requirement, specific criteria in tables A-Ⅱ/1, A-Ⅲ/1 and A-Ⅲ/6 for the operational level. Whereas in table A-Ⅱ/2, A-Ⅲ/2 is for management level. However there is no big difference between two courses except in teamwork in the operational and managerial level. Therefore, the same questionnaires are used for the survey. They are based on the program on the Model Course.

table 2: Leadership & Teamwork outline and framework

Knowledge, understanding and proficiency	Hours
1. Introduction and administration	1.0
2. Working Knowledge of shipboard personnel management and training 2.1 Organization of crew, authority structure, responsibility 2.2 Cultural awareness, inherent traits attitudes and behaviors, cross-cultural communication 2.3 Shipboard situation, informal social structures on board 2.4 Human error, situation awareness, automation, awareness, complacency boredom 2.5 Leadership and teamworking 2.6 Training, structured shipboard training programme 2.7 Knowledge of personal abilities and behavioural characteristics	5.0
3. Knowledge of international maritime conventions, recommendations and national legislation • International Maritime Convention – SOLAS, MARPOL, STCW, MLC • Recommendations and national legislation	1.0
4. Ability to apply task and workload management • Planning and coordination • Personnel assignment • Human limitations • Personal abilities • Time and resource constraints • Prioritization • Workloads, Rest and fatigue	4.0

• Management(leadership) styles • Challenges and responses	
5. Knowledge and ability to apply effective resource management • Effective communication on board and ashore • Allocation, assignment and prioritization of resources • Decision making reflecting team experience • Assertiveness and leadership, including motivation • Obtaining and maintaining situational awareness • Appraisal of work performance • Short and long term strategies	4.0
6. Knowledge and ability to apply decision making techniques • Situation and risk assessment • Identify and consider generated options • Selecting course of action • Evaluation of outcome effectiveness • Decision making and problem solving techniques • Authority and assertiveness • Judgement • Emergencies and crowd management	4.0
7. Conclusion 1. Evaluation of course, individual assessments and advice, certificate presentations	1.0
Total	20

Analysis and Discussion

Research Question 1: What are the attributing knowledge and skills in leadership and teamwork?

Management level officers and operational level officers have different views on the knowledge and skills an officer on board should possess in exercising leadership and teamwork. <Table. 3> below shows the mean scores of the five knowledge and skills identified in the IMO Model Course 1.39, 2014 Edition. Among the management level officers, they believe that Task and workload Management (Mean score of 59.65) is the most important knowledge and skill an officer should have to be a good leader on board. This is followed by Effective Resource Management (Mean=53.55). Third is Personnel Management (Mean= 53.37). Then, followed by Decision-making Techniques skill (Mean=46.45), and the least they consider is the Knowledge on Maritime Conventions and Regulations (Mean=43.97). These views of the management level officers can be ascribed to how the respondents perceived the roles that they are performing on board as management level officers. They consider the sub-skills of the Task and workload Management such as planning, personnel management, time/resource constraint and prioritization to be the most valuable skills to be a good leader and to exercise teamwork on board. More so, the sub-skills of Effective Resource Management such as communication, resources, decision-making, situational awareness and appraisal of work are the second important skills that are closely connected with the third important skill, Personnel Management (Effective Resource Management Mean = 53.55; Personnel Management Mean = 53.37). Personnel Management means authority, cultural awareness, situation, human error, leadership and behavioral characteristics.

The management level officers regarded the Decision-making Techniques skill as fourth since they believe risk assessment, generate options, course of action, outcome effectiveness, problem-solving, judgment and emergencies as sub-skills of decision-making can be achieved by the management level officer with the help of other officers on board including the operational level officers. And, the least the management officers has considered as important in leadership and teamwork skill is the Knowledge on maritime conventions and regulations.

table 3: Knowledge and Skills for Leadership and Teamwork

Professional Rank	N	Leadership and Teamwork Knowledge and Skills	Mean	Rank
Management Level	31	Personnel Management	53.37	3
		Knowledge on Maritime Conventions and regulations	43.97	5
		Task and workload Management	59.65	1
		Effective Resource Management	53.55	2
		Decision-making Techniques	46.45	4
Operational Level	74	Personnel Management	52.84	3
		Knowledge on Maritime Conventions and regulations	56.78	1
		Task and workload Management	50.22	5
		Effective Resource Management	52.77	4
		Decision-making Techniques	55.74	2

On the other hand, the operational level officers have the opposite result. They regarded the Knowledge on Maritime Conventions and Regulations (Mean score of 56.78) as the most important knowledge and skill in leadership and teamwork on board, followed by Decision-making Techniques skill (Mean=55.74); third is the Personnel Management (Mean=52.84); fourth is Effective Resource Management (Mean=52.77) and the least is Task and workload Management (Mean=50.22). It can be interpreted that the officers' personal competencies are put above the other elements at operational level, since personnel management and knowledge on maritime conventions to control or oversee a group of ship's crew are regarded the most important factors.

Research Question 2: What is the role of communication in leadership and teamwork on-board?

The top use of good communication on board among the management level officers is 'Necessary in applying task and workload management' (M=63.40). It is parallel and consistent with the skill that they regarded as most important in leadership and teamwork in Table 4. This means they see a strong connection between language use and the giving of task to the crews. With very slight difference of the mean score, the second top use is 'Can promote open communication among crews' (M=63.24). The management level officers found good communication useful in promoting openness (among crews that they can express one's thought in the workplace. Third is 'Can communicate about conventions/regulations to crew members' (M=55.32). The management level officers thought they need to communicate to the crew on the maritime conventions and regulations as to inform the subordinates what should be implemented and complied. Ranked fourth is 'Necessary in applying decision-making as a leader' and the last is 'Can communicate better with other nationalities'. This means that the value of communications for delivering an important decision regarding operations and for interacting with multi-national crews is regarded relatively less important.

table 4: Uses of Good Communication On board

Professional Rank	N	Uses of Good Communication	Mean	Rank
Management Level	31	Can communicate better with other nationalities	48.76	5
		Can communicate about conventions/regulations to crew members	55.32	3
		Necessary in applying task and workload management	63.40	1
		Can promote open communication among crews	63.24	2
		Necessary in applying decision-making as a leader	54.94	4
Operational Level	74	Can communicate better with other nationalities	54.78	1
		Can communicate about conventions/regulations	52.03	3

	to crew members		
	Necessary in applying task and workload management	48.64	5
	Can promote open communication among crews	48.71	4
	Necessary in applying decision-making as a leader	52.19	2

Research Question 3: What are the human elements that limit the communication on-board?

table 5: Factors that Limit Communication On board

Factors that limit Communication	**Mean**	**Rank**
Software or Procedure	2.27	3
Hardware or Ship's technology	2.35	2
Environment	2.01	4
Liveware or People	3.12	1

Using the SHELL model or *Software, Hardware, Environment and Liveware-Liveware* of Hawkins (Swedish Club Academy Maritime Resource Management, 2011), human element in the study is defined into four components such as the people one is working with, the machine or technology, the procedures and the environment. As shown in Table 5, the respondents were asked to rank the factors that may limit or hinder communication on board. They unanimously answered that Liveware or People (Mean=3.12) interaction is the most common factor. It can be judged that there are significant communicative restrictions on board in such cases as interacting with VTS and other adjacent ships. Therefore, an in-depth awareness for this is required before commencing the communication.

The next human element that hinders communication on board is the Hardware or ship's technology (Mean=2.35). The respondents considered it as a problem in communication if one has less knowledge on the physical elements of the ship such as the controls, surfaces, displays,

functional systems, machinery, operator equipment, tools, materials, etc. Therefore, it can be said that the less experienced crew at operational level or newly boarded crew tend to have the more restrictions on communications with other members. This kind of situation seems to put the crew in a disadvantage position or to make them less confident towards their jobs.

The Software or procedures (Mean=2.27) ranked third. Less knowledge on rules, instructions, policies, norms, laws, orders, safety procedures, customs, conventions, habits, contents of charts, publications, emergency operating manuals and procedural checklist are job-related communication that breakdown accidents on board . The situation, when the subordinate and the officer have not understood each other well for example in an instruction, limits both to interact smoothly and freely.

The least respondents believe that the communication is affected by surrounding Environment onboard (Mean=2.01). Difficulty in the work area, or adjusting to physical factors such as temperature, noise, vibration, or the weather has no significant impact to communication.

Research Question 4: What are the factors that influence the crew's behavior and performance among crews and ship-shore personnel interactions?

Respondents ranked accordingly which factor they perceived as the most influential in their behavior to interact. Interpersonal Relations (M=5.17) ranked first. They need to interact or communicate for the job and for social reasons. Personality and Attitude Interactions (M=4.5) is the second. Respondents noted that one's personality plays a role in interaction. Every crew has the personal choice to mingle or distance from others on board. Next is Leadership (M=4.46). The ship's officers can influence crews' attitude to interact with the officer's leadership. He can initiate ship's social activities. Fourth is Teamwork (M=4.24). Respondents noted that when there is teamwork in performing their job on board it encourages the crews to be more sociable and open beyond work time. One's Language ability to Communicate (M=4.03) in English or in their common language influences the crew's enthusiasm to interact. Result also suggested that Crew Cooperation and Coordination is an individual trait or internal influence like the Personality Attitude Interactions that has to be influenced with external factor such as teamwork or leadership so interaction will happen. The least considered as factor of interaction is Cultural Interactions (M=2.99). It is noted that crews have high tolerance in culture, though, it is inconclusive in this study.

table 6: Factors influence crews' interaction on board

Factors influence crews' interaction on board	Mean	Rank
Interpersonal Relations	5.17	1
Leadership	4.46	3
Crew Cooperation and Coordination	3.85	6
Teamwork	4.24	4
Cultural Interactions	2.99	7
Personality and Attitude Interactions	4.50	2
Language and Communication	4.03	5

Conclusion

The findings of this study suggest that task and workload management, knowledge of the maritime conventions and regulations are regarded highly important in leadership & teamwork on board. Their functions are likely to be connected with professional or job-related areas. Moreover, interaction in communication on board among the crews can be enhanced with positive leadership which results in teamwork. Further, management and operational level officers have the different views in organizing optimal leadership & teamwork. Even though Maritime English ability in terms of a global shipping industry has been identified as a key element for good communication, other factors such as planning tasks, managing workload and applying the international and national regulations in the view of safe shipping by seafarers are regarded considerably more important. Therefore, interpersonal relations influence social interactions on board. In addition other considerations identified by this study should be fully recognized as ways of encouraging interpersonal activities on board that enhance communication.

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The Design of Maritime Education and Training: Progression and Integration in Maritime English Courses, for a Global Maritime Approach

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Abstract

One of the greatest challenges in teaching good communication skills and what that means for a marine engineer or any seafarer, is to design content-based language learning activities which integrate Maritime English along with the requirements of the engineering profession. The design of such a curriculum supports the development of communicative skills by enabling students to recognize any given communicative dimension of their profession in a natural working environment. Another yet greater challenge, is to progressively integrate all these activities in the courses of an established university programme, thereby creating a meaningful whole which twins [1] content and language in teaching and learning activities. Improved language skills enhance communication and leadership skills and also promote the understanding of multicultural variations amongst seafarers; all of which are imperative when at sea.

This article presents the latest concerns of IMECs with focus on essential Maritime English skills. It exemplifies how communicative language learning activities can be integrated in content courses, progressively, throughout the recently reformed Marine Engineering programme at Chalmers University of Technology, Sweden, and it suggests how MET institutions can collaborate to develop a unified model for MET around the world. The article also gives a brief account of graduates' reflections upon communication and how it is achieved in this content-based setting.

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Introduction

This paper discusses the reform of the Marine Engineering programme at Chalmers University of Technology, Gothenburg Sweden and aims to explain how learning and learning processes at a Maritime Education and Training (MET) institution can be designed in a way that students can identify at graduation and identify in a life-long learning context. As there has been continuous discussion during the past years about how MET programme graduates can develop good communicative language skills, the Marine Engineering programme at Chalmers has laid focus on different pedagogies and approaches to learning in the design of its courses so as to embed into the teaching activities as much as possible the international Maritime English discourse.

Therefore, this paper not only deals with programme/course design, but perhaps more with learning as a progressive pattern within the programme, giving consideration to teacher and student feedback with regards to learning outcomes and how these are interconnected with professional requirements. Having the development of communicative skills at its core, the authors elaborate on learning activities and learning outcomes at individual course and programmatic level, and explain how these are interconnected towards the completion of the programme.

The text is divided in three parts: it provides a conceptual understanding of graduate attributes within the curriculum, by mentioning main topics of the past years IMLA-IMEC① discussions; it describes the Marine Engineering programme at Chalmers which focuses on the progression of communicative aspects of language learning activities; and concludes with an account of the overlapping areas previously mentioned by exemplifying how students recognize what they have learned and how it can be applied in their future professional lives.

Maritime Education and training: an overview from the last five IMECs

During the past years, a recurrent concern at IMECs has been how to develop a uniform, worldwide, ready to implement system of Maritime Education and Training. Within this discussion, aspects of mobility [2,3] with regard to teaching practices, the establishment of English language competency levels and testing of Maritime English skills have been named in various

① International Maritime Lecturers Association – International Maritime English Conference

ways. To that end, a number of extensive European Union funded projects (MarTEL, SeaTALK, CAPTAINS) were developed and have tried to converge towards globally established MET standards.

Maritime English is perhaps the ultimate example of English for Specific Purposes (ESP) as its specific purposes are naturally and accurately embedding the concepts and contexts of the maritime industry and its disciplines. At the same time however, Maritime English is not easily defined as various, more or less accurate definitions exist as a result of regional needs, unique local skills, and unpredictable requirements of its international users. This 'hazy' nature of Maritime English is most evident as the international users are summoned to satisfy international standards. A number of documents adopted internationally via IMO member states, aim to regulate and direct MET, and includes Maritime English, as well as STCW, SOLAS, SMCP, and the IMO model courses. These documents provide a good starting point for all IMECs discussions, as they represent common ground for MET institutions around the world. However, in order to establish an international MET standard; it implies being on the same page as the national authorities and the locally determined learning outcomes and graduate requirement in every corner of the world where MET is organized.

Learners of Maritime English, depending on their background and different nationalities, will always have different needs and expectations of themselves and their tutors, which in turn determine course content at local level. In addition, international standards recommended for inclusion in Maritime English courses are always complemented, or altered in some cases, by national standards as both regulate the local MET curriculum. This generates a very uncertain situation for the Maritime English trainer. One example of how radically different the teaching and learning activities, the prerequisites and the learning outcomes may be for the Maritime English learner around the world– and not even mentioning conceptual thinking, learning strategies or motivation – is to highlight the difference in approach to teaching between native speakers of English and non-native speakers. Native speakers of English and non-native speakers of English will always have a very different initial conception about their need to learn Maritime English as cadets, which includes the desire not only to learn Maritime English in school, but also to keep developing it, throughout life.

Consequently, any Maritime English course designed anywhere in the world is conceptually different to courses given in another part of the world, as it will be conditioned in its design with the learners' particular situatedness, prerequisites, and needs in mind. But as these para-

meters are very unlikely to overlap at a global level, and as globalization should be the common goal of the Maritime Industry, perhaps the discussion about how to design internationally unified MET programmes must take a goal-oriented turn. This means that MET worldwide must be based on the standards that all IMO member countries have ratified, before it can deal with cadets' needs, prerequisites or situatedness.

It has been suggested in several IMEC contexts [2-6] that MET institutions should collaborate internationally to develop joint aims and objectives which meet the IMO STCW requirements in a way that the Maritime Industry can agree upon, in addition to meeting national standards. Maritime English must be taught to the minimum level of proficiency as outlined in the STCW. If this were the case, locally developed teaching and learning activities, learning outcomes and assessment methods may not be enough to satisfy the IMO requirements if they do not descend from the international agreement or are not aligned with the same.

Multiple authors at previous IMECs have discussed that Maritime English needs: globally aligned assessment procedures [7-9] optimization within the training of communication skills at sea [5, 6, 10, 11] cross-curricular collaboration among trainers, i.e twinning [5, 8] and intercultural communication must be given right of way in our 80% multicultural crews [12-17] Therefore, a call to action exists for IMEC and IMLA to enable lecturers worldwide to join the round table which these conferences aim to represent in the maritime discourse, and start working on making Maritime English evident in IMO documents around the world.

Chalmers University of Technology – the Marine Engineering Programme

The Marine Engineering Programme at Chalmers (Gothenburg, Sweden) starts at a post-secondary level, and it is an academic programme ([18] which during the past years has been undergoing fundamental changes [19, 20] These changes were due firstly to the need for a new structure of alignment at course level and programme level [21, 22], imposed by the Bologna (1999) process in Europe and secondly due to the realization that graduates need developed paths of progression throughout the programme if they are to understand their education from a broader professional perspective. The structure of the Marine Engineering programme at Chalmers as it currently operates, is illustrated in the table below:

Progression, Marine Engineering programme – Chalmers University of Technology

Area	Basic courses	Continuation courses	Advanced course/specialist course
Mechanical engineering	SJO555 Marine engineering SJO560 Marine engine systems	SJO700 Fluid mechanics and thermodynamics SJO707 Project on machine and drive technology	SJO167 Internal combustion engine technology SJO061 Steam and cooling plants
Electrics, regulation and control technology	SSY032 Basic electrical engineering SSY036 Control technology	LNB726 Advanced electrical engineering LEU751 Regulator technology	LEU743 Control and regulation systems
Shipping technology	SJO546 Ship and cargo safety LNB483 Maintenance technology	SJO707 Project on machine and drive technology	
Communication	SJO555 Safety communication	LSP193 Technical marine English SJO061 Steam and cooling plants	LNB483 Maintenance technology
Simulator exercises	SJO555 Basic marine engineering SJO560 Marine engineering SJO061 Steam and cooling plants	SJO168 Internal combustion engine technology SJO707 Project on machine and drive technology	SJO707 Project on machine and drive technology
Safety and security	SJO112 Basic safety	SJO710 Work environment and safety	
Writing	FFU 1	LSP193 Technical marine English SJO755 Leadership on board ship SJO570 Environmental impact of shipping	Student placements

It is important to note from a learner-centred pedagogical perspective that the main skills and abilities students need to develop during their 4 years of study are aligned conceptually, in the column to the left. Each area is in turn developed progressively with different courses throughout the programme. Within each area, new knowledge is initially introduced, then taught, and lastly applied and reinforced in advanced or specialized courses.

The idea to design the programme like this comes primarily from the Bologna Agreement [23] which requires all tertiary education within Europe to be aligned conceptually. Moreover this model lends itself well to pedagogical approaches to learning and also easily integrates the international and national requirements of the maritime industry – namely the IMO STCW, SMCP, and SOLAS. The programme description explains in detail how the STCW code is followed in each course, and also how it is progressively followed up throughout the programme (The Marine Engineering Programme – programme description 2013-2 0 V1_ENG).

Another aspect to take into account with regard to the programme structure is that some of the courses have been deliberately designed to be twinned [10] or perhaps 'inter'-twinned as they follow up on each other. In other words, the courses are not really integrated but they run in par-

allel or in tandem with each other. For example in the communication area in the table above, safety communication, is introduced in year 1 via Marine Engineering (SJO555), taught, integrated [19] and reinforced in year 2 in parallel classes of Marine English [20] and Steam and Refrigeration Techniques and integrated and reinforced again in year 3 in Maintenance Technology [20]. For the writing area in the table, note that students have two other courses in year two, Leadership on-board ships and Environmental impact of shipping. While they do not run in parallel with Marine English, they do reinforce and follow up on those learning outcomes.

The Marine Engineering Programme at Chalmers leads to an academic degree aiming to provide engineer officers with the knowledge and skills needed to operate on board internationally sailing merchant ships. After completion of the programme, the graduates can serve as second engineers. The programme must therefore be compliant with the requirements defined by the Swedish Higher Education Authority, the Swedish National Transport Agency's regulations and the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (the IMO STCW Convention), as well as the local degree schedule at Chalmers University of Technology.

The intention of the Marine Engineering Programme is to provide stimulating, world-class, high quality engineer training on demand, with emphasis on sustainable shipping, encouraging competitive knowledge not only of the shipboard engine systems of today but also of the maritime industry as a whole.

Discussion

The idea of twinning, or to integrate courses across the curricula, is not foreign to the theory of learning. Both Problem Based and Project Based Learning aim for the same outcomes, to make students understand the whole picture of a particular professional context. For example, in their design, integrated Maritime English courses lend themselves well to cross curricular assessment for example, which may be a higher form of formative assessment very much pursued in the maritime industry. This also means that Maritime English, in an obvious way, is invited to take room in the curricula; that it becomes evident in its natural context.

In any educational context, one must take into account that student prerequisites may vary significantly, and directly affect the student workload and the teaching methods. Integrated courses can therefore help weaker students demonstrate knowledge using skills of different domains, thus providing reassurance and motivation to the students. In addition, joint assessment of integrated courses seeks to give students opportunity to demonstrate knowledge and understanding in more than one professional field. Therefore it may become easier for weak students to pass, but at the same time it will also become clearer for the student what is missing. If we consider the affective perspectives of learning, this will also facilitate additional training for weak students, as they will lose neither face nor motivation when given second or different chances to assimilate essential course content. Course literature, lectures, assessment and independent exercises can be integrated to provide information as a whole, thus generating learning contexts highly relevant for the learning process.

Following up on this, in the design of internationally matched MET programmes, one can aim to interrelate graduate attributes firstly with the requirements of the STCW convention, secondly with national agencies and thirdly, with globally compatible MET programmes. For this, language and content instructors should align their teaching and learning activities [21] not only within the local programme and across curricula, but across borders.

This means that contextual learning can be generated, while transforming pedagogical, technical and cultural conceptions for the benefit of a strong professional identity specific to the maritime setting. The currently engaging academic discourse of the past IMECs acknowledges these aspects and encourages such collaboration.

The Marine Engineering Programme at Chalmers also shows that cross-curricular integration at programme level is not only possible but also appreciated while fulfilling the conditions of a contextual teaching and learning perspective. This was identified in students' reflections, which were prompted to reveal what students thought about integrated courses and if joint teaching and learning activities of different subjects helped them acknowledge their learning process differently.

In 2014, the second year students were asked to reflect upon the learning they thought they had acquired due to joint teaching, learning and assessment in Marine English and Steam and Refrigeration techniques (Gabrielii, Gabrielli & Pahlm, 2012). The comments revise life-long learning aspects of Maritime English in its professional contexts, language learning strategies

and needs, the importance of language proficiency in a technical context, the importance of language proficiency in a safety context, and also, among other things, the correlations between language and content and how language determines and is determined by content. A representative number of students comments follows:

> *The way we worked with this text, first translating it from English to Swedish and then back again is probably the best way to work with a text. If you only rewrite the text in English you usually steal words and sentences that you do not fully understand. If you only translate the text from Swedish to English you usually stay within the limits of your knowledge.(Student A)*
>
> *One example is that no one in the group could explain what a gland steam condenser is. After a while we asked Cecilia and we realized that we knew the answer but just could not link it. Sometimes you know something in Swedish but are unable to link it to the English language. (Student B)*
>
> *We also discussed that the text was interesting. Why this text felt more interesting than other texts we don´t really know. It is probably because we need to know the content of this text in Cecilia's steam and refrigeration techniques. It feels good to read something that we work with in another course; it makes it easier in both courses. Most group members learned a lot from this exercise. (Student C)*
>
> *To sum up we think that this text was a good exercise and we all see the connection to both Steam and Refrigeration Techniques and Marine English. The exercise helps the student to realize that despite we are all able to speak fluent English, we are unfamiliar with terms used in mechanical engineering. (Student D)*
>
> *We feel that the assignment is most relevant to the steam/refrigeration technique course. The reason for this being that the actual information, what is presented for us to learn, is information regarding steam & refrigeration technique. English is only a mean to convey that information to us, and if you understand what is written you do not pay all too much interest in the actual language. However if the reader is more knowledgeable in the field of steam-technique and less so in English, he would look more into the meaning of words and the grammar of the text. (Student E)*

Although already a victory with regards to the positive student feedback and the positive outcomes of learning in both technical and linguistics terms, the Marine Engineering

programme at Chalmers does not fill the gap between theory and practice internationally. The liability of a MET programme lies, unfortunately, not solely in the progressively aligned aims and objectives of one MET institution, and this has been said before [20]. Instructors must therefore be given conditions in which they can elaborate on means to balance variation and facilitate collaboration and support cross borders so that ME pedagogies can be further developed, as advised by the IMEC steering committee over the years.

Conclusion

As established in the introduction of this paper, the discussion about internationally aligned teaching and learning activities of Maritime English requires clearly defined parameters of the same while taking learning processes and the IMO STCW aims and objectives of Maritime English training into account. Maritime English is also a restricted language defined by its particular setting. It aims at facilitating communication not solely at sea, therefore the partakers in the communication processes which take place in this given setting, and in the circumstances under which they might act in their various professional roles, must be taken into account. For this, as Maritime English instructors, we may need support and guidance in a twinning manner.

Because of vast international requirements and legislation within this industry, as well as the national and institutional expectations and demands, the Maritime English tutor is often depending on the pedagogical environment that is created within each MET institution. Therefore, the responsibility for Maritime English proficiency as identified within the STCW code have been laid on the responsible institutions, and not the Maritime English instructors.

Considering the above, we would like to paraphrase Professor Doctor Peter Trenkner, who in his opening letter for the IMEC22 in Alexandria wrote that we should ”teach locally but think globally” [24]. This is a call for a more global teaching approach, where we, as Maritime English instructors, think locally of the particular needs and prerequisites of our students. The final word of the day must be globalization of MET institutions as we start working towards internationally unified graduate attributes for our cadets.

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Rapid-Learning and IT Tools for Teaching and Learning Maritime English

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Abstract

Proficiency in Maritime English sits on a substantial lexical basis. Indeed before a mariner can effectively communicate in maritime English, he/she needs to learn (i.e. memorize) a significant number of new words, some of which are uncommon even to the native speaker. Ship parts, standard position indicators, or VHF pro-words, for example, make up a whole new vocabulary, which must be learnt before being able to re-use it in sentences compliant with the very specific SMCP grammar.

This paper is two-fold. The first part will present a collection of rapid-learning tools which learners can use to facilitate the memorization of lexical items. These are digital tools, designed to ease learning by enabling drilling, and all stem from the concept of flashcards. In the second part of this article, we have curated a list of e-learning suites and/or authoring tools. These are programs that allow for the easy creation of automated and/or interactive multimedia learning documents, particularly in a context of blended learning. Finally, a third part will list utility programs that all teachers who wish to implement blended learning should know.

keywords: e-*learning, gamification, blended learning, digital tools*

Introduction

In today's time of economic constraints, class hours are being cut in many MET institutions and academic staff is required to bring students to the same results as they used to, but in fewer hours of class. As a consequence, blended learning has recently received major attention from senior academic staff, and teachers have been encouraged to create e-learning material. The rationale behind blended learning is to associate the appeal and flexibility of online resources and

technology with the personal engagement between faculty and students that only in-classroom teaching provides [3], [6]. Research has shown improved learning when using this blended model [4], [5], [8]. The literature also shows that much of the motivation of learners in blended learning courses can be attributed to the interactive capabilities of information technology [2], [7].

In some institutions, this has become part of the job description of lecturers. At Ecole Navale, the department of Maritime English has pioneered such evolution [1]. Because there is no point in re-inventing the wheel, we have endeavored to share our knowledge of the topic with fellow ME teachers. The first part of this article will list a number of rapid-learning tools. These are easy-to-use programs, suitable for every teacher and learner. The second part of this article will focus on e-learning authoring tools/suites. These are more powerful programs, at the cost of a slower learning curve. Finally, a third part will list utility programs (graphics-editing, sound- or video-editing applications). We have tested each of these tools (and many more) and tried to briefly present their main features while avoiding publicity. We have no commercial interest of any kind in the promotion of any of these tools. For each of them, we have mentioned whether the tool is free, where it can be found on the internet, and tried to describe what the tool allows.

Rapid-learning tools

The tools presented in this section are relatively easy to use, and will be mastered in less than a day. They are listed in alphabetical order.

Anki [free]

http://ankisrs.net/

Anki is an open-source flashcards program that makes advantage of the principle of spaced repetition①. It is available on all platforms, is highly configurable, and media-rich (allows images, audio and video clips to be integrated into cards). Cards are automatically sorted into decks of well-known and not-yet-known material, so that learners focus what they do not know.

① Spaced repetition is a learning technique that incorporates increasing intervals of time between subsequent review of previously learned material in order to exploit the psychological “spacing” effect. (Definition from https://en.wikipedia.org/wiki/Spaced_repetition).

Decks can be shared between users, synchronized between several devices, and shared with the community.

Cleverlize [free]

http://www.cleverlize.com

This web-based tool allows you to create HTML5-compliant apps for smart phones. You can create lessons (with text and images), flashcards, right/wrong questions, multiple choice questions, all with pictures. Since the apps generated are in HTML5, they work on any operating system. Note, however, that they require a live internet connection, and cannot be downloaded.

Edpuzzle [free]

https://edpuzzle.com/

Edpuzzle is an online tool which lets you create video quizzes from any video online. Questions can be multiple choice, true/false or short answer, and will be integrated within the video itself. Teachers can then create classes and assign quizzes to them. Monitoring tools are provided, to allow for student performance tracking. You can use your Google account to connect to Edpuzzle.

Educreations [free]

https://www.educreations.com/

Educreations is an app that lets you create flipped lessons right from your iPad. Record your voice while you draw on the screen or manipulate objects. You can find classroom safe images, take your own pictures, or draw with your finger. Educreations makes it simple and easy to create lesson videos and share them with your classes. You can connect with your Google account.

Basics: https://www.youtube.com/watch?v=KvytBvIJfY0

Advanced: https://www.youtube.com/watch?v=qyjKUVzxQYA

gFlash+ [free] / gFlash Pro [3.99$]

http://www.gwhizmobile.com/gWhiz/Apps.php?search=gWhiz

This rapid-learning app allows users to easily create flashcards to learn anything. The cards can include images or audio. Learners will then either simply use the flashcards to quiz themselves (marking known and not-yet-known cards), or learn from automatically-created quizzes (multiple-choice). Items to learn are automatically sorted into mastered/not mastered, based on user performance, thus allowing learners to focus on less-known items. Flashcards and quizzes can be easily generated from spreadsheets (Google™ documents, and/or Excel™), and shared with the community. Many nautical and navy quizzes are available. The premium version (with more features) is available only on iOS, while the free version is available also for Android.

The Mnemosyne Project [free]

http://mnemosyne-proj.org/

Similar to Anki, Mnemosyne is a powerful open-source flashcard program, built on the principles of "spaced repetition". It allows media-rich cards (with images, sound and video clips), and is available on all platforms (desktop and mobile). It comes with a card browser that lets user organize their cards into sets, and decide precisely what they want to study. It features visual statistics to track progress.

Multimedia Learning Object Authoring Tool [free]

http://www.learningtools.arts.ubc.ca/mloat.htm

This web-based tool lets you create a multimedia learning object composed of a video, with a synchronized slideshow of images and text. Thus you can use the pictures and text areas to display important information of spelling tips while your video is playing. Can be used as a web-based tool, or downloaded and installed on your own web server.

Nearpod [free / premium]

http://nearpod.com/

Nearpod is an online tool that lets you design presentation slideshows, and integrate quizzes into them. The question types include the usual multiple choice, true/false, short answer, plus a drawing type, which lets students answer by drawing on a "canvas" which you provide for them. Tablet/smartphone apps available for all operating systems.

Quizlet [free]

http://quizlet.com

This is primarily a rapid learning tool to facilitate memorization of lexical items. It is web-based and very easy to use. All that is required from the teacher is to create vocabulary lists (with the word to learn and its definition, translation or picture) and Quizlet will automatically generate flashcards (with audio pronunciation), a spelling exercise, two learning games (a matching game and a speed-typing game). Quizlet will also automatically randomly generate 20-question self-assessment tests in one click. The platform can track user activity and performance, thus encouraging healthy competition and boosting motivation.

Socrative [free]

http://socrative.com/

Socrative is a web-based real-time questioning tool that boosts student engagement in classroom activities. It allows teachers to create a virtual classroom in which your students will have access to all activities you design. These include quick question tools (MCQ, short answer, true/false), exit tickets and "space race" (a team-based competitive quiz). Teachers and student apps are available for iOS and Android, and you can connect using your Google account.

Tutorial: https://www.youtube.com/watch?v=EGr53IA91MU

Vocabulary Memorization Platform [free]

http://www.learningtools.arts.ubc.ca/vocab.htm

This flashcards tool is designed to help students memorize the spelling of words. On the web, instructors can quickly set up a dictionary database by entering the new words with correspond-ing translation to be learned in a lecture and this database then be instantly plugged into the on-

line flashcard games for students to play with. Students can also select a set of flashcards to print on paper.

E-learning authoring tools

The tools presented in this section require more time to master, but are much more powerful. Some are professional e-learning authoring suites. They are listed in alphabetical order.

Captivate 9 [400€ (academic license) or 36€/ year]

http://www.adobe.com/fr/products/captivate.html

Captivate is the e-learning creation suite of Adobe. Probably the most complete e-learning suite, it allows for the creation of professional quality e-learning products, with every possible type of quiz, learning interaction, and learning games one can imagine. Fully compatible with the vast majority of Learning Management Systems, capable of exporting to Flash™, HTML5, SCORM, or even stand-alone executable files, multi-platform… there is nothing it does not do… at the cost of a slow learning curve. The product now comes integrated into Adobe's Creative Cloud.

iSpring Suite 7 [300-700]

http://www.ispringsolutions.com/ispring-suite/

iSpring suite 7 is a professional e-learning authoring suite. It integrates into PowerPoint ® to convert slideshows into interactive learning objects. It includes tools for animation, for screen-casting, many different types of interactions and quizzes, and is fairly easy to learn. iSpring Suite 7 includes QuizMaker, a very versatile and powerful quiz generator, which can export to Flash™, HTML5, and SCORM format, thus ensuring seamless integration into most Learning Management Systems, and portability to mobile devices.

SmartBuilder [free]

http://www.smartbuilder.com

SmartBuilder is a fully-fledged web-based development suite for the creation of online courses that enables you to create rich Flash e-learning with an easy-to-use interface. It has advanced animation tools, tons of ready-to-use objects for interactions, a large template library, and does not require you to write any code. All interactions are set up using drag-and-drop, and flowcharts. SmartBuilder features branching scenarios, gaming elements and assessment tools.

SoftChalk [495$/year]

http://softchalk.com

Softchalk is an online exercise creator. It lets you create e-learning content with rich text, images, video and audio resources. It features a wide variety of question types (sorting, matching, labelling, multiple choice, short answer, etc.).

Utility programs

Audacity [free]

http://web.audacityteam.org/

Audacity is a free, multi-language, easy-to-use, multi-track audio editor and recorder for all operating systems. You can use Audacity to record live audio, record computer playback convert tapes and records into digital recordings, edit many types of sound files (including MP3, and cut, copy or mix sounds together. Numerous effects and filters are available, including change speed or pitch and VHF sound.

Explain Everything [free]

http://explaineverything.com/

Explain Everything is an interactive white board and screencasting iPad app that lets you annotate, animate, narrate, import and export almost any type of media. Probably the easiest way (if not the prettiest) to create educational screencasts.

Screencast-o-matic [free/premium]

http://screencast-o-matic.com

Screencast-o-matic is a simple, java-based, screencasting program that runs on any operating system. It allows you to create instructional screencasts (recordings of what is happening on your screen) with voice over, and an optional thumbnail video of yourself recorded from your webcam. The premium edition (15$/year) also adds overlay tools a magnifying glass, and advanced editing tools. A cheap tool for adding sound (and video) voice over to your PowerPoint slideshows or Prezi presentations, capturing video, or making tutorials.

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English as Lingua Franca at Sea

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Abstract

Learning and training English implies interesting oneself for the hegemony of the Anglo-Saxon cultural sphere and beginning to be a part of it. The hegemony implies the lesser value of cultural expressions of other languages as they are more peripheral. Individuals who use English well have more cultural capital than those who do it badly or not at all. Communication onboard can be improved if this situation is acknowledged and addressed, since English will not be spoken well anytime soon in very many shipping contexts. Intercomprehension means training to understand what others mean even though they use other languages than those one has learned. It is an age-old method which also allows users to learn languages they get exposed to.

Introduction

Using a lingua franca for communication about practical issues is a very good method, used all over the world. It is cost-effective since many people learn to use just one extra language instead of many. It is serious and businesslike, often accompanied by non-verbal communication that underlines the business context and distinguishes from other functions of communication, such as social functions. (Wikipedia, 2015a)

As English teachers we have the pleasure of helping many young persons to gain a very important tool for success in working life. In this essay I'd like to discuss a few aspects of lingua franca pertaining to its symbolic value rather than to its communicative functions.

Mastering a lingua franca is clearly an advantage also because of the higher status with which the user is endowed. It is a type of cultural capital that we are happy to see growing in our students, hence making us believe that they can be more successful in the professional life. In this sense it would be because of the power boost by the symbolic value of the English language,

since it is associated with many positive connotations, such as modern, well-educated, successful, etc.

But does this success also come with a cost of some kind? If so, would it be a good idea to prepare our students for dealing with the consequences or even avoiding them if it can be done readily? In this essay I shall raise a few issues, give a few examples, and discuss a few possible ways to work around some of the negative aspects of lingue franche (Italian plural, also in English).

Lingua Franca and Power

Social and cultural capitals

In many languages inserting a word or two in English is fashionable. It is not mainly because our languages lack expressions to denote the meaning people want to communicate, but rather because the Englishness is considered to adorn enunciations with a world smart air. Why is this? It is because the speaker who uses this manoeuvre (mostly subconsciously) poses as well-educated or part of an (often imagined) well-connected in-crowd. Very often this trick works fine, very much so in the shipping context. (Bourdieu, 1984)

Centre periphery

In the centre-periphery theory the centre is seen as the locus of the rich and well-connected. It is the place people aspire to move towards. Through acquiring symbols people hope to gain symbolic capital and advantages – a type of learning through role models. To (pretend to) master the highly regarded lingua franca can be said to correspond to the feeling of a bundle of bank notes in one's pocket or a Rolex watch on one's wrist – a source of confidence. (Marshall, 1998)

High status needs low status to be seen. Other languages lose status as English gains. Mastery of Gaelic or Estonian will not be possible to exchange for glamour. It will perhaps be seen as an oddity – something one might as well hide from the public. Likewise cultural expressions of countries where English is not spoken are much less valued – or even understood – than those of the UK and the USA plus a few more countries. (The term is soft power – the ability to be noticed and to exert possible influence in the world without nuclear weapons.)

If you can't beat them, join them

In fact, cultural expressions – such as food, drinks, music, fashion and so on – most of the time need to take the detour through the hegemonic culture to be accepted by inhabitants of a peripheral country. An example of this is Italian and Mexican food which has spread via the USA to many other countries. Even more obvious are the paths of musical impulses from odd and unknown via the US music scene into the mainstream and world fame. It can be noticed that the world "international" often means USA in many languages. Likewise it is easy to see that news from the USA is valued as more important than much more dramatic events in other parts of the world.

Power in relations onboard

Many studies confirm that seafarers are unlikely to communicate outside their rank and native language onboard ships. This is due to many things, from outright recommendations to not socialize with members of other rank to simple going with the flow. Communication between the "us" and the "them" is more difficult. (Ostreng, 2007)

Status is power in communication and in relations. Power will be used – there are so many subtle ways – in addition to the less subtle. In the maritime context proficiency in English is often compounded with senior positions in the hierarchy. This is obviously because English is part of the training and required for work as officer. It is also often because English is more similar to the officers' native languages than to those of the crew. The latter is one of the consequences of European colonialism still lingering on.

It is not enough to have a good level in English to achieve good communication. Power networks use so-called domination techniques to stop outsiders from gaining influence in communication situations (Wikipedia, 2015b). This is another good reason to learn English well for seafarers of lower rank, since it is possible to reveal some dirty tricks if one's linguistic capacity is good.

In spite of the difficulties many seafarers do build trustful relations across cultural and linguistic barriers. Intercultural communication skills are learned and play a decisive role for maritime safety worldwide. This is mostly done without any effort on the part of shipping companies; instead it is handled by individuals onboard. (Trygg Månsson, 2014)

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English as Working Language

Low wages

For simple economic reasons crews are hired based on levels of salary. As a consequence people from poor countries and with lower level of education often get jobs onboard, also in companies where English is the working language, which is most companies. Seafarers from poor countries seldom get to leave the ships and ships seldom go into cities, but remain in port areas far from city centres. Social isolation and ensuing disorders are not uncommon (Brenker, 2014).

Little influence

A crew member whose level of English is low will have very little influence onboard a ship for two reasons: Obviously because s/he can't express her/himself on complicated matters, but also because s/he will have low status in the social circles, both as for rank, but also informally. Their voices will not be heard, even if they have important contributions to make.

It is perhaps excusable that officers will not take time to find out what the crewmembers have on their mind, as if they really don't have anything to say unless they can say it in English. Working hours are long and fatigue is ever present (Brenker, 2014).

The Halo effect

People who have acquired a few capitals are thought of as successful also in other areas than the ones they really are good at (Hindle, 2008). They even have the inner idea of themselves as more intelligent and/or attractive than what can be seen from the outside. Hence good skills in English tend to spill over into assumptions of competence in other fields, partly because real competence can be expressed and made visible for others, but also because language skills translate into high status in so many situations.

Inversely low competence levels in the working language will make crewmembers more quiet and unsure of themselves. Both these cases impair good communication for a number of reasons. In this article the offsetting of equality is what is most interesting.

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Maritime English Skills

Transferable skills

Language training means training in communication. Good communication relies on listening and feedback systems, not only on vocabulary and grammar. Teachers in Maritime English can prepare students for the real world by including training in communication with people who do not have basic skills in English. There are things that officers can do to reduce the unequal relations in communication that inevitably lead to bad communication, inviting many undesirable consequences. (Wikipedia, 2015a)

If language courses train feedback and listening more, and convey more interest in the other 5,000 languages spoken on earth, communication can be improved. There is never enough time to introduce more content in the language courses, but there is always room for considering new ideas if they seem valuable. Course materials do exist for practicing Multilingualism and Intercomprehension in a maritime context (Intermar, 2013). One example is the INTERMAR materials on www.intermar.ax (see Figure 1)

Figure 1. INTERMAR – Intercomprehension at sea and ashore (Intermar, 2013)

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Good communication in professional settings

The Danish researchers Metze and Nystrup have identified four dimensions to describe communication, see Figure 2. All four of them play out in professional communication onboard (Grech, Horberry, & Koester, 2008). If communication can be more affective, expanded, confronting, and listening when there is time for that, people will get to know each other better. Obviously this makes communicating easier and decoding the other party more exact.

1. *Cognitive* (knowledge and sense, exchange of exact information) – *affective* (feelings and intuition)
2. *Expanding* (long conversation or dialogue, questions which lead to comprehensive answers) – *limiting* (closing the conversation as quickly as possible, short answers, yes/no)
3. *Confronting* (focus on problems and conflicts) – *concealing* (hiding problems and conflicts)
4. *Listening* (paying attention to what is said and showing that by gestures or answers) – *not listening* (not paying attention, indifferent, no eye contact)

Figure 2. Four dimensions in professional communication (Grech, Horberry, & Koester, 2008)

Making other languages visible to students

The lingua franca notion is that other languages are not necessary to learn. This notion takes away interest in them. Hegemonic ideas from the Anglo-Saxon cultural sphere even sometime ridicule other languages, spilling over into lack of respect for the people who speak them and their accents. This leads to stereotyping, which is exactly what is not needed in a team onboard a ship. There is some truth in the statement that a woman must be twice as good as a man to get promoted. The same goes for black people and of course for people with non-native skills levels in English.

Spare time onboard

There will always be opportunities to spend time with crewmembers on a ship, if the attitudes are positive and the ship culture allows it. By showing interest in the native languages of crewmembers and even learning a few phrases of them, officers can take steps to better equality in relations and better self-esteem in fellow seamen. If an officer works for many years with speakers of a certain language, this language can be learned with very small daily efforts. What

it takes is a strategy or method to follow and this is basically the same method that was used when English was learned.

Understanding other cultures

Since our languages are the main vehicles of our cultures, knowledge of other languages offers inroads to deeper understanding of other people and their different values and behaviour. In addition, interest shown in other cultures will bring rewards such as invitations to social gatherings and better personal relations, more smiles, etc. If a problem comes up at work, expectations will be more positive that a solution will be found. This can be of crucial importance, also economically of course.

Conclusion

To have symbolic capital is useful in practical communication. Competence in English is seen as such thanks to the predominance of the English language in high status contexts internationally. Hence the Anglo-Saxon cultural sphere has achieved hegemony – implying that other cultural spheres do not have much to offer. The halo effect adds to the advantages of using English expertly. Good communication today, however, and maybe fortunately, cannot be achieved by only using English since many do not master that language. Yet it is possible if there is respect despite the lower status of other languages. Active listening and expanded communication can take place. Maritime academies can equip their students for the multilingual world by introducing Intercomprehension on the curricula. Intercomprehension means practicing understanding what people mean also when they use other languages than those one has learned previously.

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The Review of Maritime English Course Syllabus in DMU – A proactive way to the revised Maritime English Model Course

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Abstract

Based on the requirements of STCW Code Manila amendments, the revised Model Course 3.17 Maritime English (2015) will be put into place soon. Compared with the new model course, this paper will review the current Maritime English course design and syllabus in Dalian Maritime University (DMU), then give a suggestion for its revision so that the education quality can be improved and the students can fit to the need of their future job as mariners in the shipping industry.

keywords: Maritime English, IMO Model Course 3.17, course syllabus

Introduction

English for general and special purposes is essential for mariners working on board ships, particularly for communication on multinational crewed ships. In order to further improve the students' performance and be in line with the requirements of STCW Convention and IMO Model Course 3.17, Navigation College of Dalian Maritime University initiates the course reform including Maritime English. Concerning the poor communication skills of Chinese seafarers in English, it is necessary to review the current course design and course syllabus so that a good course syllabus can be developed. Besides, referring to the Model course, analysis and suggestion will be given in this paper on how to build up a scientific Maritime English course system.

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IMO Maritime English Model Course 3.17

Maritime English Model Course is designed to help trainees develop their communicative competence in English to a level that will enable them to satisfy the competences relating to English language set out in the STCW Code and further ensure the safe navigation at sea [1]. The methodology of Maritime English (hereafter referred as ME) model course is based on the principles of the Communicative Approach. Compared with the traditional Grammar translation method which lays more stress on reading rather than speaking, communicative approach can effectively improve the seafarers' communication skills, and enable them to use and understand English in a range of situations.

Syllabus Structure

The latest revised version of IMO ME Model Course 3.17 still contains two parts: Core section 1for General Maritime English (hereafter referred to as GME) and Core section 2 for Specialized Maritime English (hereafter referred to as SME). However, this version has changed greatly no matter the structure or the contents. Particularly the Core section 2 on SME has been emphasized substantially and divided into six parts as per the different seafarer ranks or duties, of which the corresponding communication competences in English are clearly specified in the STCW Convention. Compared with the old version, the layout of new version is more concise, simple and clear. As usual, the GME section is to teach the language for the language's sake through the application and it is designed for trainees who have an elementary and lower intermediate or intermediate level of English, while SME focuses on specifically maritime aspects.

Syllabus content of Core Section 2

Core section 2 provides the learning objectives focusing on maritime scenarios and a variety of topics could be selected by the instructor to suit the needs of the trainees. As stated above, in spite of six parts being contained in Core section 2, here we will mainly discuss Part 2, SME for officers in charge of a navigational watch on ships of 500 GT or more, which is particularly relevant to navigation learners. The syllabus in Part 2.1 consists of two areas and it is more competence-based and task-oriented. Area one is "use English in oral and written form" and area two is "use IMO SMCP". Area one includes 5 units relating to a ship officer's competence and area two gives a brief introduction on how to use the IMO SMCP.

In the detailed syllabus, the 5 units mainly cover the competence requirements of STCW Code to ship deck officers. The last learning objective of area one is "communicate appropriately with a multi-lingual crew". This objective comes from the competence requirements from the culture awareness aspects and highlights how important it is to keep a harmonious working relationship particularly when manning involves a multilingual and multi-ethnic crew. Therefore, as the minimum training standard, the STCW Code requires the seafarers to have an adequate command of the English language to communicate with the multilingual crew. Furthermore, it also requires seafarers to identify language problems that can arise and endanger effective communication aboard, to identify their social responsibilities and to show respect to those of other religion and culture. From this point of view, the ME model course sets a good example in syllabus to incorporate the relevant study about culture.

As usual, the Model Course provides rich references and recommends a variety of books and other teaching materials and resources for the users who can access these resources when they need.

DMU English Course Design

For all enrolled undergraduates in Dalian Maritime University, English courses consist of two stages: General English stage in the first two years and Subject English stage in the following two years. It is compulsory for all undergraduates to take these English courses no matter general or subject English. In this section, the paper will focus on the English course design for students majoring in marine navigation. Table 1 gives details.

General English

A knowledge of General English is necessary for all the students. As future seafarers, students who study navigation need to have good command of General English, because General English is not only a necessary foundation for Maritime English but also helps seafarers deal with all situations while they work aboard merchant ships, particularly in the multilingual and multinational crew environment [2]. Practice also proves that it is more helpful to start with a common core of General English and gradually pass over to Maritime English instead of intermingling them. In a word, when the students come to the specialized courses including specialized English, they must have already covered all topics of General English and essential grammar. Furthermore, studies at Dalian Maritime University comprise a four-year bachelor degree pro-

gramme. It is a must for the students to finish the college English courses in the first two years in accordance with the requirements of the Ministry of Education in China.

table 1: English course design in DMU

Class Level	**Course**	**Class hours**	**Total Class hours**
English-emphasized class	College English (reading)	270	558
	College English (listening)	162	
	College English (speaking)	108	
	College English (writing)	18	
	Nautical English (reading and writing)	174	276
	Nautical English (listening and speaking)	18	
	Nautical English (CoC license exam)	84	
General Class	College English (reading)	216	324
	College English (listening)	72	
	College English (speaking)	36	
	Nautical English (reading and writing)	64	184
	Nautical English (listening and speaking)	36	
	Nautical English (CoC license exam)	84	

College English aims to develop the ability of students to use English handily when they explore their career under the trend of global economic integration. According to the different levels of English proficiency, College English course syllabuses are classified into basic requirements and intermediate requirements. In order to enhance the students' communicative ability, the course focuses more on cultivating and training language skills in terms of reading, listening and speaking as well as a good command of vocabulary and grammar.

As illustrated in table 1, General English stage focuses on the basic language skills improvement integrated with the four aspects; listening, speaking, reading and writing. The time allotted in the syllabus is based on the credit rule and proportional to other courses in each semester. Overall, the two-year General English stage helps students set a solid foundation in English language.

Maritime English

Maritime English is a rather broad and general concept which being used as a device for communication within the international maritime community contributes to the safety of navigation and the facilitation of the seaborne business (Trenkner, 2000) [3]. It covers a variety of aspects and this paper mainly discusses those English syllabuses related to students of navigation. The specialized subject English course is named as nautical English rather than maritime English in the table above, while maritime English will be still used hereafter according to the unified standard, no matter what they are called in this paper, the meaning is the same.

Syllabus of Nautical English Reading and Writing

Nautical English Reading and Writing is a specialized course for nautical students and aims to develop students' reading and writing skills so that they can use various nautical publications and communicate in written form while working on board merchant ships. This course design is fully compliant with China M|SA standard and refers to IMO Maritime English Model Course 3.17 as well. Particularly, we realize the importance of writing skills for students especially when they are promoted to management levels. Moreover, good writing skills can assist in improving the other three language skills, so writing skills are highlighted in this stage as well. The main contents and time allotted to this course are described in the course outline of table 2.

table 2: Course outline of Nautical English Reading and Writing

No.	**Knowledge system**	**Knowledge**	**Class hours**
1	Nautical Publications	Sailing Direction	6
		Port Entry	
		Other nautical publications (Light list, astronom-	

		ical Almanac, etc.)	
		Charts and uses	
		Notices to mariners, Navigational warning	
2	Logs, Letters and Fax	Deck logs	6
		Standing orders and night orders	
		Notices and instruction	
		Sea protest	
		Marine accident report	
		Survey report	
3	International Safety Management	Safety Management code	4
		Documents and reports for PSC	
4	Shipping law and business	Bill of lading	6
		Carrier's responsibility and Hague-Visby rule	
		Charter party	
		General Average	
5	International Maritime Conventions	STCW	6
		SOLAS	
		MARPOL	
		Salvage Convention	
6	Marine Navigation Technology	COLREG	6
		Ship handling	
		Terrestrial navigation	
		Tides and Currents	
7	Marine Cargo Operation	Loading and discharging operations	4
		Cargo tallying and measuring	
8	Marine Meteorology	Weather reports	4

		Weather routing	
9	Ship Structure and Equipment	Ship structure	4
		Ship equipment	
10	Nautical Instruments	Radar and ARPA	4
		Magnetic and Gyro Compass	
		AIS, ECDIS, GPS, VDR, etc.	
11	Communication at Sea	GMDSS, VHF, etc.	4
12	Ship Repair and Maintenance	Deck and hull maintenance	4
		Rigging and fitting system	
		Stores and provisions	
13	Emergency Response	Search and rescue operations	6
		Fire-fighting	
		Life-saving and survival at sea	
		Oil pollution and damage control	
		EMS and MFAG	
Total			64

Syllabus of Nautical English Listening and Speaking

For navigation students, Nautical English Listening and Speaking is the only course in oral form for a specialized English aspect with the aim to improve students' communicative skills. As table 1 shows, there are only 18 class hours for English-emphasized class and 36 class hours for general class. The basic contents given in table 3 are in line with the requirements of MSA Maritime English oral assessment.

Table 3: Course outline of Nautical English Listening and Speaking

No.	Learning objectives	Detailed syllabus	Class hours
1	Everyday English	Greeting, shore leave and shopping	2
2	Business on Inbound/Outbound Ship	Certificates, forms and documents	2
3	Mooring/Unmooring operations	Ship berthing, unberthing and anchoring	4
4	Cargo Work	Loading/unloading operations	4
5	Navigation at sea	Collision prevention, Narrow channel, etc.	4
6	Marine communication	VHF, radiotelephone, GMDSS	4
7	Accident Response	Fire-fighting, grounding, damage control	4
8	Life-saving and Survival at Sea	Search and rescue operation	4
9	Ship Repair and Maintenance	Deck and hull maintenance	2
10	Port State Control	Port State inspection, documents and reports	4
11	Ship Security	Ship security measures	2
Total			36

Nautical English (for CoC license exam)

This course mainly helps students prepare for the national seafarer license exam. The students who hope to work on board merchant ships have to pass this exam and obtain the Certificate of Competence corresponding to the different level. Therefore, the syllabus of this course is fully in accordance with the requirements of China MSA standards. Likewise, these standards are established in compliance with STCW convention. However, this course focuses on professional knowledge and maritime English vocabulary rather than the students' communicative skills, because it is subject to the form of the license exam. This national exam is a kind of sitting exam

and the form of exam is multiple -choice questions and reading comprehension for the convenience of computer marking.

Issues Analysis and Suggestions

Syllabus design

ESP teaching is rather complicated. To derive a qualified ESP syllabus, several approaches could be adopted, such as the grammatical approach, situation approach, task-based approach and learner-centered approach, etc. The ME syllabus is often designed in combination with two or more approaches, with the learner-centered and tasked-based syllabus in particular becoming more popular [4].

Moreover, as one of the members of the ESP family, the ME syllabus should consider not only language knowledge but also professional knowledge, so it is not an easy task to combine these two aspects uniformly and harmoniously. Since the ESP syllabus is tended to be expressed in more communicative terms (Brown, 2001) [5], the ME syllabus designer should be an expert in language skills and professional knowledge. In this regard, IMO can take the advantage to invite world-wide experts to develop the Model Course, so it is suggested for maritime institutes and academies to refer to relevant IMO Model Course while designing their own course syllabus.

The ME course syllabuses of DMU are developed by a batch of navigation professors. Although language experts' suggestion and Model Course 3.17 are both consulted, these syllabi are concerned with more specialized knowledge rather than language, and the lecture is delivered by teacher-centered approach rather than learner-centered communicative approach. Learning ME through this way, the lecturers focus on the professional maritime knowledge and the aim of cultivating the students' language skills has been ignored. From this point of view, new version ME Model Course provides a good example on how to integrate the language functions with professional knowledge system into a whole.

The Consistency of Language Training

As stated in table 1, the time allotment of English course for navigation students is adequate, while the class-hour of maritime English is just one third of the total English teaching hours

compared with general English. The proportion of maritime English is therefore a bit of low. Moreover, the time allotted to maritime English listening and speaking is much lower, just 18 class hours for English-emphasized class and 36 class hours for normal class. Obviously, it is not very helpful for students to improve their maritime English communication skills at all, and neither to say their future performance on English language aspect aboard ship. Some English teachers hold the opinion that good command General English is the basis and more important than maritime English, the doubt is how the students can well command maritime English skills in such a little time.

It is understandable that Maritime English stage starts from the third year. Because the first two-year study only involves foundation courses, and students start to learn the subject courses in the third year. It is hard to learn the maritime English without any maritime knowledge. However, according to the DMU syllabuses, the ME courses start in the second semester of the third academic year. It means that there is one semester time gap between General English and Maritime English courses, whereas the intensive General English training is conducted during the first two school years. As we all know that China is not an English-speaking country and has no English language environment, it is thus very important to maintain a consecutive learning process until the learners reach a stable level, otherwise it may not only waste time but also influence the learning efficiency for the leaners to pick up the language again.

With one exception, the Extensive English Reading course, covering a variety of topics about oceans, international shipping and transportation as well as world economics and finance, is for first-year students and can be regarded as Maritime English in scope. However, fluent oral expression in English communication is still a big barrier for Chinese students.

In a word, even with a solid foundation of General English, the problem the DMU students are facing is lack of adequate exercises in oral maritime English communication, this make it difficult to master Maritime English in the real world. Besides, writing skills also need to be enhanced according to the current situation. In this regard, it is suggested to adjust the maritime English course and bridge the gap in the first semester with nautical English course in oral and written form to enhance the students' communication skills.

The methodology and techniques of teaching

In DMU, the course of Nautical English listening and speaking has been taught by language teachers from Foreign Language College who are proficient in language skills. While the other subject English courses have been delivered by teachers from technical fields who are good at professional knowledge, normally they have good command in English skills but may not be a good language expert particularly in the language teaching aspect.

In consequence, most of the lectures of Maritime English are delivered by Grammar translation approach rather than communicative approach. When teaching, the lecturers focus on explaining technical knowledge rather than developing the students' language skills. The principles of the communicative approach, for example, learner-centered teaching, students' active involvement and communication tool, etc. have not been adopted to cultivate students' communicative competence. Like the traditional classes dominated by teachers, teamwork and role play are seldom held in the class, students cannot use and practice the language actively.

In addition, the various teaching techniques in Maritime English stage are not well developed. Four language skills including listening, speaking, reading and writing are taught separately. It is suggested to introduce the teaching techniques recommended by Model Course and integrate the above four language skills together when teaching.

Culture Awareness

A current global trend, whether inside or outside of shipping, is globalization which highlights cross-cultural communication. However, culture difference is an obstacle in the cross-cultural intercourse particularly aboard a ship manned by a multi-ethnic crew. Rivers [6] believes, "People cannot learn language well if they do not know the mode and standard of the culture, and people cannot have a well command of English if they do not know the culture background". Culture learning is the key issue in language learning and language is closely related to culture which includes norms, religious beliefs, values, etc. Yet there is no relevant course or related topics being covered in DMU teaching syllabus. Intercultural awareness cultivating is undoubtedly a great progress that meets the demand in maritime college or institution and promotes better understanding in the real world. Therefore, it is necessary to set up new course or revise the current syllabus to increase the students' culture awareness and develop their cross-cultural communication skills.

Conclusion

To sum up, good course design and course syllabus should not only comply with international training standards and satisfy the requirements of relevant conventions and regulations, but also provide students with a full and complete knowledge system, fully develop the students' potential and give them the capability and ability to explore their future career. With the new revised IMO Maritime English Model Course 3.17 as reference, it is necessary for DMU to take the initiative to redesign the Maritime English courses and course syllabus, so that the students' communication competence in Maritime English as well as in General English is substantially improved.

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English and Non English major Teachers' Assessment of Oral Proficiency: A case of Iranian Maritime English Learners

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Abstract

Speaking assessment is still construed as a complicated, under-researched process from the vantage point of tasks and rater characteristics. The present study aimed at investigating if and how English Major and non English Major teachers differ in their perception of the construct of oral proficiency while assessing learners' L2 oral proficiency. To this end, 38 male and female non-native EFL teachers were asked to rate 10 monologs on a 4-point rating scale and provide concurrent verbal reports. Cronbach's alpha coefficient shows that the inter-rater reliability is relatively high, however; EM teaches are on the whole more reliable while doing the assessment task. On the other hand MANOVA reveals no significant difference in the teachers' holistic rating of the speech samples ($F=1.44$, $\rho \geq 0.05$), and the adopted approach while doing the assessment task in EM versus NEM teachers' modes of assessment.

keywords: assessment, rater, performance-based assessment, holistic rating scale, oral English proficiency construct, test

Introduction

Preview

To many language learners, the ability to speak in a foreign language is equal to being able to use a foreign language. Speaking is a productive skill which involves the process of encoding or creating a message. Like the other skills, speaking is an active skill in which speakers use their background linguistic knowledge to create a meaningful message to the deliberate audience

(Chastain, 1988). Speaking skills are an important part of the curriculum in language teaching, and this makes them an important object of assessment as well (Luoma, 2004, p.1).

Shifts from conventional paper-and-pencil selective response tests to performance-based assessment of second and foreign language skills, especially in assessment of writing and speaking, where raters are usually required to carry subjective assessment of a person's language ability, over the past decades has accorded pivotal importance to the role of the raters in assessing students' language abilities. While in conventional tests (i.e. multiple choice tests) the obtained score is the implication of interaction between test task and examinee, in performance-based assessment rater facet is added to the assessment process which can be a potential source of error, influencing test score validity and reliability. Variability caused by raters has been found to manifest itself in a number of ways: raters may differ with regard to the overall internal consistency, they may display different bias patterns, or they may rely on diverse scoring criteria or make different interpretation of rating scales.

An increasing number of studies have focused on rater variability in performance-based assessment of L2 ability. Raters have been proved to differ with regard to the severity of their evaluation of examinees' oral proficiency and can produce a broad range of scores. Raters were also found assigning the same score to disparate performances or disparate scores to the same performance (Brown, 1995; Douglas 1994; Merion & Schi, 2000; Orr, 2002). Some researches revealed that even if high degree of agreement exists between the raters, this does not state by any means similar judgment, in other words the same score may mean different things to different raters (Ang-Aw & Meng Goh, 2011; Douglas, 1994; Johnson & Lim, 2009; Orr, 2002; Merion & Schi, 2000). Raters may also differ in their approaches while assessing speaking. To increase rater consistency and provide a more accurate estimate of examinees' scores, some researchers have recommended rater training sessions. Research findings, however, have shown that although training is effective, it does not eliminate rater variability and rater inconsistency exists even after training programs (Hamilton, Reddle & Spratt, 2001; Knoch, 2011; Lumely. 2002; Weigle, 1998). This lends credence to the use of more than one rater to assess each learner's L2 performance. In many assessment contexts, multiple raters' rating of examinees' performance are combined to produce a single score. But such multi-rater assessment of L2 speaking ability does not usually result in highly reliable and valid scores. There are occasions when raters assign completely discrepant scores to the same performance which requires the use of some method of resolving those differences (Penny & Johnson, 2011).

Statement of Problem

The expansion in scientific, technical, and economic activity on an international scale after the World War the Second created an appeal for an international language. For many reasons, most significantly the economic power of the United States after World War II, this role fell to English (Hutchinson & Waters, 1987). With the growing demand of learning English as a foreign language over the past decade in Iran, we witness an increasing number of English institutes which require English teachers more than at any other time. The majority of these institutes are private, indicating that they are governed in accordance with their managers' policies. Some institutes just use teachers with English related majors i.e. having a university degree in one of English majors is essential for teaching there. But for some institutes, it is not the case, it does not matter what the teachers' majors are, if their English knowledge is acceptable for teaching English they can take the role of teacher. Parallel with changes occurring in language teaching methods, most of the language institutes focus on communicative ability of the learners, hence, speaking receives vital importance. Since assessment is a part of any teaching curriculum, assessing speaking is of crucial importance especially when learners are going to take part in a placement test the aim of which is to place test takers at an appropriate level in a program or course (Richards & Schmidt, 2002.p.404). As noted earlier, the involvement of raters is a source of error influencing the scores obtained by learners, and in language institutes where the selection of teachers is somehow done without careful consideration, this involvement may lead to even more severe consequences.

Research Questions

Q1. Is there a significant difference between inter-rater reliability indices in English Major versus None English Major teachers?

Q2. Is there a significant difference between the holistic ratings of 10 speaking tasks by English Major versus None English Major teachers?

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Literature review

Rater Variables

A number of studies have focused on those raters' characteristics that may introduce a source of substantial degree of variability in English as a second language (ESL) and English as a foreign language (EFL) performance-based assessment contexts. Of these properties, diverse linguistic background and professional experience have received the most attention.

Linguistic Background

As regards raters' linguistic background which has mostly appeared in contrastive studies of native speaker (NS) and non-native speaker (NNS) raters, findings have revealed that although in most cases there are no significance differences between these two groups of raters in the scores they assign to candidates' L2 performance, they differ in their perception of the construct under question i.e. writing or speaking (Fayer & Krasinski, 1987; Santoes, 1988; Shi, 2001; Zhang & Elder, 2011). Zhang and Elder (2011), for instance, found no significant differences between the scores assigned by NS and NNS raters to oral performance of a group of examinees, however, the two groups were found to differ in the way they weighed various aspects of oral proficiency construct. As far as linguistic features were concerned, NNS English teachers demonstrated to be more severe than NS teachers. On the other hand, NS teachers attended more to communication strategies, demeanor and interaction indicating that they based their judgment on how well candidates can accomplish a communicative task rather than on candidates' linguistic competence. It should be noted that drawing clear-cut conclusions about the effect of linguistic background of raters on their rating behavior from extant literature is not safe. Some studies have been carried out with contradictory results. There has been some research, for example, showing that NS raters are likely to be more severe than NNS raters with regard to linguistic features (Barnwell, 1989; Brown, 1995). Another group of studies show no difference between NS and NNS groups with respect to both severity (Johnson& Lim, 2009; Kim, 2009) and consistency (Kim, 2009). These differences can be attributed to different methodologies employed in these studies, small sample size, and diverse native language (Chaulhoub-Deville, 1995; Brown, 1995).

Rating Experience: Novices vs. Experts

Rating experience that raters bring to the rating process is another variable that has been found to impact on raters' performance. Research on the effect of rater experience on ESL assessment shows that experienced and novice raters approach the rating task differently (Barkaoui, 2010; Cumming, 1990; Schoonen, Verger & Eiting, 1997; Weigle, 1998). Cumming (1990), for example, found that expert teachers had a fuller mental representation of the task of assessing their students' ESL compositions and used various criteria, self control-strategies and knowledge sources to read and rate the compositions. Novice teachers, on the contrary, employed a few criteria to assess students' compositions and used skills that might derive from their general reading abilities and other sources of knowledge that they had acquired previously such as editing. In a recent study, Barakaoui (2010) also argued that novice and expert raters make differential use of the rating scale. Generally, novices relied more heavily on the rating scale for rating criteria and decision-making because they did not have established criteria and/or they did not know how to approach the rating task. Experienced raters, by contrast, referred to criteria other than those in the rating scale more frequently, gave more comments on the compositions, and were more self-consistent. Taken together, literature on rater experience in ESL assessment shows that raters' expertise is fundamental to their decision-making and does affect their rating performance.

Teaching Experience: Teachers vs. Non-teachers

Some research have made a comparison between assessments done by ESL teachers and those raters without teaching experience (Barnwell, 1989; Brown, 1995; Chaulhoub-Deville, 1995; Hadden, 1991; Shoamy et al 1992). These studies, however, have not provided consistent results as to how teacher and non-teachers' judgments differ. Hadden (1991) figured out that teacher raters were more severe than non-teachers with respect to linguistic ability in assessing speaking ability of Chinese students, but the two groups did not differ significantly as far as comprehensibility, social acceptability and body language were concerned. These findings, however, contrasted with Chaulhoub-Deville's (1995) study which found that non-teachers tended more on linguistic features in a narration task than teachers who referred to creativity and adequacy of information more than linguistic aspects. Chaulhoub (1995) attributed the discrepant findings of the two studies to the different native languages of the participant raters. While in her study, raters were NSs of modern standard of Arabic (MSA), in Hadden's (1991) study the participants were native English speakers.

The above studies address rater variability in performance-based assessment in diverse rater groups. Another line of research, however, has been carried out with the aim of identifying bias patterns among raters, thereby providing a fuller picture of the rater facet in performance-based assessment.

Rater Training

From research on rater facet in L2 performance-based assessment, it can be understood that there is the possibility of a substantial degree of rater variability in assessing L2 writing and speaking, that raters, consciously and unconsciously, may assess students L2 abilities with bias, and that raters interpret rating scales differently and draw on a range of non-criterion factors which they suppose to be important in assessing oral or written performance(Brown, 2000; Douglas, 1994; May, 2006; Orr, 2002; Wiggleworth, 1993). These among others are reasons that have pushed researchers and administrators towards planning training programs so as to reduce systematic errors caused by raters and improve rater consistency and score validity (Lumely et al., 1995). As such, several studies to date have been carried out investigating whether training can improve raters` performance (Elder et al., 2007; Shohamy, et al., 1992; Tajeddin & Pashmforoosh, 2011; Weigle, 1998). Shohamy et al. (1992) investigated the effectiveness of rater training by comparing rating performance of 10 trained and 10 untrained raters of 50 L2 compositions on three scales: holistic, communicative, and accuracy . They observed that inter-rater reliability was relatively high in both groups, but trained raters were on the whole more reliable than untrained raters.

While the existing literature shows that, on the whole, training reduces rater variability and improves rater self-consistency, it does not appear to eliminate random errors caused by raters, that is, rater inconsistency still exists after regular training session (Lumely et al., 1995, Lumely, 2002; Ang-Aw et al., 2011; Weigle, 1998; Weigle, 1994), receiving individualized feedback(Knoch, 2011; Wiggleworth, 1994) or online self-training programs (Hamilton, Reddle, & Spratt, 2001). In a recent study, Ang-Aw et al. (2011), for instance, investigated rater variability among 7 experienced examiners of ‘O’ level examination (a high-stakes national English test for secondary students in Singapore (formerly also in the UK, replaced by GCSE). They found that despite undergoing similar training, raters differed in their perception of oral proficiency construct, the emphasis they placed on different aspects of oral proficiency, and their interpretation and approach to assessment. In another study, Knoch (2011) examined the impact of individualized feedback on rating behavior of 19 raters assessing writing and speaking subsets

of occupational English Test (OET) over eight administrations. After each administration, raters received a performance profile on their rating behavior on the basis of MFRM. The findings showed that raters rated neither the writing nor the speaking subsets no better after receiving individually targeted feedbacks.

The overall impression gleaned from literature on rater facet in L2 assessment, thus, shows that while rater training which, as stated by Lane and Stone (2006), typically involves "familiarization activities, practice rating, and feedback and discussion" (cited in Lim, 2011, p. 544) can attenuate rater variability, improve self-consistency of individual raters, and reduce rater bias in relation to various aspects of test situations, it does seem to have a temporal effect, usually no more than a day (Congdon & Mcqueen, 2000; Lumely & McNamara, 1995, Weigle, 1998), and does not eliminate the extent of rater variability. For this reason some researchers are against the practice of training raters and conducting judgments on the basis of a single rating by such trained raters and have advocated the use of double or multiple raters, specially in high stakes tests (Lumely et al.,1995). Several studies to date have investigated inter-rater reliability and scoring validity of multi-rater judgments of students L2 performance (Douglas, 1994; Gamaroff, 2000; Meiron et al., 2000), most of them showing that even in cases where high-inter rater reliability is achieved , quantitatively similar scores usually reflect qualitatively different learner performances.

Methodology

Participants

38 Iranian EFL teachers (15 male, 23 female) participated in the study, of whom 19 were EM and 19 NEM teachers. Of the 19 EM teachers, 9 males and 10 females and of 19 NEM teachers, 6 males and 13 females were currently teaching English as a foreign language (EFL) at Safir Language Academy and had been teaching English for a minimum of one year and maximum of 15 years. None of the participants had received any rater training programs. They self rated their English proficiency as either *advanced* or *near native*. Table 1 describes a profile of participants' demographics.

Instruments

Audio-recording of 10 Iranian EFL learners' oral English were used as the motivated material. They were an unsystematic subsample of a pool of recordings performed for research purposes in an earlier study and were based on 5 topic-based one-way speaking tasks, with 2 students speaking 2-3 minutes on each(Tajeddin, Pashmfroosh, 2011). As noted by (Tajeddin, Pashmfroosh, 2011), the students were adult EFL learners studying English in private institutes.

Participants were also asked to fill an assessment sheet in which they rated speaking samples holistically on a 4-points scale from 1(novice) to 4 (superior) with the midpoints labeled as intermediate and advanced respectively (half points were allowed). As mentioned in the introduction of this chapter no further explanation of the scores was provided to find out how the raters perceived second language oral proficiency construct and defined the scoring criteria (Orr, 2002; Zhang & Elder, 2011; Kim, 2009; Ang-Aw& Meng Goh, 2011). Teachers employed all the scale points, with 4 being the least and 2 being the most used scores in both groups.

Procedure

38 participants of both genders were selected randomly. The participants were supposed to assess 10 speaking tasks chosen from a pool of recordings of an earlier research (Tajeddin, Pashmfroosh, 2011). The assessment took a holistic rating on a 4-point scale from 1 (novice) to 4 (superior) with the midpoints labeled *intermediate* and *advanced* respectively. Each rater was briefed on the rating scale and speaking samples and received instruction on how to produce think-aloud protocols while rating the recordings. Nothing was said about student's name, specific age, and level of proficiency, but they were told that the speakers were EFL students who spoke on a specified topic after giving one minute to think about it. Teachers, then, rated the 10 recordings on the basis of the holistic 4-point rating scale while thinking aloud into a tape recorder. To eliminate researcher effect on their performance and to provide them with sufficient time, raters were allowed to do the ratings at their convenience. The researcher came up with 38 assessment sheets and 380 sets of verbal protocols.

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Data Analysis

Analysis of the First Research Question

The first research question focused on investigating inter-rater reliability indices in EM versus NEM teachers' modes. As noted earlier the 38 participants in the study were asked to complete an assessment sheet in which they rated each speaking sample holistically on a 4-point rating scale, labeled as 1= novice, 2= intermediate, 3= advanced, 4= superior (half points were allowed). Consistency of ratings in both modes - EM teachers vs. NEM teachers was estimated by means of Cronbach's alpha coefficient.

table 4.1: Inter-rater reliability estimates for EM vs. NEM teachers modes.

Modes of assessment	α coefficient	95% confidence interval	
		Lower Bound	Upper Bound
EM teachers	0.81	0.65	0.91
NEM teachers	0.79.4	0.62	0.90

Inter-rater reliability in the EM teachers' mode and in NEM teachers' mode were 0.81 and 0.79.4 respectively (table 4.1) which is surprising given the fact that the participant teachers had not received any training. The high level of inter-rater consistency in both modes can be attributed to the fact that raters were allowed to augment integer-level scores by using half points. Thus permitting such flexibility in the scores assigned by raters can be suggested as a reason for the high level of consistency between raters in EM and NEM teachers. Although the indices of agreement between raters for each mode are very similar, it is important to look at the confidence intervals for the reliability indices in each mode (table 4.1).The confidence intervals show the range within which the population indices may fall in 95% of samples. For EM teachers' mode, the confidence intervals are 0.65 to 0.91 and for NEM teachers' mode 0.62 to 0.90. These results show narrower confidence intervals for alpha coefficient in the EM teachers' mode of as-

sessment. Although the inter-rater reliability was relatively high in both modes, EM teachers were on the whole more reliable while doing the assessment task.

Analysis of the Second Research Question

The second research question aimed at investigating the difference between the scores assigned to the 10 speaking tasks by teachers in the two modes of assessment. To achieve this aim SPSS version 17 was used. Table 4.2 summarizes means and standard deviations for teachers` assessment of the 10 speaking samples in the two modes.

table 4.2: Descriptive statistics for the 10 speaking samples in EM vs. NEM

Ranking of samples		**EM mode**		**NEM mode**		
NEM	EM	Mean	S.D.	Mean	S.D.	
8	9	1.83	.38	2.28	.50	Task 1.1
3	4	2.27	.46	2.60	.60	Task 1.2
6	7	2.01	.36	2.35	.76	Task 2.1
1	2	2.82	.68	3.36	.57	Task 2.2
10	10	1.77	.64	1.93	.73	Task 3.1
9	6	2.05	.53	2.18	.71	Task 3.2
4	5	2.16	.38	2.48	.72	Task 4.1
2	1	3.05	.63	3.31	.60	Task 4.2
7	8	1.94	.53	2.33	.67	Task 5.1
5	3	2.50	.70	2.44	.65	Task 5.2
		2.24	.50	2.58	.65	Total

As it is shown in table 4.2 in the EM teachers' mode, mean scores for the 10 tasks ranged from 1.77 to 3.05 and in the NEM teachers' mode it ranged from 1.93 to 3.36. The total mean score of the 10 speaking sample for EM teachers' mode is 2.24 and for NEM teachers' mode is

2.58 which shows teachers assigned slightly higher scores to the 10 tasks in NEM mode while doing assessment. Moreover, considering standard deviations, a smaller total mean of standard deviation was found for EM mode (total mean of S.D. of .50 vs. .65). This suggests that scores awarded by EM teachers to the 10 speaking samples were more homogeneous than those they gave in the NEM mode. With respect to the rankings, in the NEM mode, Task 2.2 received the highest score and Task 4.2 the second highest score. In the EM mode, teachers scored Task 4.2 as the best and Task 2.2 as the second best. They agreed in both modes, on the poorest performance by assigning the lowest score to Task 3.1. Concerning the rest of the tasks, a difference of one to two ranks emerged between raters` performance in the two modes.

To find out the differences in the scores assigned by the teachers to 10 speaking tasks in EM and NEM mode, MANOVA was run. Table 4.3 shows the results of MANOVA comparing the scores in EM and NEM mode.

table 4.3: Results of MANOVA comparing the scores in EM and NEM

Partial Eta Squared	Sig.	Error df	Hypothesis df	F	Value	Effect
.252	.192	43.000	10.000	1.44	.74	Wilks` Lambda

The F- observed value is 1.44 and significance level is .192 which is more than 0.05 which shows no significant difference between the scores assigned by teachers to the 10 speaking tasks in EM versus NEM mode(F=1.44, $p \geq 0.05$).

Discussion and Conclusion

As indicated in preceding parts and chapters, this study set out to ascertain whether there is any difference between EM and NEM teachers' assessment of L2 oral proficiency of Iranian EFL learners. Four research questions were addressed in this descriptive research that would be discussed here. This study examined teacher variability through both qualitative and quantitative approaches, focusing on inter-rater reliability indices by EM and NEM teachers, the differ-

ences between the scores assigned to 10 speaking tasks by them, their perception of oral proficiency construct, and approaches used by them while assessing L2 oral proficiency.

To answer the first research question Cronbach's alpha coefficient was run. As it was shown in table 4.1 inter-rater reliability in the EM teachers' mode and in NEM teachers' mode were 0.81 and 0.79.4 respectively. . Although the indices of agreement between raters for each mode are very similar, it is important to look at the confidence intervals for the reliability indices in each mode (table 4.1). For EM teachers' mode, the confidence intervals are 0.65 to 0.91 and for NEM teachers' mode 0.62 to 0.90. These results show narrower confidence intervals for alpha coefficient in the EM teachers' mode of assessment. Thus, although inter-rater reliability was relatively high in both modes, EM teaches were on the whole more reliable while doing the assessment task. So the null hypothesis assumed for this research question is rejected.

The second research issues under-question in this study was whether EM and NEM teachers differed in their holistic rating while doing the assessment task. Based on the results stated in table 4.2 teachers assigned slightly higher scores to the 10 tasks in NEM mode while doing assessment. Moreover, considering standard deviations, a smaller total mean of standard deviation was found for EM mode (total mean of S.D. of .50 vs. .65). This suggests that scores awarded by EM teachers to the 10 speaking samples were more homogeneous than those they gave in the NEM mode. To discover the differences in the scores assigned by the teachers to 10 speaking tasks in EM and NEM mode, MANOVA was run. according to table 4.3 the F- observed value is 1.44 and significance level is .192 which shows no significant difference between the scores assigned by teachers to the 10 speaking tasks in EM versus NEM mode($F=1.44$, $p \geq 0.05$). Therefore, the null hypothesis supposed for this research question is accepted.

Pedagogical Implication

The overarching aim of the present study was to explore the differences between a group of EM and NEM teachers in assessing candidates' L2 oral proficiency. The findings of the study have a number of implications for teacher educators as well as for teachers and language institutes.

A crucial implication of this study would be a change in the policies of private language institutes in choosing English teachers. The owners of these institutes might be more cautious about recruiting teachers to teach English in their institutes. Another implication concerns educating

programs with the aim of making teachers more homogonous in the assessment of subjective tasks i.e. speaking and writing, in any teaching curriculum including private language institutes.

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On-going Maritime English Education Reform in China

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Abstract

IMO's call for seafarers' effective communicative competence reached its climax in the 2010 Manila amendments to STCW Conventions. In response, China has undertaken a series of reforms in Maritime English education. Under the authority of China MSA, Dalian Maritime University has taken its lead in the reform, giving full consideration to the revised STCW. Among all the efforts, College English Teaching for cadets has been reoriented so that there is a natural transition from EGP to ESP (Maritime English). A series of innovative College English Textbooks (For Cadets) were released in 2012 and have received much attention; meanwhile, MSA Examination Guides for Certificates of Competence initiated a new Maritime English teaching(MET) and examination model that is communication-oriented. At the same time, great importance has been attached to updating the Maritime English. The first part of the paper gives a general introduction to Maritime English Teaching and Research in China, and the second part contributes to Maritime English Education Reform in China with the case of Dalian Maritime University as an example. It is hoped that the initiatives taken in DMU can shed light on MET in non-English-speaking countries and further experiments and research on effective MET will be implemented with the joint effort of all maritime institutions.

keywords: *College English Textbooks (For Cadets), Effective Communicative Competence, Development of Maritime English Professionals, Maritime English Education*

Maritime English Teaching and Research in China

The ability to communicate successfully is one of the most important qualifications for seafarers, and misunderstandings caused by poor communication at sea have been identified fre-

quently as a contributory factor to accidents posing a threat to safe operations of ships, even leading to loss of life and property. Investigations into disasters at sea involving the human element have revealed that one-third of accidents happen as a result of communication problems primarily to insufficient command of Maritime English. [1] (Trenkner, 2010)

The most crucial points regarding verbal communication is that more than 86% of all SOLAS vessels are crewed with multilingual personnel who due to diverse reasons, more often do not master the Maritime English skill required.[2](Trenkner, 2013)

In China, English is a compulsory subject in marine education institutions of different levels. Many teaching hours are assigned to English courses in maritime schools. But detailed analysis of Maritime English teaching and training shows that the time devoted is not well rewarded.

Maritime English teaching at marine colleges and universities in China has been substantially dominated by the exam for Certificate of Competency. The teaching syllabi have been closely related to the Maritime English exam syllabi which are subject to changes according to the requirements of maritime international conventions and regulations as well as the development of marine science and technology plus maritime transportation business progress. The Maritime English exams before 1997 were written exams consisting of multiple choice questions and translation, which tested vocabulary, grammar knowledge, reading comprehension and translation ability respectively. Maritime English teaching at that time was mainly text-based using the grammar-translation approach and students were passive learners who listened to the teachers and wrote down the Chinese meaning and memorized the answers. It was not difficult for students to pass the ME exam and obtain the competency certificate as long as they memorized all the answers to the questions, but they ended up with poor communicative competence when working on multilingual ships.

Since 1997, Maritime English listening and speaking evaluation has been added to test the candidates' listening comprehension ability and speaking ability. The reform is intended to improve communicative competence of the examinees to make them more competent for future work on board, which to some extent has made Maritime English teaching move from the grammar-translation approach to relatively more interactive approaches., with more emphasis on speaking and listening skill training. However, as the question banks of the exams were published prior to the exam, many candidates chose to memorize the questions to pass the exams,

which made maritime English teaching focus more on teaching the students the content of the exams and the skills to pass the exams.

To sum up, maritime English teaching at school was mainly exam-oriented and students' competence to communicate for meaning and understanding was marginalized.

A large body of research literature has been contributed from the perspectives of educators, policy makers and business administrators, pointing at strategies to improve Chinese seafarers' communicative ability in English, and five main areas of research are researches on improving ME classroom teaching, researches on ME testing reform, researches on ME education policy reform, researches on ME teaching practitioner training and researches on strategies to pass ME exams. But the articles are more theoretically based, and there is a lack of reports on empirical study of the ME teaching reform in China.

The Manila Amendments were completed on June 21st , 2010 and entered into force on January 1st, 2012. Within the 18-month period of grace, which allowed member states and their institutions to prepare for the change, China undertook a series of reforms in Maritime English education for the purpose of improving the English communicative competency of Chinese seafarers. A new teaching and examination system was drafted, full consideration given to practical English reading, professional writing, listening comprehension and oral expression. Under the authority and direction of MSA, Dalian Maritime University has been engaging in the revision of relevant guidebooks, providing a common basis for the elaboration of the exams, textbooks and guidelines. Aside from that, DMU has been granted the responsibility of directing a national program —Comprehensive Translation of IMO Model Courses, which is scheduled to be complete in 2016.

Dalian Maritime University (DMU) is the the only key maritime institution under the Ministry of Communications, People's Republic of China, and enjoys a high reputation as a center of maritime education and training as recognized by the International Maritime Organization (IMO). Since the amended STCW pays special attention to realizing competency-oriented rather purely knowledge-based MET and assessment [3] (Trenker, 2000), it is worth noting in this context that DMU has played a key role of setting a higher bar in terms of College English Teaching which is otherwise arranged for cadets.

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Reoriented Teaching Mode

In the maritime world, “effective communicative competence” is an increasingly paramount factor for carrying out safe and successful operation. However, several researchers in China have argued that the lack of communication skills among Chinese seafarers is still ‘a snake in the grass’. Despite the efforts and time students spend in their pursuit of English proficiency, they often fail to see pleasing results from their study of English. [5] (Weihua Luo, 2009) Therefore, this provides the condition for educational administrators, course designers, teachers, teacher trainers, examining bodies, etc., to reflect on their current practices, with a view to situating and co-coordinating their efforts and to ensuring that they meet the real needs of cadets and seafarers.

The fact is that the soaring status of English has drawn the attention to the importance of English teaching at undergraduate level in China. According to College English Curriculum Requirements released by China Ministry of Education and considering the characteristics of its own navigational majors, many navigational colleges have managed to establish their own College English Syllabus, which are intended to work out scientifically and systematically as a teaching guideline for College English. Taking the case in DMU, the syllabus stipulates three teaching modes with the same number of requirement sets.

table 1: Specific teaching requirements in the syllabus

	Teaching Mode	**Level of Requirement**
I	Elementary Stage: Teaching for College English Curriculum Requirements	General requirements
II	Processing Stage: Teaching various selective courses and professional English through all school years	Intermediate requirements

Ⅲ	Enhancing Stage: Providing Bilingual Education and English as a minor	Higher requirements

In the syllabus, the cultivation of comprehensive English competence takes priority, in particular the listening and speaking ability and navigational English skills; modern English study techniques are taken into full consideration to cater for the principles of individualized teaching. In addition, the university has decided to switch their attention to English output skills by intensifying relative classes.

table 2: Comparison of curriculums before and after the reform

Semester	Before (252periods, 16credits)	After (432periods, 16credits)
Ⅰ	36(reading/writing)+18 (Audiovisual) =54	**90**(reading/writing)+**54**(Audiovisual **)** **+18 (Pronunciation) =162**
Ⅱ	54(reading/writing)+18 (Audiovisual)=72	**108**(reading/writing)+**72 (** Audiovisual **) =180**
Ⅲ	54(reading/writing)+18 (Audiovisual)=72	**54**(reading/writing/Selected Readings of English Newspapers)
Ⅳ	36(reading/writing)+18 (Audiovisual)=54	36(Advanced Audiovisual/speaking)

Meanwhile, the autonomous study material on Maritime English is accessible for the students on the school website, which includes the related audio files repeatedly broadcast in the morning, afternoon and evening. Moreover, the selective inclusion of that content in the final test is applied to reinforce the effectiveness of autonomous study.

Innovative College English Textbooks (for cadets)

ESP practitioners often find themselves stuck in a situation where they have textbooks or course books that are de-motivating, boring and inappropriate to a particular group of learners.

Searching the market for Maritime English textbooks, the present course designers found this process daunting. The reasons for this vary between "*the lack of Maritime textbooks* ", "*the lack of interest on the part of the publishers*" and "*the slow rate of the adjustments to meet advances in foreign language teaching*" [4](Pritchard, 2004, P.4). In this context, China has responded to the implementation of STCW78/10, with the aim of achieving a natural transition from EGP to ESP (Maritime English) on the basis of the needs analysis. A multitude of experts on both navigational majors and linguistics have been gathered as a think tank for the compilation. Till now, this series of College English textbooks have already been adopted by more than 10 colleges and turns out to be a new solution for ESP (Maritime English) learning.

The whole set is constituted by College English (Reading and Writing for cadets) and College English (Listening, Watching and Speaking for cadets). Either of them consists of four books, with eight units in each one and one theme in a unit. Topics are introduced by authentic listening and speaking materials and are deepened into discussion by reading and further by writing. This way of editing contributes to a tighter bond of the English language and navigation skills. Case to be taken below is College English (Reading and Writing for cadets).

table 3: Structure of College English(Reading and Writing)

	Name	**Content**
Part I	Pre-reading	Theme-related culture input in the form of pictures, forms to encourage students' learning initiative before reading texts.
Part II	Text A	Key text of the theme, with practices of comprehension, collocation, synonyms, translation, text retelling, theme discussion.
Part III	Text B	Text of maritime-related theme for reading practice
Part IV	Writing	Practical writing instruction which includes structure analysis, model essays and practice.
Part V	After Class	Theme related websites, entertainments such as songs, stories, poetry to further inspire students' interest in learning English.

With six parts in one unit, the content of each part concentrates on the same theme to ensure the abundance of vocabulary and background information input; text B is in particular maritime-related, aiming to enhance students' reading comprehension in Maritime English. Most of the texts are selected from English original books, magazines, newspapers and main-stream web-sites. The compilers have tailored some essays and inserted necessary footnotes so as to adapt the students' literacy in English.

College English Textbooks (Listening, Watching and Speaking for cadets), as an indispensable part of this book set, are complied by the principles of practicality, interactivity, authenticity and diversity, taking on-board context into account and finally achieving Effective Communication Competence. This attempt to combine EGP and ESP (maritime English) in the textbooks of College English explores a creative approach of MET in China.

table 4: Structure of College English (Listening, Watching and Speaking)

Unit	**Content**	**Unit**	**Content**
Unit 1	Integrity and Honesty	Unit 2	History
Passage A	Honesty in Communication	Passage A	A Chinese Empire to Rival Rome
Passage B	Professional Mistakes Seafarers Should Never Make Onboard Ships	Passage B	Life at Sea in the Royal Navy of the 18th Century
Passage C	Trustworthiness and integrity: What It Takes and Why It's So Hard	Passage C	Australia's First Colony
Passage D	Communication and Teamwork	Passage D	The Human Footprint

Development of Maritime English Professionals

China Ministry of Education has consistently underlined the importance of teachers' stability, integrity and high quality long since the beginning of College English Reform in 2002. Maritime English teachers in China are taking the opportunity with this reform to switch outdated pedagogical ideas to new channels and pursue their professional development. On the one hand,

priority in class is partially given to students under teachers' guidance, a way quite different from the teacher-centered mode; the role of teachers shifts from an imparter of knowledge to a promoter. On the other hand, the Department of Maritime English is involved in a multitude of teaching-related trainings and activities; visits on board training ship take place every semester so as to refresh their knowledge about ships; the senior teachers take turns to present classes and remain open to evaluation while the young take the initiative to attend school teaching competitions, forming a virtuous circle within the teaching staff; scores of senior teachers have been engaged in the compilation of CoCs (Certificates of Competence) Syllabus and relevant guidebooks under the authority of MSA (Maritime Safety Administration), China.

With the support of MSA, China, the Training Program of Maritime English Teachers has been held three times on board M/V Yukun (DMU training ship), a real target context for the use of Maritime English. The program is intended to help teachers enhance their level of proficiency in terms of maritime knowledge, sea culture and on-board drills. Till now, more than 100 participants from different colleges are involved, and their advice also contributes in return to the on-going reforms of Maritime English education.

Conclusion

The amended STCW conventions have been in force for more than 4 years. During this period, there has been a real intention and desire in China to make a sustainable and valid contribution to the implementation of the new provisions. DMU plays the key role along the way by adapting Curricula of College English courses (for Cadets), reorienting teaching materials, refreshing teachers' professional skills and developing new assessment tools. There is no doubt that all these endeavors will finally contribute to not only China but towards a more prosperous and safer shipping industry at international level.

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The IMO SMCP 15 years on: current perceptions and realistic recommendations

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I would like to dedicate this paper to Peter Trenkner①, Chairman of IMLA-International Maritime English Conference (IMEC) and key author of the IMO Standard Marine Communication Phrases (SMCP).

Abstract

Recent amendments to the STCW② (Table A-II/1, Manila Amendments 2010) stipulate that officers "*shall use the IMO③ SMCP④ and use English in oral and written form*". However, despite efforts to locate the SMCP at the forefront of on-board communication, the literature confirms that authentic maritime communication does not display high SMCP content [1] [2]. Within the framework of ongoing doctoral research, the author discusses survey-based data gathered from a questionnaire distributed within the Belgian fleet about the use of the IMO SMCP. A range of findings offer information about the training and assessment of the SMCP, the circumstances under which the phrases are used on board, the frequency of their use and the perceived role of the phrases as a linguistic asset. Approximately 15 years following the IMO's adoption of the SMCP, the paper concludes with a review of current practices and perceptions and some realistic recommendations for the future of the SMCP.

keywords: *SMCP perceptions, SMCP training and assessment, authentic maritime communication, SMCP survey-based data, Belgian fleet*

①Prof. Peter Trenkner was Chairman of the IMLA group of experts and IMO-NAV drafting group for the establishment of the IMO SMCP. The SMCP were approved by the IMO Sub-Committee on Safety of Navigation at its 46th Session which took place from 10-14 July, 2000.

②Standards of Training, Certification and Watchkeeping

③International Maritime Organization http://www.imo.org

④Standard Marine Communication Phrases

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Introduction

Since this paper is destined, initially, for an audience in the know, I will refrain from offering either definitions of Maritime English or from embarking on a preamble about the IMO Standard Marine Communication Phrases (SMCP). Those wishing to explore such definitions will find numerous examples in the literature [3] [4] [5], if not in these very conference proceedings. I will simply reiterate that the SMCP were adopted by the IMO in 2001, following a long period of development, in the hope of enhancing on-board communication, thereby improving safety and thus reducing communication-related accidents at sea.

In his opening speech to delegates of IMEC26 in Terschelling, The Netherlands, Milhar Fuazudeen, current Head of the IMO Maritime Training and Human Element Section, Maritime Safety Division, stated the following:

"*There is a misconception among some seafarers (and some training providers) that an ability to speak and understand general English and the ability to use the IMO Standard Marine Communication Phrases (SMCP) are adequate for discharging their functions on board. However, proficiency in General English and the necessarily restricted language of SMCP are not sufficient to ensure effective two-way communication on board ships.* ***SMCP is only one among many tools, but it is considered by many as the key tool for communication on board. They might not know how far from the truth this is until it is too late***" [6].

From the context of the quote within Fuazudeen's paper, "*two-way communication on board ships"* seems to refer to internal communication, namely within the ship, on the bridge and between the bridge team. It might, however, include two-way external communication, in other words ship-to-ship or ship-to shore/shore-to-ship.

In the light of Fuazudeen's comments, this paper draws on survey-based findings gathered during research as part of the author's doctoral thesis and, almost 15 years after the adoption of the SMCP, reflects on their status, perceived by many as the "key tool" for communication on board. Using the data gathered, the paper attempts to rate their use on board, thus gauging their success in terms of their original objectives.

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Methodology

As part of the author's doctoral research, a questionnaire relating to the role and use of the IMO SMCP on board was sent out to the Belgian fleet. The questionnaire, which was made available both online and as a text document, was distributed to the fleet in February 2014 by way of the major Belgian shipping companies (Exmar, Ahlers, Deme, Jan De Nul) and the Royal Belgian Shipowners Association. In addition, the questionnaire was sent to members of the Antwerp Maritime Academy Alumnus Association. The manner of distribution meant that the sample group included both currently navigating officers and respondents who were no longer navigating. It should be noted that the network of respondents at one stage expanded to include an online group of mainly French merchant marine officers. Many of the latter had graduated from MET institutions in France and, contrary to the Belgian officers, had thus trained as "dual-purpose" officers.

The first section of the questionnaire was designed to gather general information about the respondents. Respondents were asked to give details of their employer, shipping experience (number of years of experience, vessel type, trade type and geographical area), current on-board function (captain, chief officer, second officer, third officer, fourth officer, apprentice officer) or, if the latter were no longer applicable, current employment and last on-board function. The second part of the questionnaire focused on the SMCP, eliciting information about the respondent's knowledge and perceived command of the SMCP; the observed frequency of their use on board in specific situations; the formal teaching and learning of SMCP; the perceived effectiveness and usefulness of the SMCP; and their advantages and disadvantages.

The survey contained 13 questions, excluding the initial questions designed to gather respondents' metadata. However, many of these 13 questions were composed of numerous statements which the respondents were asked to rate. Open-ended questions were excluded on the grounds that these were more than likely to generate a non-response. Nevertheless, respondents were given the opportunity to add additional comments to their answer where appropriate. A Likert[①] type scale was chosen as offering a suitable method of measuring levels of agreement or disagreement, thus allowing the author to gauge respondents' perception of a particular aspect. The decision was taken to use an even number of categories, in this case six, thus preventing re-

① The Likert scale was 'invented' by Rensis Likert, an American administrator and organisational phsycologist.

spondents from opting for the 'neutral option', namely the option occupying the middle ground, thus reducing so-called 'acquiescence'.

According to the type of statement employed, a range of 'forced choice' scale response categories were selected. Table 1 below provides the categories.

table 1

0	1	2	3	4	5	6
No answer	Very effective	Effective	Rather effective	Rather ineffective	Ineffective	Totally ineffective
No answer	Very often	Often	Rather often	Not often	Rarely	Never
No answer	Very important	Important	Rather important	Rather unimportant	Unimportant	Totally unimportant
No answer	Excellent	Good	Fairly good	Fairly poor	Poor	Non-existent

Focus group discussions, which took place prior to developing the survey, had indicated the importance of recognising the respondents' 'knowledge' when compiling the questionnaire [7]. Thus, where the ability to respond to a question was judged as falling outside the respondent's justifiable domain of knowledge an additional response, namely "*don't know*", was inserted as an additional option. Following receipt of the completed questionnaires, the data was analysed using software means available in the commonly available Excel programme.

Respondent profile

The total number of respondents who completed the questionnaire was 92. Table 2 below provides details of the respondent sample. It can be seen that there is a high number of respondents represented by top management functions on board, in other words captains and chief officers: 69 of 92 respondents hold or held the function of captain or chief officer. This particular top management profile was deemed liable to generate sufficiently 'knowledgeable' answers [7], thus validating survey findings.

table 2: number of respondents and their current or former function on board.

	SMCP survey: respondent profile		
Total respondents	**92**	**% of total respondents**	**% of total respondents currently navigating**
Total respondents currently navigating	55	60%	
Captains & chief officers	34	37%	62%
Second, third, fourth and apprentice deck officers	16	17%	29%
Chief engineers	3	4%	5%
Second, third, fourth, etc. & apprentice engineer officers	2	2%	4%
Dual purpose function	3		
		% of total respondents	**% of total respondents no longer navigating**
Total respondents no longer navigating	37	40%	
Captains & chief officers	25	27%	67%
Second, third, fourth and apprentice deck officers	4	4%	11%
Chief engineers	7	8%	19%
Second, third, fourth, etc. & apprentice engineer officers	1	1%	2%
Dual purpose function	2		

Analysis of the data

It would take many pages to detail or even to summarise all the data gathered from the survey. For example, a number of the survey questions are aimed at gathering information about methods of teaching and evaluating the IMO SMCP. The data related to these particular questions have been only briefly noted. Thus this paper will attempt to select and address the findings

considered most interesting for the audience in question and to consider these in the light of discussion introduced at the start of the paper.

We should remind ourselves here that the SMCP document [8] contains, first, a brief "Foreword" which is followed by sections entitled "General" and "Glossary". Then come the standard phrases themselves. These are divided into Part A ("*phrases applicable in external communications*") and Part B ("*on-board communication phrases*"). The "Foreword" clearly states that "*Part A covers phrases applicable in external communications from ship to shore, shore to ship and ship to ship as required by STCW 1978, as revised, Table A-II/1, as well as phrases applicable on board vessels in conversations between pilots and bridge teams as required by regulation 14(4) of chapter V of SOLAS 1974, as revised*". The references to the requirements established in both STCW and SOLAS leave no doubt as to the mandatory nature of these phrases for external communications. Part B "*may assist mariners in meeting other basic on-board communication requirements and may be regarded useful for maritime English instruction*", suggesting that these phrases, although not mandatory, come highly recommended!

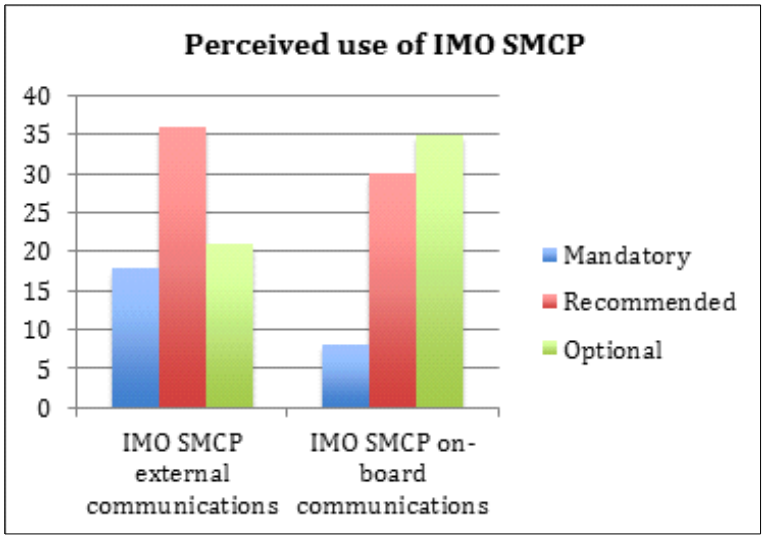
The first question of the SMCP survey asked respondents to state whether use of the IMO SMCP for **external** communications, namely Part A of the SMCP document, is *mandatory*, *optional* or *recommended*. The same question was repeated for Part B of the SMCP, namely **on-board** communication.

As regards the standard phrases for **external** communication (Part A), findings reveal that the majority (48%) of respondents who answered this question have an understanding that these phrases are *recommended*, with only 24 % believing them to be *mandatory*. A rather high 28% perceive them as being *optional*! Thus the majority of respondents have apparently failed to appreciate the intended status of the SMCP in STCW/SOLAS training. The STCW 1978, as amended, stipulates that officers *shall* use the SMCP. The competence is described in detail as the ability "*to communicate with other ships, coast stations and VTS centres and to perform the officer's duties also with a multilingual crew, including the ability to use and understand the IMO Standard Marine Communication Phrases (SMCP)*". At this and at other levels the STCW curiously refuses to progress from a broad, and therefore somewhat vague (*shall use, the ability to use and understand*), definition of acceptable standards of (Maritime) English on board, stating elsewhere only that English shall be used "*in written and oral form*". Perhaps by dint of the

fact that the SMCP constitute the only official IMO document① for use in Maritime English training they often come to be placed at the forefront of on-board communication. This is possibly why both Maritime English learners and trainers tend to perceive the SMCP as ***the*** key tool for communication on board. Additional comments received from a number of respondents shed light on this apparent misconception. These are discussed in the author's presentation of this paper.

In reply to the question about the use of the IMO SMCP for **on-board** communication, namely Part B of the standard phrases, only 11% reply that the use of these phrases is *mandatory*, 41% that it is *recommended* and 48% that it is *optional*. Figure 2 illustrates the results.

figure 2



Regardless of this apparent misconception regarding the mandatory, or otherwise, nature of the phrases, the data gathered from questions 2 and 3 of the survey reveals that the majority of respondents certainly received formal instruction (classroom tuition) in SMCP in their corresponding MET institution. Of 75 respondents providing a reply to question 2, almost 60% reply in the affirmative, confirming that they received some kind of formal instruction in the IMO SMCP. 41% reply that they received no instruction or, depending on their year of graduation, re-

① I write this advisedly, aware that Model Course 3.17 Maritime English also comprises an official IMO document. However, as Fuazudeen (2014) points out the Model Course 3.17 is a "*non-prescriptive document intended only to provide guidance to trainers*".

ceived instruction in the former SMNV①, which pre-dated the SMCP. With one exception, all respondents who replied negatively to the question had graduated before 2002, the year in which the SMCP officially came into force.

When asked to indicate the type of instruction, the majority of respondents who had received tuition reported undertaking a combination of learning methods (rote learning, translation from English to native language and/or vice versa, learning specific SMCP vocabulary, using online tools and/or CD-ROMs, performing role-play, using SMCP in full mission bridge simulator). On a positive note, the communicative approach to learning is reflected in the data, with 24 respondents stating that role-play played a part in their learning of the standard phrases. Moreover, 19 cited full mission bridge simulation as a method, with 13 of these respondents② experiencing both methods. It is worth noting that all of the 13 graduated within the last decade, perhaps reflecting recent pedagogical developments where a more authentic approach to training the SMCP has been employed. On a less positive note, distinctly non-dynamic methods still play a role with 79% and 76% of respondents reporting rote-learning and the assimilation of specific SMCP vocabulary respectively as the means of instruction.

The question designed to elicit information about evaluation methods (written, oral, oral in the full bridge mission simulator or other) reveals that the most common way of testing knowledge of the SMCP involves a combination of both written and oral evaluation. A combined 81% of respondents reported being tested by some form of oral means. As stated above, however, the scope of this paper does not allow for a deeper analysis of training and evaluation of the IMO SMCP and thus additional details will be reserved for a separate study.

The data also shows confidence levels regarding use of the SMCP to be high. 89% of respondents consider themselves to have a *fairly good* to *excellent* active command of the SMCP, whilst a stunning 99% feel they are *fairly good* to *excellent* when it come to a passive command of the phrases! Clearly, without further research, it is impossible to say whether respondents' self-assessment reflects reality.

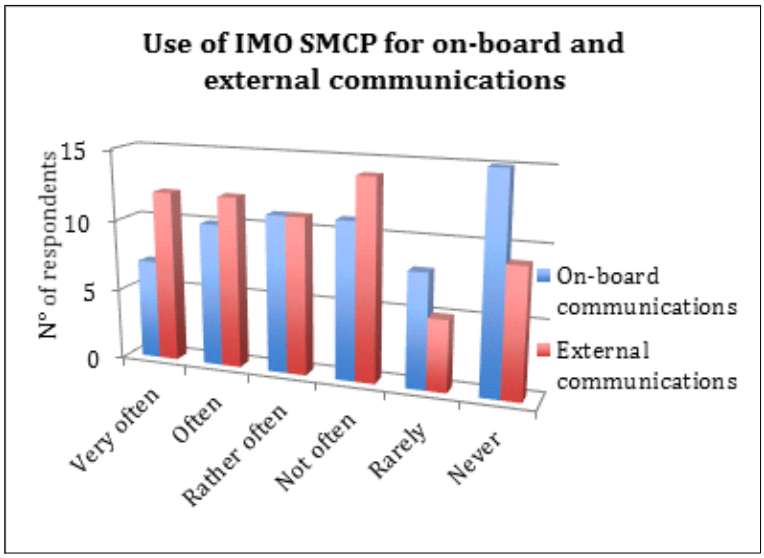
Respondents were asked about the frequency of use of the IMO SMCP for external communications as opposed to on-board communications, respectively those phrases contained in Part A of the IMO document compared with those contained in Part B. This revealed (Figure 3) that,

① Standard Marine Navigational Vocabulary

② All except one of the 13 respondents were graduates of Antwerp Maritime Academy, Belgium.

in general, the SMCP are more widely used for external communications than for on-board communications. 56% of respondents reported using the IMO SMCP *rather often* to *very often* for external communications. This may be compared to a lower total of 45% in the same categories for on-board communications. The actual difference (11%) is, nevertheless, not particularly large.

figure 3



Figures 4 and 5 offer a breakdown according to the categories of response received.

figure 4

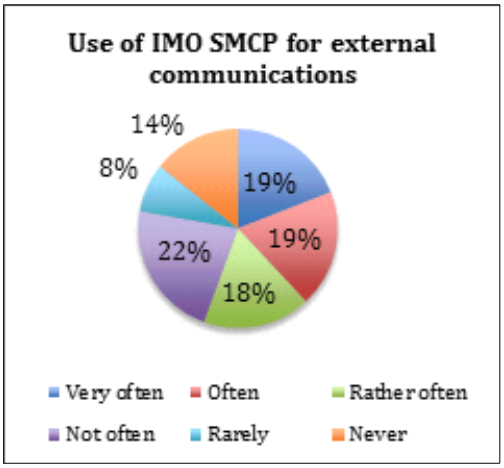
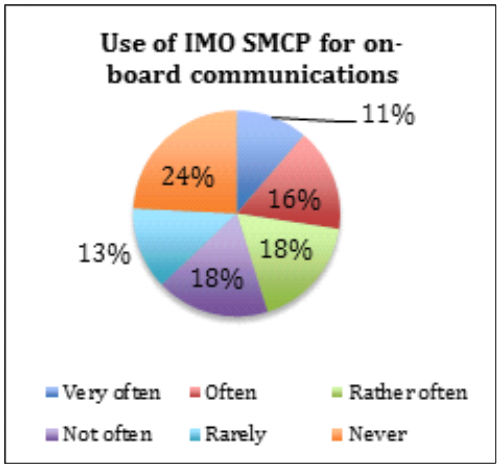


figure 5



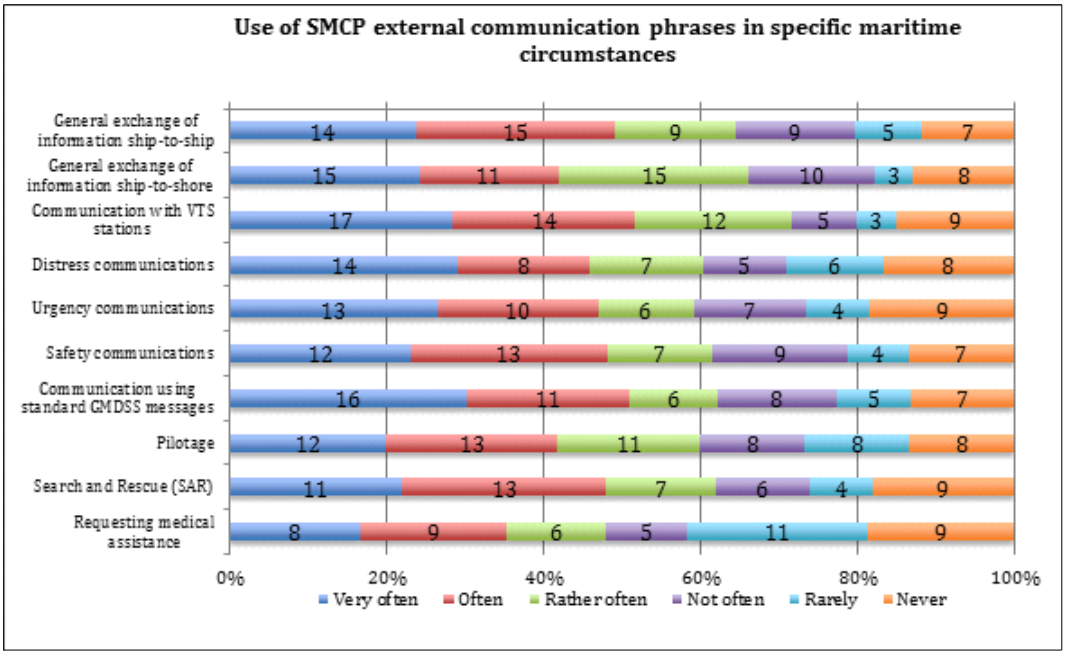
Acting on the knowledge that Part A of the SMCP is mandatory, it would be straightforward to comment that the findings merely confirm that the SMCP are being used as intended and desired. However, 56%, corresponding to only slightly over half of the respondent group, may actually be construed as low when the issue in question involves mandatory industry compliance with STCW requirements. It is perhaps to be expected that almost a quarter of respondents (24%) say that they never use the phrases for on-board communication. In comparison however, it is surprising that 9 of 63 respondents (14%) state that they never use the standard phrases in external communication!

Looking in more detail at both the on-board and the external communication phrases, the survey moved on to ask how often respondents believed they used these phrases under specific maritime circumstances.

Of the 12 specific on-board circumstances offered (e.g. on the bridge, standard wheel or engine orders, with the pilot on the bridge, with the engine rom, during drills, etc.) only 6 returned a percentage of 50% or more respondents who reported using SMCP *rather often* to *very often* for this type of communication. The on-board situation where use of the SMCP was rated as highest was for communication during standard wheel or engine orders. Just over half of the respondents (31 of 61) who answered question 7 stated that they *very often* (the highest category) use SMCP when giving standard wheel or engine orders, with a total of 73% (45 of 61 respondents) saying that they *rather often* to *very often* make use of the SMCP in this particular situation. It would appear from the data that, certainly during communication on board, seafarers have a greater tendency to use the SMCP in situations that traditionally employ long-established items of maritime communication, for example wheel and/or engine orders. At the other end of the scale, almost 70% of respondents reported that they *never*, *rarely* or *not often* used the SMCP in communication with passengers.

Findings related to the use of SMCP external communication phrases under specific maritime circumstances produced a different picture. Figure 6 below provides the details.

figure 6

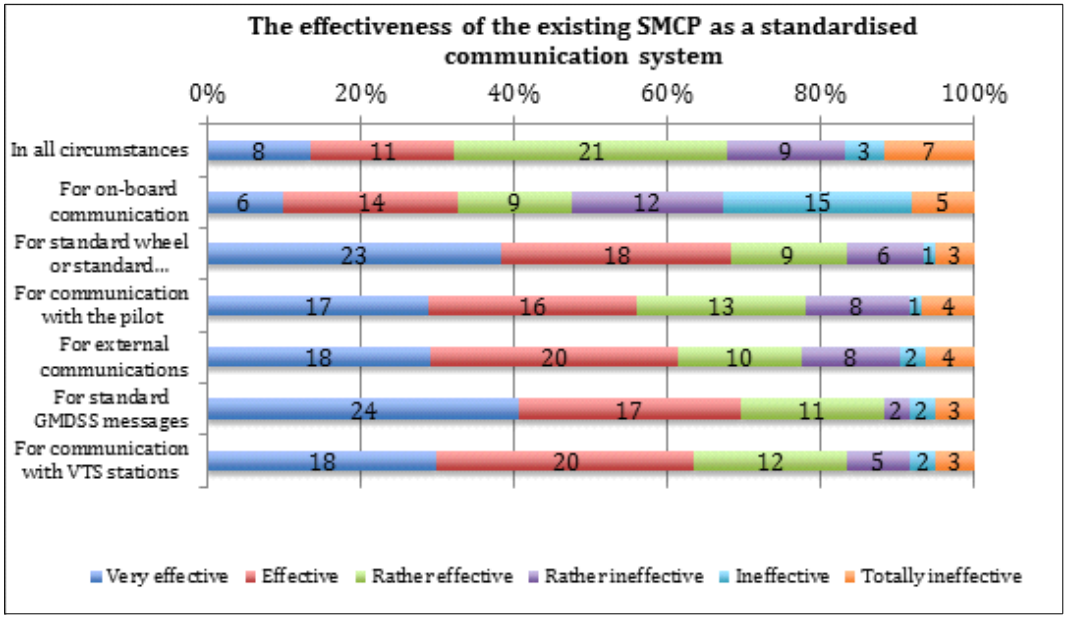


It can be observed that in all cases with the exception of one (*requesting medical assistance*) over 50% of respondents reported that they used the phrases *rather often* to *very often.* Circumstances which return particularly high percentages for the categories *very often* to *rather often* are communication with VTS stations (43 of 60 respondents or 71%), followed by general exchange of information ship-to-shore (66%) and ship-to-ship (64%), and communication using standard GMDSS messages (62%). Use of SMCP for communication with VTS stations and for GMDSS messages is reported as being *very often* used by approximately 30% of respondents, the highest percentage in this category. The relatively high usage of the phrases might promote the view that respondents are aware of the mandatory nature of these phrases. However, data gathered at the first question of the survey shows this not to be the case. It might therefore be justified to suggest that seafarers are aware of the communicative value of the SMCP in specific situations, as shown in the graph (Figure 6).

The next section of the questionnaire was designed to gauge the effectiveness of the SMCP at fulfilling its role as a standardised communication system for the maritime world. Respondents were asked to rate the effectiveness of the existing SMCP under certain circumstances system according to a scale of six descriptors (*very effective, effective, rather effective, rather ineffective, ineffective, totally ineffective*).

In general positive ratings are given to the effectiveness of the SMCP. A high number of respondents, 40 of 59 (68%), find the SMCP *very effective* to *rather effective* in all circumstances as opposed to 19 respondents (32%) who state that the phrases are *totally ineffective* (7 or 12%) to *rather ineffective* in all circumstances. Of all the circumstances listed, the effectiveness of the SMCP for on-board communication phrases in general reflect the least positive rating, with less than half of respondents (47%) stating that the existing SMCP is *very effective* to *rather effective* for this type of communication. This result is perhaps not surprising given the data collected from a previous question which confirms that the standard phrases are less widely employed for on-board communications than for external communications (see p 6). Figure 7 offers details of the findings.

figure 7



Additional data collected generates findings related to whether a standardised communication system, not necessarily the SMCP, is an asset in specific external and on-board communication circumstances. With regard to on-board communication at least 70% of respondents were in favour of a standardised communication system in all the on-board circumstances listed. The data corresponding to external communication circumstances offers a much higher percentage with at least 90% of respondents agreeing that a standardised communication system is an advantage. The overriding message seems to be that a standardised communication system, although not necessarily the IMO SMCP, for use during external communication circumstances is a 'must

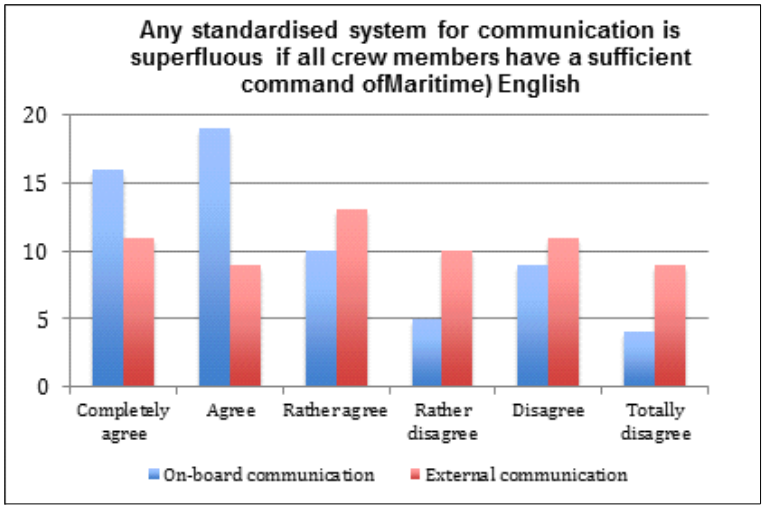
have'. Details of this data will be provided in the conference presentation accompanying this paper.

To move on I wish to address the findings of the last questions contained in the survey. This offered the respondents a series of statements both critical of the IMO SMCP and supportive of the standard phrases. Respondents were presented first with a range of critical statements and asked to what extent they agreed with them. Using a negative (critical) approach, the questions attempt to gauge perception about issues such as the size of the IMO SMCP (the actual number of phrases), the content, the type of English used (vocabulary and syntax) and whether there should be a revision of or amendments to the current IMO SMCP.

One of the statements, often debated, suggested to respondents that a standardised system for external communication might be considered superfluous if all crew were to have a sufficient command of (Maritime) English; in other words, if all crew had a sufficient level of English would it be necessary to implement a standardised communication system? It might simply be enough to say that all crew should speak 'good' English. The same statement was produced in relation to on-board communication.

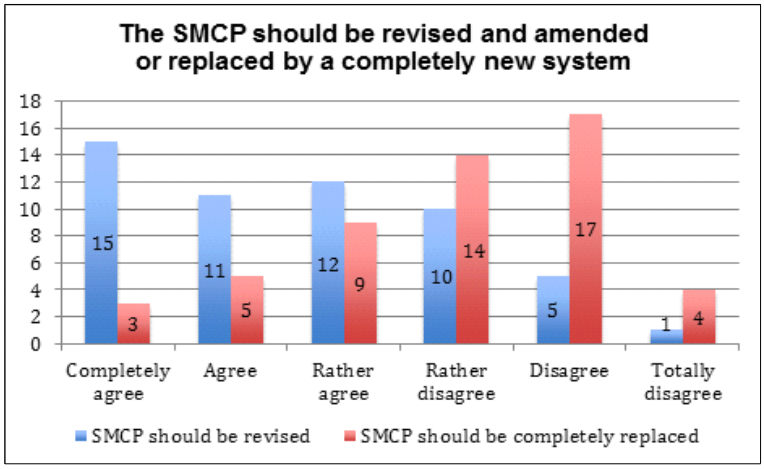
With the critical statement in mind, it is relevant to gauge whether respondents perceive a difference between on-board as opposed to external communication. The bar chart below (Figure 8) illustrates the difference in respondent opinion. As regards internal or on-board communication, a large number of respondents (45 of 63 or 71%) agree that a standardised communication system would be superfluous if all crewmembers had a sufficient command of English. This statistic changes, however, for external communication where numbers are more evenly distributed. 48% of respondents agree and 52% disagree with the statement. The highest percentage (21%) corresponds to the category *rather agree*. Of course, in an ideal maritime world, either every seafarer would be fluent in a common language (English) or s/he would understand the others' languages. This, although highly unrealistic, would exclude the need for a standardised language. However, the data from the survey suggest that other considerations are at play since almost half of respondents ***would*** retain a standardised form of language for external communication, even if the crew's command of (Maritime) English were of a high standard. It is an interesting result which lends itself to further research.

figure 8



Another of the statements gauged response as to whether the IMO SMCP should be revised and amended or replaced by a completely new system. Clearly respondents were in favour (71%) of the current SMCP being revised and amended. Figure 9 below illustrates the results.

figure 9



In the light of this result, it is logical to consider why respondents feel that revision or amend-ment might be desirable. Data gathered from some of the other critical statements provide as-sistance. To draw on just three examples, 60% of respondents feel that the number of standard phrases is too large and 66% are dissatisfied with the actual language itself, finding that the SMCP present an over-simplified version of English ("pidgin" English). 70% of respondents

feel that the SMCP limit communication fluency due to their strict/rigorous patterns. The SMCP constitutes, in other words, a 'restricted' and therefore restrictive language. Figures 10 and 11 below illustrate some of these statistics.

figure 10

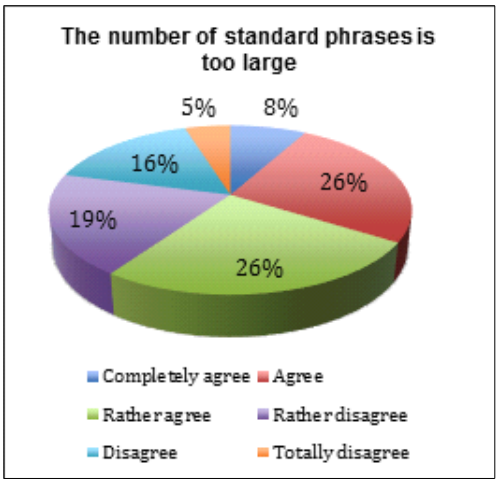
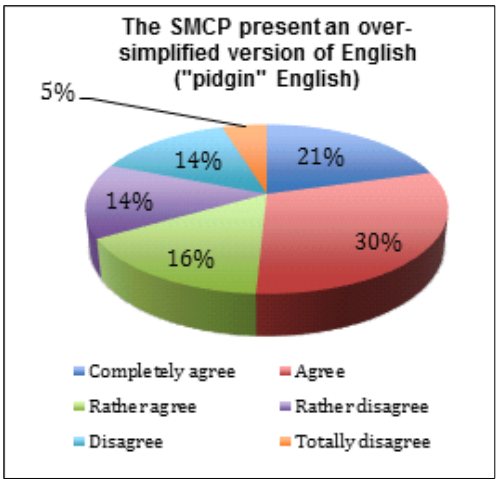


figure 11



The implication of these findings might be that the unwieldy nature of the document renders the whole less attractive as an effective system for communication. In the light of the data, Gustaffson (2004) [9] offers some relevant comment. She notes that following trials of the SMCP in 1997 the size of the original draft provoked concern, especially from the ISF①, whose respresentatives commented that the organisation was "particularly concerned about the *enormous* length of the SMCP", thus rendering it too large to be of practical use for non-native speakers. Also according the Gustaffson, the ISF drew attention to the poor quality of English used in the phrases and suggested that '*the entire SMCP be subjected to a detailed review on a line-by-line basis'*. In the subsequent revision prior to IMO approval, the total number of words appearing in the SMCP was effectively reduced. However the number of content words② which appear only once in the text (almost 900) remained in place, thus, as Gustaffson postulates, contributing to the document's cumbersome nature and offering no support from repetition in learning tasks. As a footnote on the aforementioned learning task, it will perhaps not surprise the reader

① The International Shipping Federation (ISF) was one of a number of maritime organisations and IMO member states who were asked to comment on the draft version of the SMCP.

② Content words are represented by major classes of nouns, verbs, adjective and adverbs.

to learn that a huge 76% of respondents agreed with the statement that current teaching and studying methods for the SMCP tend to be boring and monotonous!

To turn to respondents' reactions to the statements supportive of the current IMO SMCP, it is fair to say that the data reflect the findings of other aspects of the questionnaire. Thus, for example, a relatively high percentage of responses (67% or 41 of 61 respondents) indicate some extent of disagreement with the statement that the SMCP is an effective (standardised) communication system and requires no revision or amendment. A high 25% of respondents reply that they *totally disagree* with this statement. This would appear to support the data which indicates that respondents feel that the SMCP would benefit from amendment.

Despite this, respondents tended to agree with the statement that the SMCP system is an adequate and effective standardised system for *external* communication. 75% (or 49 of 66 respondents) supported this statement. In addition almost half of the respondents (48%) *completely* to *rather agree* with the statement that the SMCP should always be compulsory for all professional communication *on board* (see Figures 12 and 13 below). This data was further broken down into specific circumstances and revealed, for example, that 72% (49 of 68) of respondents agree that the SMCP should be compulsory for external communication between ships and 78% (53 of 68) that the SMCP should be compulsory for external communication with VTS stations. In addition over half of respondents agree that the SMCP should be compulsory for communication with other services ashore.

figure 12

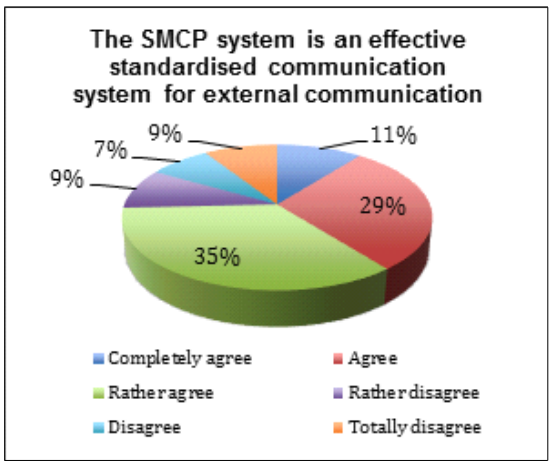
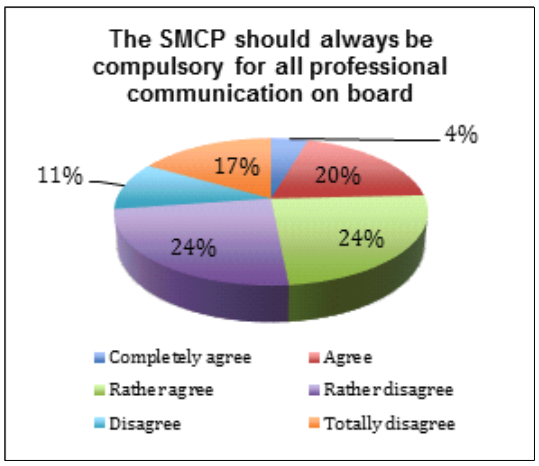


figure 13



In addition, and finally, respondents were slightly more evenly split over the statement that SMCP should always be compulsory for *internal* communication within the ship, with just under half (44% or 29 or 66 respondents) agreeing with the statement and just over half (56% or 37 of 66) disagreeing. It should be noted, however, that an overwhelming percentage (86%) of respondents agreed with the statement that the SMCP should be compulsory for standard wheel and engine orders, given on the bridge, and 69% agreed that the phrases should be compulsory for communication on the bridge. These findings correspond to the analysis given on page 8.

Conclusions

As stated, the findings presented in this paper represent only a small part of the more detailed analysis carried out as part of the author's doctoral research. It is hoped, nevertheless, that the aspects of the survey discussed will provoke thought and generate discussion.

Several conclusions may be drawn from this representative sample comprised of officers from the Belgian fleet. All the respondent officers graduating after 2001 reported that they had received formal instruction in the IMO SMCP although the teaching and study of the phrases are considered boring and monotonous. There is, nevertheless, a high 'feel good' factor about using the SMCP, with respondents feeling confident! There is widespread confusion about the status (*mandatory, recommended* or *optional*) of the standard phrases within the framework of the STCW or, indeed, their status during communication at sea.

In terms of current perception, respondents to the survey agree that under all *external* communication circumstances, no matter how good the level of English, a standardised communication system (not necessarily the current IMO SMCP) is an advantage. Correspondingly respondents report using the standard phrases more for external communication than for on-board communication, which appears to be in line with IMO SMCP requirements. However, given that Part A (phrases for *external* communication) of the SMCP is mandatory, it is of some concern to note that the actual percentage of respondents reporting use of these phrases is relatively low, amounting to just over 50%.

Respondents rate use of the SMCP for *internal* or on-board communication to be less than for *external* communication. Nevertheless, use of the SMCP for communication relating to standard wheel and engine orders and for communication with the pilot on the bridge was deemed ex-

tremely important, with respondents even indicating that use under these circumstances should be compulsory.

The IMO SMCP in their present form are considered unwieldy, in terms of language, and cumbersome in that they contain too many phrases. These factors hinder the learning process for young cadets. A completely new system is not an option but the majority of respondents feel that, almost 15 years on from their adoption, the SMCP should be revised and amended. A revision of the IMO SMCP to follow the recent revision of Model Course 3.17 Maritime English remains in the future. However, a current increase in SMCP-related research [10] [11] combined with moves to instigate standard phrases for communication with tug pilots and for communication on inland waterways might prompt the IMO, sooner or later, to turn its attention to the SMCP.

Thus the IMO SMCP may not be ***the*** key tool for communication at sea but, in accordance with these findings, they certainly fulfil a specific and central role. In general, the data produces statistics that conform to certain expectations about the mandatory and/or recommended nature of the standard phrases. In other words, the sections of the IMO SMCP Part A, which seafarers are 'required' to use and understand according to the terms of the STCW, are those which, according to the data, tend to be used most. The phrases contained in Part B are employed less. Less comforting, however, are the data that show that the percentage of respondents who appear rarely to use the mandatory external communication phrases hovers around the 40% mark. This must surely give grounds for concern and consequently prompt additional cross-questionnaire analysis at a later stage.

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International Maritime English Conference
IMEC 27 (12 - 15 October 2015)
NMIT – Johor Bahru, Malaysia

Construct-Shift of Marine Engineering Cadets in Maritime English via On-Board Training

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Abstract

Language is a basic medium to expressing oneself and defining the world via coding and decoding systems; and, the way we realize the world is reflected through it. Personal constructs determine the way we perceive and conceptualize the whole world. Construct building takes place long before the process of language acquisition and/or learning occur(s). Attaining considerable competence and performance in the second language is highly related to how personal constructs in the language are shaped, reshaped, formed and reformed through learning and experiencing. Based on this premise, this study aims to highlight constructs shift of marine engineering cadets.

In accordance with the Standards of Training, Certification and Watchkeeping (STCW), each seafarer is to undergo a specified period of on-board training in other words sea training. Therefore, with this piece of research, we endeavor to observe what exactly happens, how marine engineering cadets' constructs of Maritime English shifted following sea training period. Marine engineering cadets from Istanbul Technical University responded to questionnaires and expressed views on their English learning and utilization experiences during sessions before and after on- board training experience. The study reveals significant issues related to shift in constructs of language problems as well as profession.

keywords: *marine engineering cadets, Maritime English, pre & post constructs, construct shift, on-board training*

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Introduction

As verified by various research carried out with engineering students, English is apparently a binding medium among people belonging to different cultures and countries. Thus, capability in English makes an individual independent, self-confident and self-esteemed in a global world (Baştürkmen [3]; Pendergrass et al [11]; Pritchard & Nasr [12]; Joseba [8]).

English is accepted as the most commonly used language all over the world as well as being the lingua franca of most professions. Understanding and being understood efficiently is pre-requisite for a global world regardless of nationality and country. It has also been considered to be a compulsory medium for conducting successful businesses and at workplace in multi-national companies (Davies, Forey, and Hyatt [6]; Forey and Nunan, [7]).

Constructs constitute an important factor in understanding the world for each individual. George Kelly [9], the founder of the theory of personal constructs, summarizes the whole theory with his outstanding verbatim sentence as:

'Every man is a scientist!'

He explains that every person is a scientist as s/he comes up with hypotheses or predictions about the world, including everyday events and social interactions, based on her/his own system of constructs.

Interpretations of occurrences have strong impacts on our lives; they even govern our whole lives; they diverge from one individual to another as each has different variables in terms of backgrounds, beliefs, past experiences, etc. Cherry [5] points out that even if we are all living in the same world, the way we experience it differs from individual to individual.

As obviously seen, in fact, we are all surrounded by constructs throughout our lives; this issue does not merely entail linguistic perspective but some other aspects of life.

Kelly [9] believes that we realize the world via the lens of our constructs. These constructs, based on our experiences and observations, are to anticipate and predict the events which in turn determine our behaviors, feelings and thoughts, and can be defined verbally or non-verbally in the form of feelings such as anger, anxiety, worry, etc. (Cited in Cherry [5], and Özkan [13]). In

his theory, Kelly [10] basically assumes that our present constructs or interpretations of the universe are to be revised or replaced.

Breen (2001) observes that students bring perceptions, beliefs, attitudes and meta cognitive knowledge together with them to a learning situation, and this has been recognized as a contributory factor in the learning process and ultimate success in a classroom context. Identification of such beliefs and reflection on potential impact on language learning and teaching can lead future syllabus designers and teachers alike to pursue effective strategies in determining course content as well as instruction delivery.

Learning is significantly related to which underlying variables a learner has been exposed to; how the language is perceived, whether the learner has positive/negative attitudes, any biases, and any motivation. From this point, personal construct formation is observed to have a determining factor in the accomplishment process of Maritime English.

Having attained intermediate level at the School of Foreign Languages of Istanbul Technical University (ITU), students in marine engineering faculty, namely, cadets, have two hours of ME lectures weekly for three semesters; which means total ME lecture are limited within only six hours per week within the whole four year round.

The course period seems to be far from meeting the needs of cadets who are expected to start training in the second semester of the third academic year. Sea training is a highly crucial period for the cadets considering how specific and demanding the profession they chose is. Besides International Maritime Organization (IMO) stipulates on-board training as a mandatory requirement to work as a professional seafarer. During their stay and work on board cadets are to find responses to questions such as:

- Am I suitable for this profession (as seafaring is significantly different in nature)?
- Which part of the sector is suitable for me?
- To what extent should I rely on my professional knowledge?
- To what extent can I handle communication efficiently with multinational crew and others at shore?

Thus, the study explores how and to what extent sea training affects marine engineering cadets' personal constructs towards maritime English; whether there is a significant change concerning pre and post on-board training; whether engine cadets of maritime faculty confront professional problems related to ME when they are on-board training; and whether ME causes any problems related to self-efficacy, self-confidence, efficiency of machinery systems and operations.

Here, we focus on how cadets reformed and reshaped their constructs of Maritime English in terms of experience, and individual corollaries. Therefore, answers to the following questions were sought within the framework of this research:

1. What constructs do engine cadets have prior to starting on-board training at sea regarding ME?
2. Were there any changes in cadets' constructs following a period of six months on board? If so, how are these changes perceived?
3. Should there be any observed construct shift, what could the underlying reasons for the shift be?
4. Do marine engineering cadets have difficulty with ME?
5. Does/Did ME cause any problems related to self-efficacy, self-confidence, efficiency of machinery systems and operations?

Data Collection

This qualitative study was conducted by means of collecting two types of data: questionnaires and interviews. Pre and post constructs were unveiled via questionnaires and interviews held with marine engineering students during the periods of pre and post on-board training. Questionnaires were made up of open-ended and semi-structured questions in order to elicit themes concerning constructs.

Participants

The participants involved in this study are third-year cadets (all male; n=50; age range: 21-25 years) attending the Marine Engineering Department of Maritime Faculty at Istanbul Technical University (ITUMF). Upon having taken a standardized university entrance exam, students are

exposed to a two-semester English program at the Preparatory School of Foreign Languages of ITU until they attain intermediate level. Once they are cadets at Maritime Faculty, they take only two hours of Maritime English (ME) weekly during three semesters.

Procedure

Participants were handed out questionnaires and taken into interviews in both pre (PreT) and post (PostT) on board training. The questionnaire and interviews were designed by the researcher focusing on research questions and in line with the aims of the study.

The questionnaires and the interviews consisted of seven items; interviews lasted approximately 5-7 minutes per cadet. Each participant was interviewed in order to observe whether what was stated in the questionnaires did match the voiced views. The same questionnaire was again utilized right after the cadets came back to the faculty to complete their fourth year of education at the faculty. Both the questionnaires and the interviews were conducted in the mother tongue, i.e. Turkish, in order to avoid any misinterpretation.

Data Analysis

The obtained data was analyzed in terms of common emerging themes categorized as pre and post on-board training constructs. The findings were analyzed regarding frequency of occurrence and valid percentages. A chi-square test was run to detect any significant differences in the dispersion of overall items using the Statistical Package for Social Sciences (SPSS) v.16.0.

Several themes emerged via the seven-itemed data collection tools. The themes considered in this study were listed in terms of frequency - time of mention (ToM, term coined by Bada, [2]). The values indicating ToMs obtained in pre and post on-board training are listed below. Frequencies and percentages were shown in the related tables together with chi-square results. Table 1 was designed to illustrate the overall emerged themes from the questionnaires and interviews.

table 1: Emerged Themes

Themes	Pre ToM	Post ToM
Importance of English	50	50
If so why	58	12
Work after graduation	50	48
Willing to work with foreign crew	49	50
Why Turkish crew	36	27
Why foreign crew	17	45
Difficulty due to lack of English	50	50
If so which skills	37	12
Expected situations necessitating English	125	153
Belief in self expression in English	50	47
Expected skills leading communicational problems	61	33
Eleven themes emerged in total		

Considering the overwhelming importance of English, the question 'do you think English is beneficial' was asked. All responses indicated that 'English is definitely beneficial due to its importance'. The theme 'Importance of English' appeared with one of the highest among the other twelve themes (see Table 1). The item 'is it beneficial, if so why' was asked to see whether cadets were aware of the benefits and reasons.

table 2: Importance of English

Importance of English	PRE ToM	%	POST ToM	%
Yes	48	96.0	50	100
No	2	4.0	---	---
Chi square result	P=.000		---	

As can be seen from Table 2, 'the importance of English' was agreed on by almost all participants (96.0 % p=.000) in PreT; only 2 out of 50 did not believe that English was not important for the profession. While, importance of English in profession was commonly agreed on in PreT, the whole population was in consensus on the importance of English in PostT. This could be interpreted that cadets had no hesitation on the solid importance of English even if they did not complete their on-board training period. It is quite pleasing to obtain positive construct on the importance of English. Upon getting confirmation responses, the cadets were asked about the reasons for importance of English in their prospective profession-'seafaring'. The responses would also show to what extent they were really aware of the importance of English while pointing out their rationales. PreT and PostT themes, identified together with percentages and chi-square results, are shown in Table 3.

table 3: Reasons for the Importance of English

Reasons for the Importance of English	PRE ToM	PRE %	Reasons for the importance of English	POST ToM	POST %
Seafaring as an international job	20	34.5	Seafaring as an international job	26	21.7
Most resources in English	17	29.3	Most resources in English	15	12.5
Lingua franca of seafarers	10	17.2	Helps with professional development	20	16.7
Beneficial	4	6.9	Beneficial	10	8.5
Helps with communication	7	4.6	Makes me privileged on/off board	33	27.5
			Facilitates social life	16	13.3
Chi-square result	p=.004		Chi-square result	P=.002	

The first theme 'seafaring is an international job' was observed to have the highest ToM of 20 (34.5 %), 'most resources are in English' with the ToM of 17 (29.3 %), 'lingua franca of seafaring' 10 ToM (17.2 %) , 'English is beneficial' having 4 ToM (6.9 %), 'English helps with communication' 7 ToM (4.6 %). All these themes illustrate that cadets had already the construct on the overwhelming importance of English in their profession with rationales. Surprisingly, only 7 ToM (4.6 %) emerged citing that English helped them with communication. This could be interpreted that cadets might have the idea of working on Turkish-crewed vessels, thus they would not have to communicate with foreign crew mates; besides, engine crew were to deal with only internal communication rather than external communication as set out by the International Maritime Organization (IMO). It was also presumed that they were urged to make use of English on board only while dealing with manuals and PreTaring some documents, which was outlined by the IMO. The value for 'English helps with communication' would have been different if the participants had been deck cadets as they would have to deal with both internal and external communication. A remarkable construct expansion emerged with the themes of 'seafaring as an international job' and 'English is beneficial'. The former construct illustrated expansion from 20 participants to 26, and the latter from 4 to 10.

A meaningful construct shift was observed in 'English helps with communication' to be reshaped namely 'helps with professional development,' 'makes them privileged on/off board life,' 'facilitating social life' with significantly high ToM values. Cadets credited that English 'helps with professional development' appeared with ToM value of 20 (16.7 %). 'English makes cadets privileged on and off board life' supporters emerged with ToM value of 33 (27.5 %)'. ToM value of 16 (13.3 %) belonged to theme 'facilitating factor of English in social life'. The theme 'English helps with communication' emerged with the value of 7 ToM (4.6 %) which was observed with a surprisingly low percentage seemed to have vanished; however, in the post onboard training period this theme reemerged in specific verbatim as: 'English makes me privileged on and off board life', 'English facilitates my social life,' 'unless I have sufficient English, I cannot be successful and respectful in the engine room'.

These extracts clearly reflect a significant shift in ME constructs of cadets since English was experienced and confirmed as a medium for privileged status both professionally and socially. This transformation in construct unveiled that it is just a myth among seafarers from bottom to top i.e. cadets, lecturers, syllabus designers, institutions and organizations – Engine room (E/r) crew necessitate knowledge of English in some certain parts; do not have to bother for more. Besides, IMO's requirements of English for marine engineers might have made them predict so.

Having to comprehend the training book in English can be a determining factor. E/r crew started to think that they also needed communication. New themes were most likely to emerge via their personal experiences and exposures during on-board training period, which certainly seemed to be a leading factor in reshaping and transforming acquired constructs apart from gaining professional awareness. Cadets did not realize how English would impede or accelerate their prestige on board for they had no expression on this issue in PreT. Besides, they seemed to be unaware of how English would ease and comfort their social life in the pre on-board training period, which would be expressed in PostT.

PreT themes in Table 4 illustrated that the cadets seemed to have some awareness of English. When we took into account PostT themes, cadets spotted English as a scaffolding factor to conduct their profession in an efficient, effective and privileged way, since seafaring has the qualities of being global, international, multi-cultural in nature. Furthermore, on-board training period had an undeniable impact on transforming, developing and changing the constructs about English.

table 4: English is Useful

English is useful	Pre ToM	%	Post ToM	%
Yes	48	*96.0*	50	100
No	2	4.0	_	_
Chi-square	**P=0.000**		_	

Here, this item aimed to find out the service receivers' (SR) perception of English in terms of their profession. The responses reflected whether and to what extent they were aware of the usefulness of having language competency on board.

The ToMs of Theme 1 indicates that English is useful with a frequency value of 48 (96.0 %) in PreT; however, this value reaches a certainty of usefulness with a frequency value of 50 (100 %) in the PostT period.

table 5: Willingness to Work with Multinational Crew

Willingness to Work with Multinational Crew	Pre-ToM	%	Post-ToM	%
Prefer Turkish Crew	27	55.1	22	44.0
Prefer Foreign Crew	16	32.7	28	56.0
Not Sure	6	12.2	0	0.0
Chi square results	**P=0.002**			**P=0.396**

When participants were asked if they were willing to work with multinational-crewed vessels, 27 (55.0 %) expressed their preference on Turkish-crewed vessels, which dropped to 22 (44.0 %) in PostT. Still 6 participants (22.0 %) were not yet sure as to what they preferred exactly.

Prior to the on-board training period, 16 (32.7 %) would like to work on multinational-crewed vessels; this number remarkably increased to 28 (56.0 %) – this is more than half of the whole population. It is most probable that both 6 (12.2 %) unsure cadets in PreT and some of those who previously were willing to work on Turkish-crewed vessels shifted their constructs. They most likely gained self confidence in expressing themselves in English. As can be seen from Table 5, on-board training enabled cadets to become more specific and determinant on their preference.

table 6: Any Difficulty Resulting from Lack of English?

Any Difficulty Resulting from Lack of English?	Pre- ToM	%	Post-ToM	%
Yes	30	60.0	8	16.0
No	20	40.0	42	84.0
Chi square results	**P=0.157**		**P=0.000**	

From Table 6, we can observe that of the participants, 30 (60.0 %) anticipated they would have difficulty resulting from lack of English and 20 (40.0 %) had no prediction of having difficulty for the same reason prior to on-board training. On having completed on-board training, they were asked again if they had any difficulty related to lack of competence in English, the figures depicted that 42 participants (84.0 %) had no difficulty; only 8 (16.8 %) had language-based problems. The change in figures emphasizes the issue of lack of confidence and efficacy of participants in terms of English. The estimation that they might not be aware of how well they were competent in English is worth considering here.

table 7: If so, in What Skills

If so, in What Skills	Pre- ToM	%	Post-ToM	%
Speaking	19	51.4	8	66.7
Cultural literacy				
ME terminology	10	27.0	4	33.3
	20	40.0	42	84.0
Chi square results	**P=0.062**		**P=0.248**	

Table 7 reflects the participants' views on problematic issues; three constructs emerged as 'speaking', 'cultural literacy' and Maritime English terminology. Of the participants, 19 (51.4 %) assessed themselves as not quite competent in speaking. Following on-board training, surprisingly, the figure had a sharp drop to 8 (66.7 %).

The second theme concerns difficulty resulting from cultural literacy which was cited by 10 (27.0 %) participants, then dropped to 4 participants (33.3 %). Those who had originally thought that they would face hardship due to insufficient Maritime English terminology numbered 20 (40.0 %), and quite rightly, in line with this expectation, this number soared to 42 (84.0 %) in PostT.

From above, it could be concluded that cadets had not felt comfortable and confident in speaking English until they experienced the real environment. They expressed themselves satisfactorily even if they had not thought so beforehand.

table 8: Expected Situations Necessitating English

Expected Situations Necessitating English	Pre- ToM	%	Post-ToM	%
Manual Comprehension	*50*	40.0	48	31.4
Docs. Completion	26	20.8	37	24.2
Reporting	34	27.2	37	24.2
On/off board comm.	15	12.0	31	20.3
Chi square results	**P=0.000**		**P=0.268**	

Cadets were asked to cite potential situations necessitating English; four specific items appeared: 'manual comprehension', 'document completion', 'reporting' and 'on and off board communication' (See Table 8).

Manual comprehension emerged as a dominating situation with 50 ToMs (40.0 %) in PreT, and 42 ToMs (31.4 %) in PostT. Document completion had been mentioned as an expected situation by 26 ToMs (20.8 %), but gradually increased to 37 ToMs (24.2 %) in PostT. Reporting skill had been expected to appear with 34 ToMs (27.2 %), and displayed a small rise up to 37 ToMs (24.2 %). The last theme, on/off board communication, dramatically rocketed from 15 ToMs (12.0 %) up to 31 ToMs (20.3 %). The on-board training period could be seen as an activating factor to make cadets rethink/remodel their constructs and as a tool to understand and visualize the real side of their seafaring profession.

table 9: Belief in Expressing Oneself in English

Belief in Expressing Oneself in English	Pre- ToM	%	Post-ToM	%
Yes	*8*	16.0	32	68.1
No	19	38.0	15	31.9
Not sure	23	46.0	0	0.0
Chi square results	**P=0.027**		**P=0.013**	

Belief in expressing oneself in English led to the emergence of three themes: the believers, non-believers and the unsure. Of the participants, 8 (16.0 %) highlighted positive beliefs in their capability to express themselves in English in PreT whilst this figure quadrupled with 32 participants (68.1 %) in PostT period. Nineteen cadets (38.0 %) had reflected that they were not capable enough to express themselves in English. In the PostT, this figure showed a slight drop to 15 (31.9 %). The participants who were not sure of their competency should not be underestimated as they were 23 (46.0 %), almost half of the population. Upon completing on-board training, this theme fortunately vanished. The unsure participants were most likely among those who cited they were capable of expressing themselves in English thanks to on-board training.

The item, expected skills leading to problems in communication, offered four skills of English: speaking, listening, vocabulary and translation. Prior to on-board training, 28 participants (45.9 % regarded the skill of speaking to be problematic, whereas this figure dropped to 15 (45.5 %) in PostT.

table 10: Expected Skills Leading to Problems in Communication

Expected Skills Leading to Problems in Communication	Pre-ToM	%	Post-ToM	%
Speaking	*28*	45.9	15	45.5
Listening	15	24.6	10	30.3
Vocabulary				
Translation	10	16.4	4	12.1
	8	13.1	4	12.1
Chi square results	**P=0.01**		**P=0.06**	

Here, the percentage should not be regarded as a key factor as it may be misleading due to participation. The listening skill appeared second in frequency with 15 (24.6 %) which had a fall to 10 (30.3 %) in PostT. Of the participants, 10 had thought that vocabulary was a troublesome skill in PreT; somehow, the figure decreased to 4 in PostT 12.1 %). Prior to on-board training, 8 cadets (13.1 %) had thought that communication could be hindered due to lack of translation; this figure showed a drop down to 4 (12.1 %) participants.

Discussion and implementations

In this study, impacts of training on shifted constructs were sought presuming that on-board training would have a direct effect on cadets' professional perceptions regarding their English education.

On-board training period seems to have had a major role in the overall shift of constructs in the form of expansion or reduction/disappearance. Cadets, during prior and post on-board training, have had the same construct regarding the importance and usefulness of English. They had

worries about their language competence and performance when they were in charge. Having gained self-efficacy and competence on board, they shifted constructs regarding English after the on-board training. Most of the participants agreed that English was important and useful for their profession regardless of training exposure, since they expressed that English granted them a privileged status on board as well as self-confidence. The majority of participants had had the construct of difficulty in self-expression via English, whereas they expressed that they did not have such a difficulty whilst training. This construct may have developed due to a lack of speaking practice in the faculty as the class consisted of more than 35 cadets. Although Turkish seafarers graduating from Turkish faculties somehow cannot work on multinational vessels, working on Turkish-crewed vessels does not mean that they will never come across English and language-related problems. E/r crew is to deal with the instructions in manuals – moreover, only English verbatim copies are available. Most vessels are automated which means that manuals are most essential for crew members, and misunderstanding any key word is likely to result in a disaster at sea. Additionally, two groups of crew members – engine and deck - are to cope with the expression in SMCP, and communication with inspectors, coast guard authorities to board vessels at certain intervals.

Considering these vital circumstances at sea, a contradictory status is observed. Credits of maritime English classes in marine engineering departments are absolutely far from being sufficient. In the very first year of the faculty, cadets undergo only one semester a – two hour- maritime English lectures. Success in maritime English is prerequisite for a proficiency exam for seafarers. Having no maritime English classes in the curriculum of second year, they have one semester of two lessons a week in the 3rd year. This success will determine whether they are able to register for highly strategic lessons such as - ERS-Engine Room Simulator, which is a prerequisite for on-board training. In the 4th year, they are to get another two hours of ME classes; totally six hours of ME exposure on weekly basis within a four-year period. This study has significant implications for program designers, instructors and Maritime English students. First and foremost, on-board training opportunity provided an atmosphere of self-assessment regarding language proficiency and competence. Most constructs which were somehow hidden or not developed at all prior to on-board training were surfaced and/or formed following this period. Therefore, designers who wish to make such programs more effective may thus gain significant insight relying on this experience of cadets. Similarly, instructors may shape their teaching styles to become compatible with a more ESP nature, and finally, students, relying on peer

experiences, may grasp the true value of being competent in English at rather early stages, much before they are to work, say, on an internationally-crewed vessel.

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Annex 1. Items in pre questionnaire and interview

1. Do you think knowing English will be beneficial in your profession, if so point out the reasons why?
2. At what part of the sector would you like to work after graduation; why?
3. Do you mind if you work on Turkish /multinational crewed vessels in the future? Explain.
4. Do you think English is of importance in terms of marine engineering profes-sion?
5. Do you think you are likely to have any communicational problems based on language with the senior officers and other crew members on training?
6. In what form of English do you think you will come across during on board training (i.e. reading, speech, orders, reporting, orders, etc.)
7. Do you expect to be able to communicate in English effectively and actively (oral /written) with the crew members on board?

Annex 2. Items in post-questionnaire and interview

1. Have you observed that knowing English was beneficial on board training? If so explain.
2. Which part of the sector have you been attracted to after having completed on board training regarding your prospective career?
3. Would it make any difference if you were to work on Turkish /foreign-crewed vessels after graduation? Explain.
4. Have you observed that English is important after the completion of on board training? If so, explain in a few sentences.

5. Have you experienced any communicational problems based on language with senior officers and other crew members on training?
6. In what form of English have you come across during on board training (i.e. reading, speech, orders, reporting, orders, etc.)
7. Did you take part in communication in English effectively and actively (orally /in writing) with the crew members on board? If you did so, write about your impressions regarding your profession, yourself and the English language.

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Aligning Occupational, National and Global Standards in Maritime English Competency: A Preliminary Study on Standard Marine Communication Phrases (SMCP)

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Abstract

The English language is the lingua franca of the maritime industry. On board of merchant ships, the Standard Marine Communication Phrases (SMCP) are used primarily for safe navigation and standardization of communication in ship to ship and ship to shore communication. Hence, it is paramount to enhance standards of training among key players in the industry: maritime education and training institutions (METs), international merchant shipping companies and the Marine Department of Malaysia. One of the effective solutions is to evaluate and align training standards of the SMCP for navigation cadets. This paper highlights a preliminary study on the SMCP which involves 110 navigation cadets from the Malaysia Maritime Academy (ALAM). The results of this study will assist relevant parties especially METs to further improve training in the SMCP so as to comply with regulations set by the STCW Codes.

keywords: *Standard Marine Communication Phrases (SMCP), Maritime English, safe navigation, global standards, STCW (Standards of Training and Certification for Watchkeeping), IMO (International Maritime Organisation), TARB (Training and Record Book)*

Introduction

Much has been said about the standardization of English language at sea, which is why the Maritime English especially matters concerning safety of navigation, ship's operations and most

importantly, seafarers themselves. Maritime English covers all aspects of navigation, ship's operations and even the training of seafarers as clearly outlined by the STCW 1978 which was completely revised in 1995 and 2010. To date, all institutions involved in the training of seafarers comply with the standards of training as ratified by the IMO via the STCW Codes, so as to produce seafarers (officers and ratings) who are proficient in the English language.

At sea, the STCW has set uniform standards for the attainment of competencies in various maritime skills required to qualify as an officer in charge of navigational watch. Therefore, authorities such as the Marine Departments of Malaysia have developed and integrated these standard assessments based on the STCW Codes. The Training Record Book (TARB) is a comprehensive record of deck and engine cadet officers demonstrating competence to undertake functions in accordance with the STCW Codes [1] which is under direct responsibility of the Marine Department of Malaysia. The synergistic link between education received at the ALAM and on board practical training as being evidenced in the TARB must be explored in order to align theory with practice and to further improve trainings on the SMCP. The evaluation standards focused on in this study are the IMO SMCP's communicative competence assessments as part of overall English language competency as prescribed in the TARB for Deck Watch-keeping Officer Cadets during their 12 months of sea service.

Background of Study

Cole and Trenkner [2] reported that communicative competence of deck and engineering officers has been further emphasized especially by the 2010 Manila Amendments in the STCW as a means to promote safety at sea and contribute to cleaner oceans. As the main regulatory body, the IMO has adopted the Standard Marine Communication Phrases (SMCP) in 2001 and has complemented this regulation by developing the Maritime English Model Course 3.17 in 1999, amended 2009. Accordingly, the STCW Codes prescribe the use of English in both oral and written communication and thus further recommend the use of the IMO Standard Marine Communication Phrases for all navigation and engineering officers as well as all the crew members onboard [3]. These are further emphasized and assessed in the TARB as part of a comprehensive record of deck cadet officers demonstrating competence to undertake functions in accordance with the STCW Codes.

Demydenko [4] asserted that the practice of deck and engineering crew training in Maritime English is carried out in "close connection with development of national and international standards".

Furthermore, the word "standard" refers to a sample which is established by professional bodies and reflects a level of quality or achievement used for evaluating someone or something.

Ziarati [5] and Ziarati et al [6] stated that communication failure on board merchant ships is one of the major factors in incidents and accidents. Hence, there is a need to "promote a high level of working Maritime English language skills" and "they must be seriously taught" [7]. In accordance with this, Jieyang & Wei [8] emphasized the need to objectively measure and evaluate the IMO SMCP in their forms of Knowledge, Understanding and Proficiency (KUP). From these KUPs, all the target achievable verbs have been devised in line with the Manila Amendments to the STCW Convention and Codes. Verbs such as "to communicate with other ships, coast stations and VTS centers" and "use English in written and oral form" are therefore included and integrated in the TARB assessments.

Statement of Problem

But to date, there have been fewer studies focusing on the evaluation of the IMO SMCP on board merchant ships especially as evidenced in the TARB. Moreover, there are also few studies that focus on classroom facilitations of the SMCP in order to gain more insights into the synergy between classroom teaching and practical trainings and assessments on board merchant ships. Hence, it is timely to embark on a preliminary study to obtain feedback on the assessments and trainings of the IMO SMCP as included in the TARB assessments for Deck Watch-keeping Officer Cadets during their 12 months of sea service.

This paper serves as a preliminary study on Maritime English language proficiency, especially on the SMCP concerning navigation cadet officers trained in the Malaysia Maritime Academy (Akademi Laut Malaysia @ ALAM). It aims to obtain respondents' feedback on the training of the SMCP at the academy, practical training of the SMCP on board merchant ships and compliance with international standards as outlined in the TARB. Future enhancements in teaching, learning and assessments of the SMCP shall be made be based on the findings of this study.

Research Questions

The research questions of this study are formulated as follows:

1. What are the areas which need improvements in the training of the SMCP at the ALAM?

2. What are the methods used by the DTOs (Designated Training Officers) to facilitate the SMCP trainings on board merchant ships?
3. Which areas need more focus in the training of the SMCP on board merchant ships?
4. Which areas should be further described in the TARB concerning the training of the SMCP on board merchant ships?
5. Are trainings on the SMCP received at the ALAM sufficient for shipboard training?

Methodology

This study used self-constructed questionnaire to obtain quantitative data from the target survey population. The respondents comprised of 110 students enrolled in the 5th and 6th semester of undergraduate Nautical Studies at the ALAM who have just completed their 12 months of sea service (shipboard training) on board various merchant ships as recorded in their respective TARBs. This shipboard training is part of the mandatory requirements as outlined by the STCW and is enforced by the Marine Department of Malaysia for 3rd Class Certificate of Competency for Officer in Charge of Navigational Watch on Ships of 500GT or more On Unlimited Voyage.

All respondents were male and female navigation cadet officers who have completed their lessons in the SMCP in both classroom and on board training. Reliability test on all self-construct questions was done by using Cronbach's Alpha on the SPSS software. The results show that all questions in the questionnaire have a value of 0.716 of Cronbach Alpha which falls in the high reliability level of 0.50-0.90. Hence, it can be summarized that there is a high level of reliability in all self-constructed questions.

The questionnaire consists of 30 questions and is divided into 3 sections namely A, B and C. Section A used multiple choice format for obtaining demographic data from respondents through 6 questions. Section B (12 questions) and C (12 questions) were used to gather respondents' feedback on the teaching of the SMCP at the ALAM and further training of the SMCP on board merchant ships through 5 point Likert Scale. The 5 point Likert Scale ranges from "Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree".

figure 1: Cronbach Alpha values of all questions in questionnaire

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.716	.909	30

Demographic Data

Fig. 2 shows that male respondents were the majority of the research population with 93 persons (84.5%). There were only 17 female respondents which contribute to 15.5% of the overall population. Majority of respondents were in the age range of 21-23 years old with 76.4% (84 persons). 25 respondents belonged to the age group of 24-26 years with 22.7% and there was a respondent who belonged to the age group of 18-20 years with 0.9%. 69 respondents were Semester 5 students (62.7%) while there were 41 respondents (37.3%) in Semester 6.

There were 5 categories of main sponsors of navigation cadet officers in Malaysia Maritime Academy. They are Malaysia International Shipping Corporation (MISC Berhad), AET Tanker Holdings Pt. Ltd (AET), Majlis Amanah Rakyat or People's Trust Council (MARA), Federal Land and Development Authority (FELDA), Jabatan Perkhidmatan Awam (JPA) or Public Service Department and other shipping companies who are mainly made up by Bumi Armada, Global Maritime Ventures (GMV), Jasa Merin, and EA Technique (Petronas subsidiary).

From the survey, there were two types of ships that received the highest frequency in shipboard training. The first type was 'Crude Tanker' with 37 respondents (33.6%). The second type was the 'Other' types of ships with 37 respondents (33.6%). This category mostly covers ships with specialised functions such as OSV (Offshore Supply Vessel), Dredger, Cable Laying Ships, RoRo ship, Bulk Carrier, General Cargo Ship and other coastal ships. LNG/LPG ships

were ranked third together with Product Tankers with 14 respondents respectively (12.7% for each). The least common ship was Containership with only 8 respondents (7.3%).

figure 2: Demographic data of respondents

Demographic information		**n**	**Percentage (%)**
Gender	Male	93	84.5%
	Female	17	15.5%
Total		110	100%
Age	18-20 years	1	0.9%
	21-23 years	84	76.4%
	24-26 years	25	22.7%
Total		**110**	**100%**
Level of Studies	Semester 5	69	62.7%
	Semester 6	41	37.3%
Total		**110**	**100%**
Sponsors	MISC Berhad	19	17.3%
	AET Holdings Pt. Ltd	33	30%
	MARA & JPA	34	30.9%
	FELDA	13	11.8%
	Others	11	10%
Total		**110**	**100%**
Types of Ships	LNG/LPG	14	12.7%
	Product Tankers	14	12.7%
	Crude Tankers	37	33.6%
	Containership	8	7.3%
	Other types	37	33.6%
Total		**110**	**100%**
Frequent Route	Domestic & Near Coastal	46	41.8%
	Asia	34	30.9%
	Africa	3	2.7%
	Europe	4	3.6%
	North & South America	23	20.9%
Total		**110**	**100%**

The survey also reports that the most frequent route taken by respondents was Domestic and Near Coastal with 46 respondents (41.8%). Asia was ranked second with 34 respondents (30.9%) and the North and South America was in the third place with 23 respondents (20.9%). Lastly, a small number of respondents chose Europe and Africa route with 4 (3.6%) and 3 (2.7%) respondents respectively.

Research Question One: What are the areas which need improvements in the training of the SMCP at the ALAM?

Figure 3 shows the mean and standard deviation of statements in Section B of the questionnaire which evaluate respondents' opinion and feedback on further improvements in the training of the SMCP at the ALAM.

figure 3: Means and SD of Further Improvements

No.	Statement	Mean	SD
14	During classes, the SMCP are taught via lecture, modelling, drills and simulations.	**3.91**	**.786**
15	I am confident with my knowledge in the SMCP.	**3.60**	**.708**
16	I do not require more training in the SMCP.	**2.80**	**.994**
17	There are sufficient resources on the SMCP given by my lecturer.	**3.88**	**.745**
18	I received appropriate exposure and practice on the SMCP.	**3.84**	**.765**

From the survey, statement which received the lowest mean score is Item 16: I do not require more training in the SMCP (mean=2.80). The other 3 statements received medium-high mean scores between 3.60 and 3.91. They are Item 14: During classes, the SMCP are taught via lecture, modelling, drills and simulations (mean=3.91), Item 15: I am confident with my knowledge in the SMCP (mean=3.60), Item 17: There are sufficient resources on the SMCP given by my lecturer (mean=3.88) and Item 18: I received appropriate exposure and practice on the SMCP (mean=3.84).

Research Question Two: What are the methods used by the DTO (Designated Training Officer) to facilitate the SMCP trainings on board merchant ships?

Figure 4 shows the mean and standard deviation of statements in Section C of the Questionnaire which evaluate respondents' opinion and feedback on methods used by their respective DTOs (Designated Training Officers) in facilitating the trainings and practical evaluations of the SMCP on board merchant ships.

figure 4: Means and SD of Methods by DTO in training SMCP

No.	Statement	Mean	SD
23	I was exposed to real life situations of the SMCP on board.	**3.70**	**.994**
24	My trainer used drills and practice to further enhance my competency in the SMCP.	**3.50**	**.827**
25	My trainer allowed me to use the ship's radio to familiarize myself with real life situations at sea.	**4.14**	**.817**
26	My trainer also used CBT (Computer Based Teaching) in facilitating the trainings of the SMCP.	**3.47**	**1.07**

Four statements in this section were further analyzed to address the research question. They are Item no 23: I was exposed to real life situations of the SMCP on board (mean=3.70), Item 24: My trainer used drills and practice to further enhance my competency in the SMCP (mean=3.50), Item 25: My trainer allowed me to use the ship's radio to familiarize myself with real life situations at sea (mean=4.14) and Item 26: My trainer also used CBT (Computer Based Teaching) in facilitating the trainings of the SMCP (mean=3.47). The statements and scores indicate the general four methods being used on board to further train deck cadets on the SMCP by the DTOs (Designated Training Officers) who were also the Chief Officers of the ship. Three statements obtained medium scores from respondents (mean = 3.47 to 3.70) and 1 statement, Item 25 received high mean score in the survey (mean=4.14).

Research Question Three: Which areas need more focus in the training of the SMCP on board merchant ships?

Figure 5 shows the mean and standard deviation of statements in Section C of the questionnaire which evaluate respondents' opinion and feedback on areas which need more focus in the training of the SMCP on board merchant ships.

figure: 5 Means and SD of Areas of Improvement

No.	Statement	Mean	SD
19	I am satisfied with the amount of time spent on training the SMCP on board.	**3.33**	**.855**
20	I am satisfied with the practical exposure on the SMCP on board.	**3.30**	**.826**
21	I am more confident with my competency in the SMCP after being trained by sea professionals on board merchant ships.	**3.57**	**.867**
22	I receive sufficient exposure and training on the SMCP on board merchant ships.	**3.32**	**.883**
27	My trainer knows the job well in the facilitating the training of the SMCP.	**3.65**	**.786**
28	My trainer goes the extra length in teaching me the SMCP .	**3.22**	**.860**

The analyzed statements above received low and medium ratings ranging from 3.22 to 3.65 in mean scores. The statements are Item 19: I am satisfied with the amount of time spent on training the SMCP on board (mean=3.33), Item 20: I am satisfied with the practical exposure on the SMCP on board (mean=3.30), Item 21: I am more confident with my competency in the SMCP after being trained by sea professionals on board merchant ships (mean=3.57), Item 22: I receive sufficient exposure and training on the SMCP on board merchant ships (mean=3.32), Item 27: My trainer knows the job well in the facilitating the training of the SMCP (mean=3.65) and Item 28: My trainer goes the extra length in teaching me the SMCP (mean=3.22). Further discussion on this will be presented in the 'Summary of Findings' section.

Research Question Four: Which areas should be further described in the TARB concerning the training of the SMCP on board?

Figure 6 shows the mean scores and standard deviations of statements in Section C of the questionnaire which indicate the need to expand the columns and assessments in the TARB on the SMCP. These expansions are recommended as they provide more comprehensive and descriptive explanation of assessments and scales for future enhancement and actions.

All fours statements obtained low mean scores from 3.22 to 3.33. This requires more attention and improvements as the low mean scores denote immediate actions must be taken to alleviate the situation. For the SMCP, the TARB only spells out the 'Use of the IMO SMCP with other ships and coast stations" (p. 47). It does not specify the standard frequency of tasks to be conducted so as to reach the acceptable exposure and trainings when communicating with other ships and coast stations. Moreover, it does not state the approaches and methods to carry out the training, evaluation and facilitation. It is recommended that the TARB should be more specific in delivering the training of the SMCP on board. The low mean scores obtained by the four statements in Section C indicated that there should be more efforts taken in those particular areas and to clarify those areas in training.

figure: 6 Means and SD of Areas that need to be expanded in the TARB

No.	Statement	Mean	SD
19	I am satisfied with the amount of time spent on training the SMCP on board.	**3.33**	**.855**
20	I am satisfied with the practical exposure on the SMCP on board.	**3.30**	**.826**
22	I receive sufficient exposure and training on the SMCP on board merchant ships.	**3.32**	**.883**
28	My trainer goes the extra length in teaching me the SMCP.	**3.22**	**.860**

Research Question Five: Are trainings on the SMCP received at the ALAM sufficient for shipboard training?

Figure 7 shows the mean scores and standard deviations of the last two statements in the Section C of the questionnaire. They indicate the synergy between the teachings of the SMCP at the Malaysia Maritime Academy and further exposure and training on board merchant ships.

figure 6: Means and SD of statements which indicate the link between theory and practice

No.	Statement	Mean	SD
29	The SMCP training received at the ALAM connects well to the real situations of the SMCP on board merchant ships.	**3.85**	**.815**
30	The training received on board complements the knowledge received at the ALAM.	**3.63**	**.879**

Both statements received mean scores in the medium-high range, which is between 3.50 and 4.00. This data shows that there is a possible high link between classroom practice and practical training on board merchant ships on the SMCP.

Summary of findings

In terms of areas which need more focus in the teaching of the SMCP on campus, findings of this study reveal that respondents require more time and exposure to the SMCP in theory classes before they embark on their shipboard training. Furthermore, the results show that more facilitation hours should be allocated to the SMCP. Other areas of improvement in the teaching of the SMCP within the academy are syllabus content, more involvement in role-plays, drills and simulations for navigational situations with the SMCP, comprehensive and updated teaching and learning resources and more practical tests on the SMCP to increase students' level of confidence and knowledge.

The results of study also highlight the three common methods used by the DTO to further teach, facilitate and evaluate the SMCP on board merchant ships. These methods are drills and practice based on navigational situations, computer software (CBT) and most importantly, the ship's VHF radio. From the study, it was also reported that most respondents had been exposed to the practical side of the SMCP when their respective DTOs authorized them to use the ship's VHF radio to further complement the theory of the SMCP learned on campus.

Majority of respondents believed that the amount of time, the type of exposure received, quality of training and facilitation and also the DTOs' dedication in training must be further

improved. Therefore, further recommendations and actions should be taken to improve the quality of training in the SMCP on board of merchants ships.

This study also indicates that future improvements in the TARB should be proposed so that the training of the SMCP could be more descriptive and objective. These suggestions include frequency of communication with other ships and coast stations (1-5 ships/stations), written record of the ships and coast stations contacted, total hours spent in communication with other ships and coast stations (0-10 hours), types of methods/approaches used by the DTOs to deliver the training, other related topics in the SMCP to be emphasized during VHF communication with other ships and coast stations (for example, Message Markers and etc.) and written record of marks or scores received by cadets indicating their level of achievement in each task.

The findings of this study also suggest that the link between theory emphasised on campus and practical on board training is in the category of medium-high (mean score = 3.63 and 3.85). This concludes that the trainings of the SMCP received on campus are sufficient for shipboard training. Moreover, this initial finding also indicates that there is a synergistic link between the theory and practice concerning the SMCP.

Conclusion

There have been weaknesses in both classroom facilitations and on board practical trainings concerning the SMCP according to this study. However, it is too early to make any judgement at this point. This is because this research serves as a preliminary study on the SMCP, especially when aligning occupational requirements as required by the Officer in Charge of Navigational Watch on Ships of 500GT or more and national requirements as outlined by the TARB and international standards as stated by the STCW Codes.

On the other hand, this study could initiate more related research and studies on the SMCP, especially on the practical applications of the SMCP in ship's VHF communication during the 12 months of shipboard training for cadets training to become navigating officers. This must be done in line with the need to further improve the standards of communication at sea. Hopefully in the near future, the Maritime English Trainers' community could be presented with clearer portrayal of the events that take place on board merchant ships worldwide. Only then we could objectively summarize the issues and offer conclusions pertaining to the implementation of the

SMCP in all types of communications at sea with a consistent focus on ship to ship and ship to coast stations as amended in the STCW 2010 Manila Amendment.

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Communications between Ships' Pilots, Masters, and Tug Operators – Some Suggestions for the IMO Standard Marine Communication Phrases

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Abstract

Effective pilot-master communication can, to state the obvious, be critical when entering and leaving harbour. Currently the IMO Standard Marine Communication Phrases or SMCP appear to cover some of the master-pilot communications necessary when these operations are underway, but in this mix there needs to be factored in effective pilot-tug communications, with the master being also able to understand also what is being conveyed between the pilot and tug skippers. Some essential and basic 'tug operation' phrases are therefore recommended for serious consideration by those involved in drafting any revision to the SMCP.

keywords: SMCP, pilot-tug communications, bridge resource management.

Introduction

Given the discussions early in 2015 in Germany and Holland about the problems encountered with 'pilot-tug' communications I decided to review the status quo in Australia (and in particular, Western Australia) regarding this issue. I also decided to attempt to find out what the situation was in the United Kingdom, the United States of America, as well as getting some feedback from Singapore, China, and Japan.

This is very much a descriptive as opposed to an analytical paper and one that concentrates on the practical, rather than the theoretical aspects of pilot-tug communications.

I am aware of the publication in February 2015 of the "Guidelines for safe harbor towage operations" by the European Tugowners Association (http://www.eurotugowners.com) although I have not quoted from this document. This is an excellent starting point for any deliberations concerning pilot-tug communications for possible inclusion in the SMCP. I am hopeful that the phrases used in pilot-tug communications in countries other than Europe will also be considered when the IMO is reviewing any additions and/or amendments to the SMCP. Given that world seaborne trade is 'dominated' by the Asian region (for both loaded and unloaded goods) it would be appropriate to acknowledge, and be aware of, the 'language practices' of mariners in that part of the world.

With this in mind I communicated with the following institutions in an endeavor to get some idea of the phrases used when pilots are communicating with tugs:

- Fremantle Pilots
- United Kingdom Maritime Pilots' Association
- International Maritime Pilots' Association
- American Pilots' Association
- Jimei Navigation Institute, Xiamen, China
- Tokyo University of Marine Science and Technology
- Marine and Port Authority of Singapore

The responses varied greatly in sophistication, details, and comprehensibility. I have attempted to summarize some of them towards the end of this paper.

I also communicated with two former ex Navy colleagues who had worked as ships' pilots for many years after their time in the Royal Australian Navy. One had been employed at the port of Fremantle, the other at Dampier, 1,500 kilometers north of Fremantle. I asked them to summarise the 'pilot-tug' commands that they personally used and preferred, and these are appendices to this paper. One is a 'Suggested set of tug orders for the Port of Fremantle" and the other is headed "2015 Tug orders", and relates to the orders used in the port of Dampier in the northwest of Western Australia.

In the course of researching this paper I became aware of additional 'maritime phrases', such as 'azimuth stern drives', 'voith water tractors', 'tractor command language', 'tonnage commands', 'powered indirect', 'transverse arrests', and 'indirect braking'. These do not, however, need to be included in the SMCP!

Western Australia – some background to pilots' duties

Fremantle Port is the principal cargo port for Western Australia (known as "WA") and is a sheltered, all weather port situated on the west coast about 20 kilometers from the State capital, Perth.

Fremantle Port comprises two harbours – an inner and outer harbour. The inner harbour is located at the mouth of the Swan River and the outer harbour is about 20km south at Kwinana, a major industrial area. The inner harbour handles almost all of the container trade for WA but it also provides facilities for livestock exports, motor vehicle imports, other general cargo, cruise ships and occasional visiting naval vessels. The outer harbour is one of Australia's major bulk cargo ports handling grain, petroleum, liquid petroleum gas, alumina, mineral sands, fertilisers, coal, sulphur, and other bulk commodities. The state of WA also has two other major ports, Port Hedland and Dampier. These two ports mainly handle iron ore, LNG and LPG exports – in large quantities. In 2013-2014 almost 150 million tonnes of iron was exported, constituting about 82% of total exports. Needless to say, the vessels handling these quantities of ore are very large.

Of Australia's five major general cargo ports, Fremantle is the closest to Singapore, which is about four and half days' journey away. The ports of Port Hedland and Dampier, in the State's northwest are also very busy iron ore exporting locations, where the tides can range up to seven metres, whereas in Fremantle the tidal range is usually about one metre. The tides can obviously – and significantly - affect shipping and tug operations.

The vast majority of traffic into Fremantle comes from Asia and the Middle East. East Asia accounts for 29%, Southeast Asia 25%, and the Middle East 17%. Only 4% of the traffic comes from Europe and the United Kingdom. Consequently ships' pilots in Fremantle find themselves communicating with ships' masters from China, Korea, Indonesia, India, and Malaysia, among others.

Services such as towage, pilotage, line boats, and bunkering are provided by the private sector. For the pilotage, a company called (unsurprisingly) "Fremantle Pilots" provides the marine pilotage service to the port of Fremantle and has been doing so for 170 years. To quote from their website, "our mission is to navigate vessels in and out of Fremantle safely and on schedule". The company provides continuous professional development for their pilots, which includes "bridge resource management".

Via some "networking" the author of this paper was able, with the managing director's permission (as well as obtaining the permission of the duty pilot) to accompany a pilot from the above company on more than one occasion, when he was providing the pilotage for arriving as well as departing vessels. These vessels included

- a training vessel from Japan
- a cruise liner
- a diesel tanker from an Asian refinery.

In Fremantle visiting vessels are usually boarded by pilots in 'Gage Roads1[①]', several kilometers off the coast.

On all but one of the occasions when I accompanied a pilot I observed the 'multinational' make-up of the crew, and in particular, the bridge team. For example, on the day I was on the diesel tanker, the captain was Korean, the First Officer was Chinese, and the helmsman was from Myanmar. The vessel was headed for the outer harbour, some 20 kilometres south of the main port of Fremantle, where petroleum, grain, fertilizers, alumina, sulphur and Liquid Petroleum Gas are the main cargoes.

Access to the outer harbour for large ships is via several channels which have a 'maintained depth' of about 15 metres. Most large cargo ships visiting Fremantle have drafts between 10 and 13 metres. The channels are only about 150 metres wide and can be difficult for vessels with a large wind profile and high ratio of freeboard/draft as it is exposed to winds and seas.

① Gage Roads is named after Rear-Admiral Sir William Hall Gage who was Commander-in-Chief of the Royal Navy's East India Station when James Stirling was surveying the Swan River in 1826.

As such, the ships' masters and duty ships' pilots have to maintain the highest levels of diligence, as these waterways are used 24 hours a day, 365 days a year.

To add to the ship handling challenges, there is – more often than not - a strong sea breeze (usually south-westerly) blowing in this area, often up to 25 knots, or 46 kilometers per hour. Furthermore, at the southern end of the channels there is one of the Royal Australian Navy's largest bases where half of the Navy's surface fleet are located, as well as all of Australia's submarine fleet, so extra traffic results when the Navy is on the move, or when there are visiting vessels from other navies. And added to this already busy mix are the recreational sailors from nearby yacht clubs, fishermen, and other users of the relatively protected waters of Cockburn Sound.

As is the practice in other ports, a duty pilot on a departing vessel may transfer to an incoming vessel that is approaching the port, once his vessel has reached a designated point offshore. So while he could - at one stage - be duty pilot on a departing cruise liner he could find himself on the bridge of a pure car carrier or container ship in the space of less than two hours. The coordination of the pilots' duties is done by a land-based administration officer in the office of the Fremantle Pilots.

On the occasion the author was accompanying the pilot on the diesel tanker, at any one time he could be talking to any one of seven parties:

- vessel traffic services
- the ship's master
- the helmsman
- the wharf gang of line handlers
- the 'line boat'
- deck crew
- tug operators.

Needless to say, the main challenges to the Fremantle pilots (and pilots in other Australian ports) are communicating with ships' masters, helmsmen, and – very occasionally – the deck crew.

In the port of Fremantle the international company "Svitzer" presently manages the tug fleet.

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Feedback from overseas regarding tug operations

As mentioned earlier, comments were sought from a variety of overseas tug associations or organisations regarding 'standard phrases that were in common use'. One of the pilots with whom I communicated kindly forwarded to me details of some exchanges that recently took place on LinkedIn and the range of contributions was substantial. One of the contributors stated that he was 'soliciting opinions and/or other practices that my fellow international colleagues use – your comments are most welcome'. The anonymity of the contributors has been respected and some of their comments are included below.

Responding to the invitation to contribute, some pilots from the following countries and locations offered their views about 'pilots instructions to tugs':

- Denmark
- The United Kingdom
- Trinidad and Tobago
- Germany
- Barrow Island, Western Australia
- South Africa
- Gibraltar
- Singapore
- United States of America
- Morocco
- Algeria
- The Russian Federation

It can be seen that there was a geographically very wide spread of views and comments.

The exchange started with a suggestion that, to 'eliminate the possibility of errors', the following tug instructions were mooted:

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Pilot to tug: "Tug (name) – push/pull back – ¼, ½, ¾, FULL"

In the situation pictured, this instruction should be straightforward.

The vessel's bow is swinging to starboard in Fremantle harbour as the ship rotates within its own length, before proceeding to the harbour mouth. Normal procedure for the tugs (after the turn) is for them to remain 'on station' – one on the bow and one on the quarter, with lines still secured on the ship, but with no tension.This is a safety measure in case of engine or steering failure on the departing vessel. Once clear of the harbour entrance the lines are let go and the tugs return to their base.

In the photograph below, the vessel has left the berth and is about to head for the harbour entrance. Being lightly loaded it only needed a tug after to assist with the turning procedure. (The water from the hawsepipe is from the washing of the anchor before it is brought 'hard up'. On some occasions moored vessels are required to lower one anchor to the harbour floor to reduce the chances of a 'runaway ship' in case it breaks its mooring ropes.

It would be worthwhile here to provide a selection of just a few of the suggestions for instructions to tugs. Care has been taken not to embellish the phrases of the many practising pilots who contributed to the discussion. Comments other than my own are in "inverted commas".

Pilot order	Comments
"(Name) - pull 10%" "(Name) - pull half"	
"(Tug name) – pull port bow, 75%, seven five"	Some pilots liked using percentage power, others did not. One made the comment, "We have found no issue at all with the interpretation, application, or effectiveness (of using percentages)"
"Number 2 (tug) – easy weight to starboard"	"The advantage is that you do not need to remember the name of each tug during the tense part of a manoeuvre and the orders

"Number 3 (tug) – half weight to port"	are easy to understand. Perhaps more useful is the fact that they are distinct from the orders you give to the master for his engines".
	"Naming tugs with a number could be potentially confusing if the tug named "1" is stationed aft and the tug named "2" is stationed for'd"
"Push in/lift off - easy/more/full"	"This is enough as you will always be adjusting the tugs' power settings based on the results you want and get"
"Number one, lie back"	

Rather than include too much detail and comments here the author will discuss 'the transcript' of the extensive interchange of views with those interested at the IMEC or via email.

Conclusion

Pilot-tug communications are a critical part of the pilots' duties when assisting ships and other vessels berthing or unberthing. The SMCP are designed to facilitate 'clear, concise, and unambiguous communications' at sea and any amendments or additions to these phrases which address pilot-tug communications should obviously meet these criteria. Perhaps cognizance should also be given to pilot-tug phrases currently used in Asian waters where there are thirteen out of twenty of the world's busiest ports.

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Appendix 1

Suggested set of tug orders for the Port of Fremantle

1. Tug Power Settings:

'Stop' 'Minimum' 'Quarter'

'Half' 'Three quarters' 'Full' 'Maximum' (Emergency only)

2.	Square Up/Come Square	Tug will work itself at right angles to hull.
3.	Lift Off/Back	Tug will lift off or pull, whether on a tow line or bow to bow.
4.	a) Pull Back 'Alongside'	Tug will lie flat alongside and pull back against the headway of the ship
	b) Pull Back 'Right Aft'	For an Aft Tug on C/L, or on or near the transom
5.	'Push'	Tug will push at right angles to the ship, or as near as possible if the ship has some head/sternway.
6.	Pushing at an angle	Indicate the angle e.g., 'Push at 45 degrees'

7.	Heading Directions	For any direction other than 2, 3, 4 and 5, alternative headings may be given, e.g. 'Head 4 points on the port bow', or 'Head 2 points abaft the beam, or 'Head towards White Landing', etc. 'Tow Towards' can also be used
8.	Inform Intentions	Prior to using main engine(s), or letting go anchor.
9.	Stand By	Inform the tugs of an impending change in its manoeuvre. If tug is pushing - 'Stop, stand by to lift off', or if the tug is pulling back - 'Stop, stand by to let go'.
10.	Running with the ship	When running free, indicate the 'standby' position(s).
11.	Ambiguous Terms	Avoid ambiguous terms , such as 'Push up gently' or 'Lift off just a little more' or 'Back easy'.
12	Communications	If other communications are needed, avoid uncertainty. Keep the message short & concise, with no rapid speech.
13	Other phrases	'Backflip' - Swing the ship stern to the wharf. 'Slack Line' 'Push/Lift off Bare(st) Minimum ' 'No Weight' 'Nose Off the Hull' 'Take her around on …….. Power'

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Appendix 2

Northwest ports in Western Australia

DOCKING THE SHIP: PART 1 - SIDEWAY

PILOT ORDER	TUG ACTION
"Square up"	Position the tug square (ie 90 degrees) to the hull
"Push up, bare weight" (minimum weight)	Apply sufficient tug power to keep the tug square with the ship
"Push up slow"	Push on the hull with about 10% to15% of the tug's available tug power, say, 10 tonnes
"Push up half"	Push on the hull with about 25% to 35% of the tug's available tug power, say, 20 tonnes
"Push up Strong"	Push on the hull with about 50% to 60% of the tug's available tug power, say, 40 tonnes
"Push up full"	This is an emergency, and the tugmaster will provide maximum available power
"Leave the hull, stretch line (s)"	The tug moves off the hull, keeping square with the ship and prepares to lay back to arrest the sideway
Lay back (slow) (half) (strong) (full) (the plan is to stop the ship aligned parallel with the wharf and displaced laterally 5 to 10 metres)	The tug pulls back on the towline with about (10) (20) (40) (50+) tonnes.

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DOCKING THE SHIP: PART 2 - THE SET DOWN

PILOT ORDER (GIVEN TO)	**TUG ACTION**
(centre tug) "push up slow" (the plan is to resume side way but only very slowly until the ship settles on the fenders)	The centre tug will push up with about 10 tonnes
(end tugs) "slack lines" or "stretch lines"	The end tugs will keep slack or stretch lines with minimum weight while the ship settles on the fenders
(centre tug) "bare weight"	The centre tug will push on the hull with minimum power as the ship settles on to the fenders
(centre tug) "push up half, hold her on" (the plan is to hold the ship on the fenders)	The centre tug will push up with about 30 tonnes
(end tugs) "Come on to the hull" and "hold her on"	the end tugs will come on to the hull and prepare to hold the ship in position with about 30 tonnes
(tug or tugs) "push on two points forward" "push on two points aft"	the selected tug will push on with the required power at an angle two points forward or aft to adjust the longitudinal position of the ship (safer than using engines)

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SAILING

PILOT ORDER (GIVEN TO)	TUG ACTION
Pilot on board	The tugs will report to the ship in the usual way and will be directed to their positions. in this example, one tug will be positioned on the shoulder, another under the bridge. both tugs will supply a single towline to the ship (ship's lines are rarely used); and the third tug will push up in the midships position to hold the ship in position while the mooring lines are recovered.
when the ship is ready to sail (end tugs) "stretch lines" (centre tug) "assist forward"	(end tugs) stretch lines and prepare to tow the ship away from the wharf. (centre tug) moves forward and around the bow and prepares to assist by pushing the bow away from the wharf.
"lay back half" and "tow her away"	(end tugs) lay back with about 20 tonnes of bollard pull and tow the ship clear of the wharf until it is safe to use the ship's engines.
When the ship's engines have fired the tugs will be ordered to "stop towing" and "recover tug lines"	(end tugs) the tugs move back on to the hull and recover their tow lines. Occasionally the third tug might escort the ship some of the way if the ship's engines are defective or for some other reason.

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ComPic "Communication by Using Pictography"- Enhancing Safety for Navigation by using Pictography

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Preface

This research about enhancing safety for navigation by using pictography was commissioned by the Rotterdam Mainport University. In our main phase of the bachelor study Maritime Officer, we had to do a research with an innovative objective. Our desk research and field research has resulted in a report, a product and a presentation.

We would like to thank mr. van Kluijven, mrs. van Der Drift, mrs. van den Berk, mr. Sprong, mr. Griffioen and mr. Gommans for their support in our research. Finally we want to thank everyone from all over the world for filling in our survey.

Introduction

One third of all maritime accidents happen primarily due to insufficient command of Maritime English. (Professor Peter Trenkner, Principal author IMO SMCP). In response to this conclusion, the idea of this research is to enhance safety for navigation by using pictography. It is not the intention to replace any forms of the current communication, but to support it.

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Problem description

Maritime communication is inefficient due to language barriers, pronunciation issues or lack of training. This poor communication is often the main cause of dangerous situations for navigation. Safety of vessel and crew is at risk due to this issue.

For example, a sailor is navigating in Dover Strait. He is intending to overtake a vessel ahead of him and he is trying to communicate by VHF with the officer of the watch of the vessel he wants to overtake. In the worst case scenario that person does not understand him and does not respond.

Another example of poor communication is when a vessel is in distress. The officer on watch is so panicked he forgets the safety-, urgency- and distress Standard Marine Communications Phrases. So he or she cannot send a clear message through VHF which other vessels or coastal stations can understand. In this case there will be no assistance from other vessels.

Problem definition

Communication between vessels and coastal stations is inefficient.

Objective

The objective is: enhancing quality of maritime communication and safety for navigation by using pictography.

This research will produce a report with all the designed pictures and conclusions.

The main question of our research is:

- How can pictography be used to improve intership communication?

The following sub questions are used for answering the main question:

- What forms of maritime communication are there? Desk research
- Why using pictograms to enhance communication and to support oral communication? Desk research
    - What are the advantages and disadvantages of oral maritime communication?

- What are the advantages and disadvantages of pictography?

- How are the Standard Marine Communication Phrases going to be translated into pictures? Desk research
  - What types of messages are eligible with pictography?
- What are the requirements regarding clarity, safety and efficiency for the pictograms? Desk research
  - What are the colours?
  - What are the sizes?
- How can pictograms be transmitted? Field- and desk research
- For which situations can pictograms be used beside oral communication? *Field- and desk research*

Project borders

What has not been investigated:

- the financial aspects.
- intraship communication.
- proceedings and regulations regarding maritime communication.
- educational, cultural differences and pronunciation matters.

Communication is a process of exchanging information, ideas, thoughts, feelings and emotions through speech, signals, writing or behaviour. There are three types of communication: verbal, non-verbal and written. Intership maritime communication is the communication between vessels and between vessels and VTS stations. Intraship maritime communication the communication on board of the vessels.

Verbal communication refers to the use of sounds and language to relay a message. Verbal communication is further divided into oral communication and written communication (Tracii Hanes, 2013).

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Oral communication

By oral communication, spoken words are used to relay a message. There are two forms of maritime communication: oral communication and written communication. Oral maritime communication uses the Very High Frequency, Medium Frequency and the High Frequency bands of the VHF.

VHF

VHF is the abbreviation of Very High Frequency. The wavelength is between 1 and 10 metres and the frequency between 30 MHz and 300MHz. The VHF signals are used for radio transmission. In maritime communication, VHF channels are used for communication between vessels and between vessels and coastal stations, in a short range. The range of the VHF signal is about 30 nautical miles. With the VHF it is possible to transmit an oral message to other vessels or coastal stations in a short range. The language that is used in VHF communication is the Standard Maritime Communication Phrases.

MF

MF or Medium Frequency is also used to transmit oral communication. The difference between VHF and MF is that VHF has a shorter range than the MF. MF has a range of about 200 nautical miles. It has a frequency of between 300 kHz and 3 MHz.

HF

HF (High Frequency) is also used to transmit an oral message. The HF has a range up to 1000 nautical miles. It has a frequency of between 3 MHz and 30 MHz.

Written communication

In written communication signs and symbols, such as images of toilets in public areas, are used to communicate. In maritime communication, written communication can be transmitted by using DSC, NAVTEX, AIS, SART, ECDIS.

DSC

With Digital Selective Calling (DSC) vessels and coastal stations can communicate by using written messages. DSC is used to establish initial contact between stations. The written messages are transmitted by VHF, MF and HF channels. The DSC system supports the following categories:

- Distress
- Urgency
- Safety
- Routine

The MF/HF channels are only for distress, urgency and safety messages. Because of the relatively low speeds of transmission, the channels of MF/HF would quickly become overloaded if it was permitted to send routine messages on these frequencies.

Every vessel that uses DSC has its own identification number. This is a Maritime Mobile Service Identification – number, or MMSI-number.

NAVTEX

NAVTEX is an international automatic radio telex service. With NAVTEX it is possible to receive navigational and meteorological warnings for a restricted area, called NAVAREA.

AIS

Automatic Identification System, also known as AIS. More information about AIS is in chapter 6.2.

Using pictograms to improve communication

There have been many accidents due to ineffective use of oral communication. This is the main reason why pictograms could be used to enhance and to support oral marine communication. The pictograms will not replace the oral maritime communication, it will only be used as an additional tool to make sure that the information has come across effectively and correctly.

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Advantages and disadvantages of oral maritime communication

Advantages of oral maritime communication

The advantage of oral Maritime communication is the direct and personal transmission of all types of information, for example information regarding weather forecast, storm warnings, general safety and routine information regarding sailing areas etc..

Disadvantages of oral maritime communication

In VTS (Vessel Traffic Services) controlled areas communicatively relevant factors contribute up to 40% of collisions (The Nautical Institute, 2007) involving the human element; most of them caused by failures in radio communication, even in routine conversations.

Port State Control inspectors often encounter problems in getting elementary information from ship officers due to their substandard English. Pilots frequently voice their concern in this respect, too.

The disadvantage of oral maritime communication is the multi-ethnic officer staffs that occasionally fail to communicate effectively when managing panicking crowds on board distressed vessels due to the lack of dominance of the English language. This disadvantage is a result of poor elementary English education. Some countries have English as a ‘second- or foreign language” and those natives will not come into contact with the English language until they have to study the Marine Communication Language. And to control a language effectively it must be trained or used for a good amount of time.

More than 86% (The Nautical Institute, 2007) of all SOLAS vessels are presently crewed with multilingual personnel who, for diverse reasons, are frequently unable to render the Maritime English skills required, risking and even causing damage to lives, property and the environment.

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Advantages and disadvantages of the use of images (pictography)

Advantages of pictography

The biggest advantage of using pictography in maritime communication is that there will be fewer problems with understanding each other through the VHF. By using pictography the icon will appear on the ECDIS (see chapter 6.4) and can be interpreted without using oral communication. In this way the intention of other ships cannot be easily mistaken for something else.

Another advantage of pictography is that there is no problem with too much noise through the VHF. In crowded areas it will become almost impossible to follow or track all the messages that are sent.

Disadvantages of pictography

The disadvantage of communication by pictography is its transmission. Most ships are equipped with AIS, (see chapter 6.2) but there is still a small amount of ships that do not operate this system. So there might be a situation where a pictogram is sent but is not delivered to all ships in the vicinity because the receiving ship does not have the proper installations.

Translating standard marine communication phrases into pictograms

For the translation of the Standard Marine Communication Phrases into pictograms the decision has been made to only refer to the intership communication phrases. Intership communication is ship-to-shore and ship-to-ship communication. The use of intraship communication, the communication between crew on board, is required but using pictograms for intraship communication would be unnecessary.

Types of messages that are eligible for pictography

Selected situations that can constitute a danger for the surrounding navigation have been translated into pictograms. When there is no clear communication between vessels the risk of incidents will increase. The Standard Marine Communication Phrases that causes a lot of

danger, like distress, urgency and safety phrases, when not successfully transferred to another station will be translated into pictograms to decrease accidents.

A number of pictograms do not relate to the Standard Marine communication Phrases but relate to traffic situations and manoeuvres that are not covered by the phrases. The pictograms (see product) used in this report only reflect a small portion of the total amount of phrases and traffic situations a vessel may encounter.

The following phrases and situations have been translated into pictograms:

- I am a pilot
- This is motor vessel [name]
- I am aground
- I am at anchor
- I am constrained by a draft
- I am engaged in fishing
- I am engaged in trawling
- I am engaged in fishing, non trawling
- I am not under command
- I have a restricted manoeuvrability
- I am towing
- I am under sail and power driven
- I am under attack by pirates
- I am on fire
- I am carrying dangerous goods of IMO-Class 2
- I am carrying dangerous goods of IMO-Class 4
- I have lost person overboard
- I am flooding below waterline
- My port side is blocked, pass on starboard side
- My starboard side is blocked, pass on port side
- I will overtake you on port side
- I will overtake you on starboard side
- I will pass you green-to-green
- I will pass you red-to-red
- I am going out to port side
- I am going out to starboard side
- I am crossing the Traffic Separation Scheme
- I am entering the Traffic Separation Scheme
- I am leaving and crossing the Traffic Separation Scheme
- I am leaving the Traffic Separation Scheme
- I am going round

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The requirements regarding clarity, safety and efficiency for the pictograms

Colors, sizes and general shapes of the pictograms

The pictograms are used to enhance safety in navigation, this means the pictograms need a clear design to make them easy to understand for everyone.

The colours that have been used for the pictograms have to be clearly distinguishable from each other and from the other colours on the ECDIS display (see chapter 6.3). One way to make the “message” stand out on the ECDIS is by using a flashing exclamation mark which can be clicked and will then open a new tab that shows the pictogram. By separating the pictograms form the main screen the ECDIS will be free of disturbing clutter.

The size of the pictograms are not fixed, as every ship uses different sized ECDIS displays. For the sake of clarity there is the possibility to zoom in, therefor the pictograms have to be made in high resolution. This way the pictogram will be sharp at any zoom level.

The general outline is same for every pictogram to create a series of images that follow the navigation rules and fit the general style of the ECDIS. For the shapes of vessels and other objects used on in the pictograms the same style has been used.

Concepts

Out of three concept drawings (Appendix I), Number two has been chosen because this concept has the clearest style and is easiest to adapt in multiple situations. The other two concepts were closer to reality in terms of shape. This meant that the design deviated from the basic intention of the whole project, to enhance safety. This is achieved by keeping the pictograms as simple as possible without using too much redundant information that could distract from the message.

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Transmission of pictograms

For sending pictograms from station A to station B, pictograms have to be transmitted wirelessly. Transmission can be done point-to-point and point-to-multipoint, this means transmitting to one station or to several stations at once.

Weather satellites

Weather satellites can send pictures from space to stations across the earth by using Automatic Picture Transmission. This is an image transmission system. This system sends data with information to a radio receiver and a decoder so the pictures can be displayed. Some dedicated software can be used for displaying pictures. Because of the long distances the signals have to travel it can take 8 to 15 minutes before the radio receiver receives the complete signal and can display a complete picture (Wikipedia, Automatic Picture Transmission, 2015).

Automatic Identification System

The Automatic Identification System, also known as AIS, is intended to provide overview and information through interaction between ships and with the authorities ashore. The transponders send information via a Very High Frequency (VHF) channel regarding speed, position and voyage related vessel data. This information comes from sensors. Other information like the name of the vessel and the VHF call sign was already programmed during the commissioning of the equipment aboard. Other stations can receive the radio signals with the information by transponders. The received information can be displayed on the radar display and the Electronic Chart Display Information System (ECDIS).

$$S = 4 \times \sqrt[2]{a^2+b^2}$$

a= the antenna height station A (metres)
b= the antenna height station B (metres)
S= the range (kilometers)

The range of the radio signals depends on the antenna height of station A and station B. This can be determined by using the following formula:

The solution

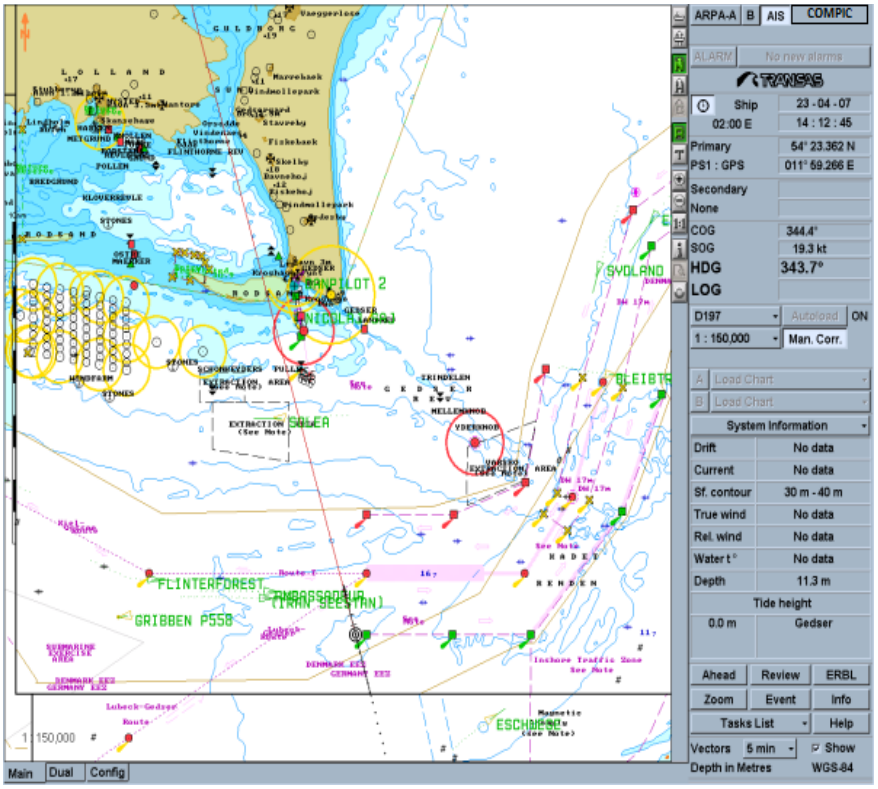
The idea is to transmit pictograms by the AIS. By sending a code from station A to station B, the received code will be translated into a picture at station B. By sending a code instead of a whole pictogram the required data that has to be transmitted will not be as much compared with sending the actual pictogram. A computer program can translate the code into the right pictogram, now the right pictogram will be displayed on the ECDIS. The Weather satellites system could also be used but does not match the requirements since transmitting a picture to another station takes quite long. Also the AIS can be connected to the ECDIS which helps displaying the pictograms from another station. There are a lot of codes for the AIS, each code meaning something else. So it is possible to implement the idea in the AIS (Eric S. Raymond's, 2015). It is recommended that further research on this part has to be done for acknowledgement and to find out the ifs and buts.

When a vessel chooses to send a COMPIC, a red exclamation mark will flash above that vessel on the ECDIS so other stations will know that the vessel has sent a COMPIC. Now the other stations have to click on the vessel and on the tab "COMPIC" to see what pictogram the vessel has sent to clarify what his means are.

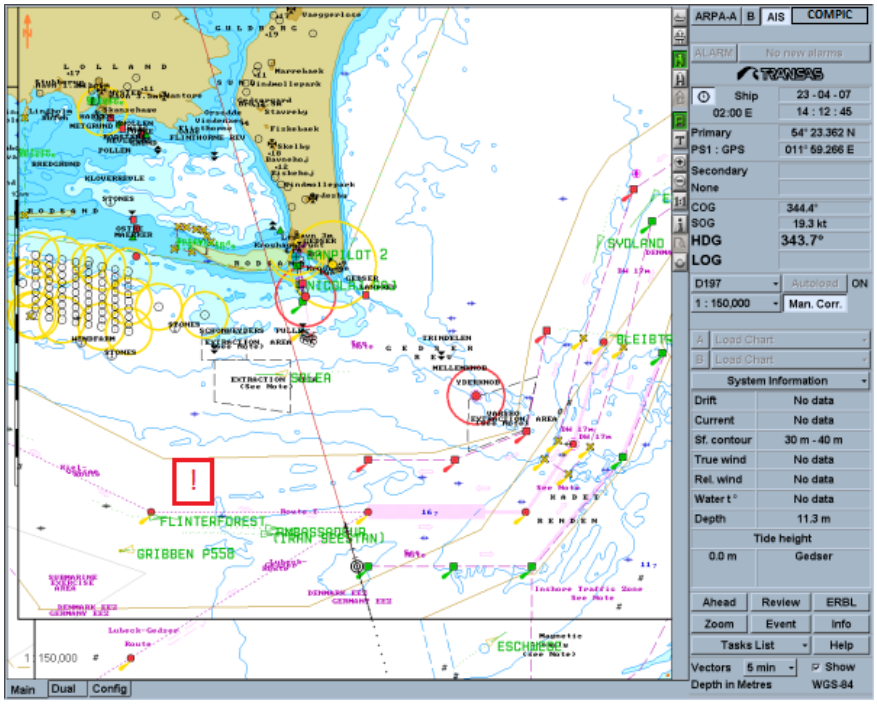
It is necessary for the user to select the right COMPIC fast and easy in a program when in a difficult situation. This program gives the user the choice about what COMPIC to use by selecting distress, urgency, safety or routine. After selecting one of these four, all COMPICs of the selected type will appear. This way the user can select the right COMPIC for the right situation in a fast and easy way.

Example

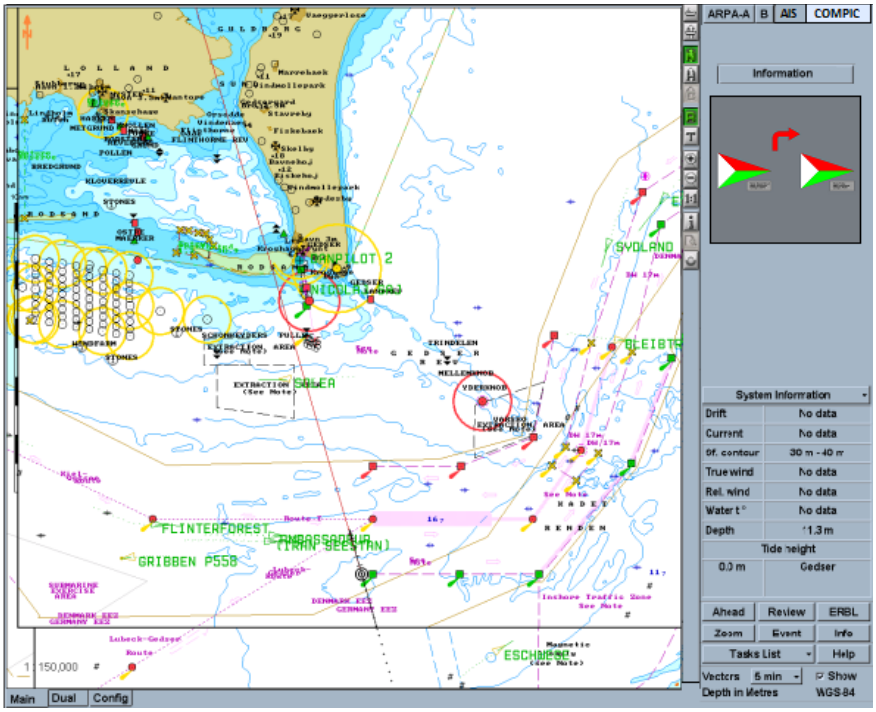
- For example, the vessel Flinterforest is going to ***overtake*** the vessel Ambassadeur.
- Vessel Flinterforest ***clicks*** the ***overtake pictogram (COMPIC)***. (A code will be sent to all stations around)



- Now other stations around will see a ***red exclamation mark*** blinking above Flinterforest.



- When the stations click on Flinterforest they can see its ARPA-A, ARPA-B, AIS and COMPIC information by clicking on the right tab.
- When clicked on the COMPIC tab the pictogram sent by Flinterforest will show.



Pictograms beside oral communication

This chapter is about question 10 in the survey, which can be found in appendix II. This question refers to situations where pictograms could be used beside oral communication. There were a lot of answers to this question, so the best and most common answers on this question were chosen and can be found in this chapter. The COMPICs are based on these answers.

Situations

The following is a list of situations where pictograms could be used beside oral communication; the COMPICs are based on these situations:

- Safety operations
- Emergency situations
- Manoeuvring vessel
- Anchoring

- Carrying/ handling dangerous goods
- At which side a ship can pass a survey ship or a dredger
- Tug
- Toxic smoke
- Person overboard
- Fire
- Crossings
- Vessel not under command
- Fishing
- Overtaking
- Hampered vessel
- Sinking
- Chemical/oil/LNG tanker
- Passing (red on red or green on green)
- Identification of Platforms
- Working vessel
- Constrained by draft
- Navigational warnings
- Military vessel
- Head-on situations

Areas

The areas where pictograms could be used beside oral communication are:

- Port entry
- Traffic separation zones

The pictograms have been chosen for these areas because pictograms (COMPICS) can be used to reduce unnecessary oral communication in these areas. Also pictograms are only possible in these areas because to transmit and receive a COMPIC a vessel has to be in the VHF range of another vessel. In open sea areas, with a distance between vessels over 30 nautical miles, it is not possible to transmit or receive COMPICS.

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Conclusion

Subquestions

What forms of maritime communication are there?

There are two forms of maritime communication: oral communication and written communication. By oral communication is meant the communication by using the Very High Frequency, Medium Frequency and the High Frequency. By written communication is meant the communication by using the Digital Selective Calling, NAVTEX and Automatic Identification System.

Why using pictograms to enhance communication and to support oral communication?

By using pictograms most of the disadvantages of oral communication, like the substandard English of some officers on watch, the failure of sending a distress message in a distress situation and the lack of English Maritime Communication can be avoided.

How are the Standard Marine Communication Phrases going to be translated into pictures?

The translation of the Standard Maritime Communication Phrases into pictures is done by selecting the phrases of the most important situations based on the survey, from the Standard Marine Communication Phrases. For the translation the decision has been made to only translate the intership communication phrases, focussing on the distress, urgency and safety situations. These phrases come from the Standard Maritime Communication Phrases.

What are the requirements regarding clarity, safety and efficiency for the pictograms?

For the requirements the decision has been made to look at the colours, sizes and general shapes of the pictograms. To enhance the safety in navigation the pictograms need a clear design so that everyone can understand them. Three concept pictograms were made with each having its own shape. Out of three concept drawings (Appendix I), number two has been selected because this concept has the clearest style and is the easiest to adapt in multiple situations. The other two concepts were closer to reality in terms of shape.

How can pictograms be transmitted?

The transmission of pictograms can be done by sending a code, with Very High Frequency using the Automatic Identification System, from station A to station B. The received code will be translated into a picture at station B. With each code meaning a different picture all COMPICs can be transmitted.

For which situations can pictograms be used beside oral communication?

The situations in which pictograms can be used beside oral communication are listed in chapter 7.1. These situations have been obtained by doing field research by means of a survey. In this survey 120 maritime affiliated professionals have contributed by giving their opinions and by answering 10 questions.

Main question

How can pictography be used to improve intership communication?

Pictography can be used to improve intership communication in every possible situations except when the distance between two stations is above 30 nautical miles. Some situations cause an increased risk of safety which can be decreased. This has to be done by transmitting COMPICs in a proper way and by having a clear COMPIC that anyone can understand. In case someone does not understand the COMPIC, a booklet has been made. This booklet shows and explains all made COMPICs. A number of COMPICs do not relate to the Standard Marine communication Phrases but relate to traffic situations and manoeuvres that are not covered by the phrases.

Recommendations

The recommendations are:

- More research should be done about the possibility to integrate the pictograms into the ECDIS.
- About 30 pictograms have been made as examples; there should be a pictogram for every standard maritime communication phrase.

- Testing the use of pictograms with a number of vessels would give a clearer answer about enhancing safety for navigation.
- To realise this project, more research should be done about the expenses.

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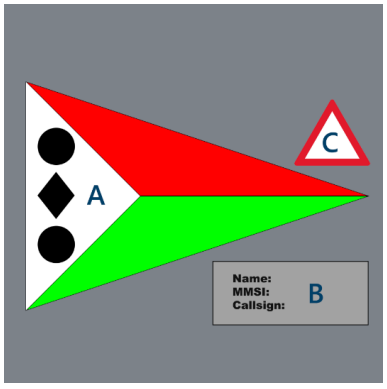
Appendix

'Communication by using Pictography'



A. The white area is used to show the daymark(s) of the vessel.

B. The textbox is used for the name, MMSI number and callsign of the vessel. Additional text to indicate that the vessel is in distress or not under command can also be displayed here.

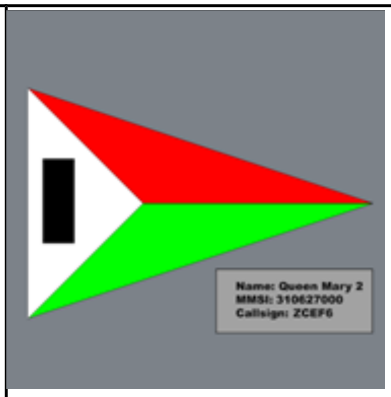
C. This area is meant for additional information applicable to the vessel, like the carriage of dangerous goods or specific distress situations.

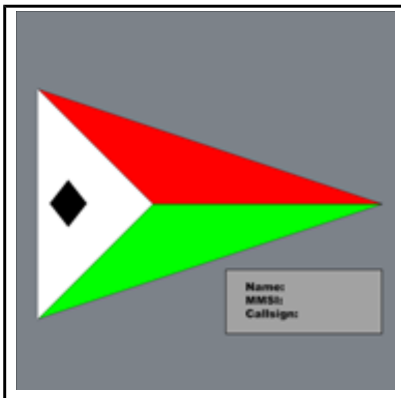
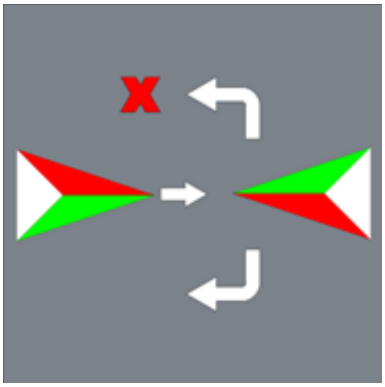
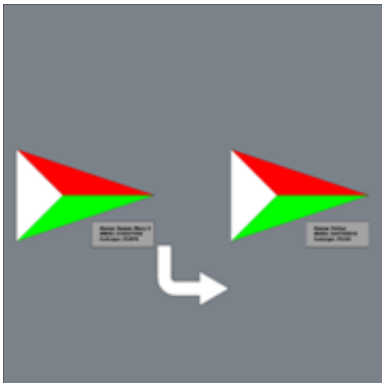
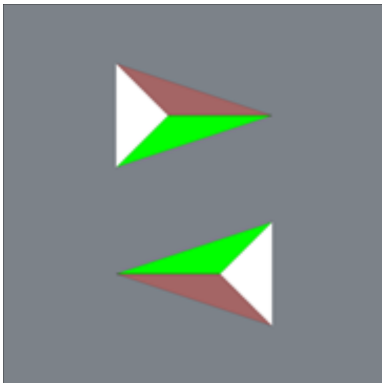
Final product

The following pages contain examples of ComPics divided into four categories: general, daymarks, distress and dangerous goods, and manoeuvres. Above each image a phrase related to the Standard Maritime Communication Phrases is displayed. A number of ComPics do not relate to the Standard Marine Communication Phrases, but relate to traffic situations and manoeuvres that are not covered by the Phrases.

The general category demonstrates the options with different types of vessels. The pilot vessel is easily distinguishable from the cruise ship by the pilot flag it carries. The daymark category shows most of the daymarks applied in ComPics. When in distress or when carrying dangerous goods, ComPics of the third category can be used. The last category shows various manoeuvres in which the use of ComPics may be beneficial.

The following images do not reflect the full possibilities of this idea and there may be many more situations in which ComPics can be used. This product has been made to give an example of the possibilities of this idea. The ComPics used in this report only reflect a small portion of the total amount of phrases and traffic situations a vessel may encounter.

		
I am aground	A am at anchor	I am constrained by draft

		
I am engaged in fishing	I am not under command	I am manoeuvring with difficulty
		
I am towing	I am under attack of pirates	I am on fire
		
Obstruction located on my port side	I will overtake you on your starboard side	I will pass you green to green

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	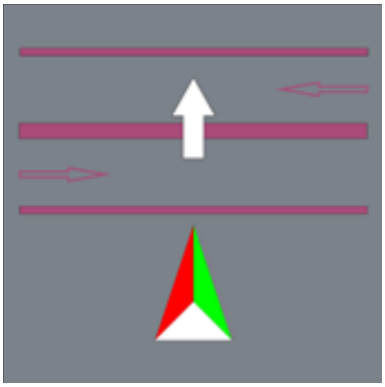	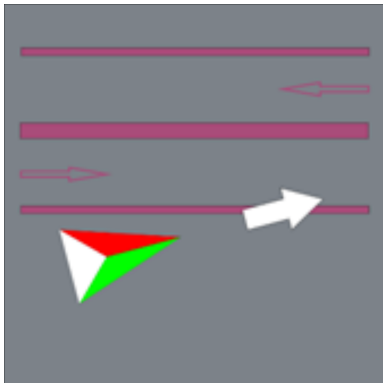
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	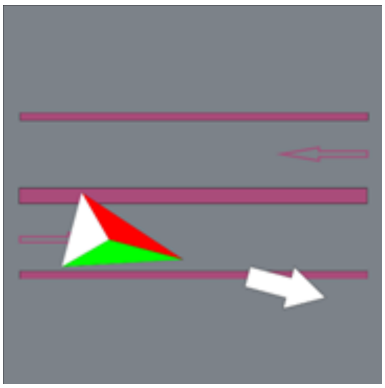	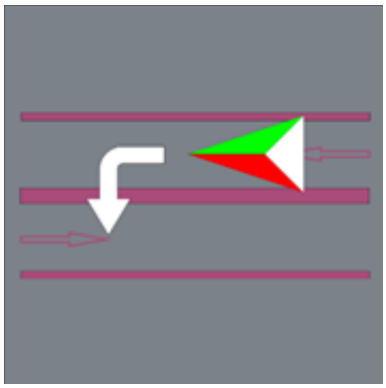
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Etc. etc..

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Blended Learning Will Be Applicable in MET

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Abstract

With the revision work of the IMO Model Course 6.09, the trainee-centered methodology is greatly highlighted, together with the newly-merging technology for education, especially for language learning. This paper will consider blended learning, for instance. Blended learning is adorable for many educators in recent years, which demonstrates the principle of student-centered as well as alternates the role of the teachers from the traditional way. MOOC (Massive Online Open Course) is initiated in most schools as well, for the purpose of mutual share of the best education in the world. Within the framework of blended learning, the MOOC can also be the essential section in a whole circle. With some successful examples for the application of blended learning in elementary and middle schools, the author is suddenly inspired to make assumptions for better MET (maritime education and training): the blended learning is applicable in MET to stimulate the students' initiatives.

keywords: *blended learning, MOOC, MET*

Some Realistic Problems About MET and Realization of Competency-Based Goals

Different from the previous years, the salary for seafarers has greatly declined under the effect of currency devaluation and rising-up salary ashore. A great amount of young people reject to work onboard ship. However, the senior officers still possess a higher income as well as a higher social status. Firstly, the traditional means of the seafarers' certification training and examination is always confined to a fixed time each year, which can be overlapped with the trainees' sea voyage. More significantly, the seafarers' competency is a vital factor for their employment. In order to conform to the requirements of STCW 2010 manila amendments, the IMO Model

Course 3.17 was revised according to the KUP (Knowledge, Understanding and Proficiency) by the STCW conventions. It is obvious that proficiency-based or competency-based study is the optimal objective for maritime English education and training. But the criteria of competency is inadequately and difficultly evaluated and assessed only in terms of the mid-term examinations, final examinations, and regular assignments. With the assistance of blended learning, Sturgis [4] held the opinion that "students are empowered to progress at their own pace, becoming active, engaged, and more independent learners " .

The Current Situation of Blended Learning at Schools and/or Universities

MOOC (Massive Online Open Course) is quite popular and utilized in many top universities for the benefit of sharing accessible high-quality courses of variable subjects. However, these online courses can only be the supplemented materials for the students' better understanding of their learned or learning knowledge. For the realization of competence, there is still a gap, which cannot be narrowed or diminished only depending on MOOC. With the available world-class online systematic courses updating hour by hour, how to make full use of these optimal resources for better education is a question to be considered. The new innovative teaching and learning approach-blended learning is on the way to make a more successful education for the next generation.

Bonks [2] defined that "BL [blended learning] is the combination of instruction from two historically separate models of teaching and learning: traditional face-to-face learning systems and distributed learning systems." It is prevalent for a decade in both K-12 education schools as well as higher education institutes. The traditional classroom education has been overturned. Traditionally, the teachers will deliver their lectures in front of their students with a planned teaching syllabus, some selective teaching aids like hard version textbooks, projectors, computers, etc, some selective classroom activities like Question&Answers, group discussion, presentation, etc. The whole process of teaching seems having no weak link, but the outcomes are not satisfactory. No clear sign of progress has been made. Differently, the blended learning has an innovative perspective to organize a course. Reversely, under the light of blended learning, the students will complete their assignment in the classroom assisted by their teacher and learn the lessons after class. Within the framework of blended learning, the students will be involved in three rotations: individual online learning; teachers' lectures; and small group project.

That means the students can learn the courses online at home, in the library or in the computer-aided room ahead of time with accessible wireless connection. With some questions and assigned project in hand, they come to the teachers.

For K-12 education, take the Public Summit School as an example, some learners will be equipped with a Pad to learn their online courses, some of them will have small group project-normally their assignment, and some of them will be selected to attend a mini course with the instructor explaining the learned knowledge. All the above mentioned procedure is conducted simultaneously and all the students will be immersed into these three rotations on each course. For higher education, take MIT for instance, the students can select their courses on will, and they do not have to attend their classes. They can learn the subject courses online and take the quizzes and exams online, if the result is satisfactory. They will pass the course with no attendance in classrooms. The whole process of learning can be monitored and tracked by their subject lecturers, the assessment means is also multiple except for the quiz and exams, some assigned project have to be completed within a small group face-to-face. If the students have any questions and confusions about the online learning and group project work, they can choose to attend the lecturers for consultation.

Convincing Benefits from Blended Learning

Review from the above two models, the convincing benefits the educator can extract from blended learning can be summarized as below:

1. Students can access the online courses at any time, at any place, at any pace, which stimulates the students' initiatives to study instead of receiving the lectures passively under a seat-time based system.

2. The students' data is recorded into the information system, and the subject lecturers are able to assign them the project work according to their different background knowledge, which increases the chances for the students-to-students and students-to-teachers face-to-face interaction as well as their knowledge diversity.

3. The traditional education cannot meet all the students' need but teach them with unified criteria, which turns to be that the top students cannot be fed fully with deeper and complicated knowledge while the fall-behind students move ahead with more difficulty even

want to quit. With the blended learning scheme, all the individual students can be assessed into individualized rank, and then all of them will acquire the competence with individualized tailored teaching syllabus.

4. With the data assessment including the students' learning results from the online courses, project performance, and others, the students' competence can be told quickly and continuously with effective way to replace the burdensome way to assign many teachers spend one or two days to grade hundreds of exam papers.

The Application of Blended Learning to MET

When it comes to the MET (Maritime Education and Training), the blended learning will also blossom in this field. Take maritime English as an example, the IMO Model Course 6.09 can function as a guideline for instructors to plan, organize and deliver a course. As for the detailed teaching syllabus, the IMO Model Course 3.17 can be referred for the seafarers' training from all rank-engineers from engine departments, officers from deck department, and Electric Technician Officers.

Alike with other subjects, the preparation work is time-consuming and tiresome for the implementation of these three rotations of blended learning. Accordingly, the curricular also needs consideration including the tangible online courses, selective project themes, and others.

Individual Online Learning Rotation:

The online courses of maritime English should be produced in compliance with the IMO Model Course 3.17 as well as each state member's national standards for seafarers' training. With the establishment of maritime English learning online platform, theses online courses can be imbedded into this platform together with various types of quiz, tests to evaluate their learning. Also the students' online learning process and results can be notified by the instructors.

Teachers' Lectures Rotation:

The professors will deliver their lectures aligned with syllabus of the online courses. Also the most frequency occurrence of the mistakes and difficulty points can be easily nominated from the database of the online learning platforms. The more detailed and emphasized explanation will clear the students' mind and face-to-face mentoring inspires the students' motivation to

learn more. The teacher functions more like a facilitator other than a lecture producer. As Liu Siyang [3] stated:"it is of great importance for teachers to stimulate students to participate in classroom activities with the model of 'question-inquiry' and give full play to their dominant position."

Small Group Project Rotation:

The learned knowledge will be valuable only when it is applicable into the learners' future study and job. After learning the courses online, the students will be assigned to complete their project starting from small group work: discussion, making plans, implementation of the project. According to the statement from Au Thien Wan [1]: "The course has a mix of students from various backgrounds, varying levels of work experience and maturity, and, possibly, different globally cultural backgrounds. Obviously, this contributes to student diversity, and consequently to their interests, expectations, and approaches to study."

The above stated three rotations will be implemented circularly. Ideally, a big classroom equipped with computers in section one for individual online learning rotation, round tables in section two for small group project rotation, projectors, blackboard and other teaching aids in section three for teachers' lecture rotation. Each section will be manned with assistance as well. The placement of the students will be determined by the teachers with the feedbacks of the students' performance from the online platform.

All the work cannot be conducted by a single teacher. All the teaching staff can be utilized more economic-friendly. The staff specialized in making teaching plans, they will work together to conduct the teaching syllabus; the experienced professors will deliver their lectures with the assistance of the colleagues with skillful computer knowledge to record and make the online lectures. The experienced laboratory assistances and instructors will assist in conducting a students' information management system to process the data of students' learning outcomes, and also provide the feedback to the teachers.

In terms of the blended learning, the students' competence can be monitored and updated contingently, each student share the equality of being educated with the acquisition of the specific competence. For the maritime English learners, immersed into these three rotations, their drawbacks will emerge at a quicker time and also be corrected afterwards. Meanwhile, the team work is also highlighted, as well.

Discussions and Conclusion

With some successful examples of the application of blended learning in schools and universities, the applicability of blended learning in MET should not be doubted either. The following advantages will be envisaged:

Firstly, one of the constituent sections of blended learning-individual online learning rotation will facilitate the seafarer learners studying the relevant high-quality courses at any time, at any pace anywhere with available wireless connections. And also, the continuous tracking and analytic system will record the learners' learning process and efficiency including their drawbacks and difficulties in specific subjects or tasks, which will assist the learners as well as the teachers emphasizing on improving their understanding and accomplishing the specific tasks for the realization of competency.

Secondly, another section of blended learning-teachers' lecturers rotation will fill up the gap where the learners still have confusion about the specific tasks after the completion or near-completion of the online courses. Attending to the teachers' lectures will help the learners review the learned online lessons as well as understand the difficult points since the teachers also attain a feedback indicating the difficult points and exercises the learners of majority have encountered.

Thirdly, the next section of blended learning-small group project rotation will make all the learned knowledge practical and related to the future jobs. To test the learners' capability of using the learned knowledge, this section will be an ideal way with other additional abilities to be acquired. With a selective topic the teachers have assigned, the small group with different backgrounds and personal skills will work together to make specific strategic plans for the completion of their project. In the process of conducting their project, their roles will be allotted naturally. In general, the concept of team work has been highlighted which is helpful in their future jobs without any doubt.

Although the benefits of blended learning are evident, the obstacles are also of clear ground. The fund of establishing a computer-based classroom with installation of a well-designed software and assessment system, the technical instructors to analyze the learners' data continuously, etc.

Hopefully, with the continuously revised and updated conventions and IMO Model Courses and all the experienced shipping industry educators and experts worldwide, all the obstacles will be removed and MET will move in a newer and more successful direction within a blended learning framework.

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On the Linguistic Qualifications of Maritime English Teachers

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Abstract

Maritime English falls into the scope of "English for special purposes" and is a theoretical and practical course based on language. On account of its nature, this article tries to dwell upon how maritime English teachers should understand and have command of the nature of language from the point of view of conventional, structural and social linguistics and the teaching approaches derived herein to "know what and know how" and become qualified in linguistics and capable of bringing linguistic theories and the teaching methodologies into the practice of maritime English teaching.

keywords: *conventional linguistics, structural linguistics, sociolinguistics, maritime English teaching*

Conventional linguistics and grammar-translation teaching method

Studies of language can be traced back to times of ancient Greece, when Socrates, Plato, Aristotle and Stoics rendered researches into the nature of language. They made discussions on the classification of phonetics, meanings of words and the components of sentences from the point of view of the sources of language and the form and meaning of language. Their theory of the language symbols laid a basis for the birth of structural linguistics. They made sure of the arbitrary nature of the meaning of words, which is still used to explain the relationship between the form and meaning for vocabulary and they isolated five types of words, namely nouns, verbs, conjunctions, articles and relative pronouns, which are still in use today.

Ancient Roman linguist Marcus Varro successfully distinguished the tense and voice of language in his book "On Latin" and put forth the meanings of past, present and future tenses, the forms of active and passive voices and the concept of perfective and imperfective forms, which basically determined the structures of modern grammar.

"The historical comparative linguistics that came into being in the beginning of the 19th century started linguistics studies in the real sense [1]." Its achievements are, (1) establishing the genealogy of Asian and European languages and investigating the relationship between the Indo-European, Sino-Tibetan and Slavic language families; (2) helping language teachers in understanding the manifestation and application of the languages; (3) giving birth to the grammar-translation method of language teaching.

The model of grammar-translation teaching method is, (1) "reading-explanation- analysis-translation-recitation [2]," emphasizing the cultivation of reading ability and application of grammatical rules. Its characteristics are, (1) conducting analysis and studies on language phenomena and grammatical structures, emphasizing the systematic education of vocabulary and grammatical knowledge; (2) having complete and systematic sets of grammar and treating grammar as the key point of language learning; (3) placing emphasis on the importance of mother tongue and translation ability, with the learning contents placed in sentence-making and translation practice in the examination items of translation between the mother tongue and target language; (4) emphasizing reading and writing with negligence of the teaching of listening and speaking; (5) attaching importance to the accuracy of language, treating the text as the material for vocabulary learning and grammatical analysis, using the mother tongue as the language of classroom teaching.

On account that the method reflects the "combination of structuralism to functionalism and achieves the combination between language ability and language use [3]," the grammar-translation method especially suits the teaching of vocabulary and structure, the leading components of maritime English. The maritime English teaching syllabuses of various maritime institutions show that the objects and requirements aim at educating and improving the reading ability of the students, enabling them to have command of understanding and translation of maritime terminologies and have the ability to read maritime English originals and translate English materials. The grammar-translation method is one to teach basic language knowledge and educate abilities in understanding, translation and writing. In the present practice of maritime English teaching, the leading method is explanation, to enable the students to learn the extensive maritime sci-

entific and technological knowledge, have command of vocabulary, learn to make sentences and write articles and improve the ability in understanding of long and difficult sentences and translation of articles. But these cannot be achieved without the training and practice of grammar and translation. In fact, most maritime English teachers unconsciously and substantially use the grammar- translation method in the teaching of maritime English. They require the students to read the text aloud, explain the meaning and use of the vocabulary, conduct analysis on the language structure, teach the special sentence patterns, translate the paragraphs and discourses, give translation of the phrases and sentences, require the students to recite the texts, prepare the examination papers of blank filling, reading comprehension, translation and writing, with emphasis paid on accuracy and correction of mistakes of all forms.

This is because, maritime English pays greater attention to the accuracy of language in comparison with other specific forms, requiring the standardization of the language, precision of the comprehension, explicitness of concepts, strengthening of logics and strictness of wording, "to perform objective description of facts and theories with accuracy and philosophical language that meets the standards [4]," to prevent the severe results caused by failure of language communication. The Manila Amendments to STCW Convention has put forth clear requirements for the English level of oceangoing seafarers, Section A-II/1 requires "Adequate knowledge of the English language to enable the officer to use charts and other nautical publications，to understand meteorological information and messages concerning ship's safety and operation ，to communicate with other ships, coast stations and VTS centers, Table A-VI/1-4 requires the seafarer to "understand the principles of ，and barriers to ，effective communication between individuals and teams within the ship,"and to have the"ability to establish and maintain effective communications" and the "ability of correspondence writing of seafarers of various ranks [5]."

What calls for clear understanding is that the grammar-translation teaching method is not opposed to the nature of communication of a language. From the view point of application, translation and writing are the important contents for business communication; from the viewpoint of vocabulary, maritime English requires the students to have command of a large amount of special words that are different to general English; from the viewpoint of grammar, language communication requires the students to communicate with correct structures and tenses. When the students have a good command of words, they have the most basic ability for communication; when they can correctly use the structures, they can communicate with accuracy and fluency and when they have the ability in translation and writing, they are able to communicate in vari-

ous levels, these meeting the requirements of qualification education. In addition, as the most conspicuous characteristics, English vocabulary carries the external marks for the parts of words, convenient for memory and use and English sentence patterns stress on the spacious scaffolds in that "they closely combine the elements of the sentences to form a cluster with the relation words [6]." Therefore, it is incorrect to neglect the teaching of vocabulary and grammar. Unfortunately, modern maritime English teaching does neglect the teaching and practice of vocabulary and grammar while emphasizing that of listening and speaking. This will no doubt undermine the basic language abilities of the students and reduce their activeness in language learning.

The work that needs to be done is, we need to earnestly and systematically learn the essence of traditional linguistics, study the environment and conditions for the practice of grammar-translation method and achieve flexible use of the method in the teaching of maritime English.

H. D. Brown, American expert in applied linguistics, concludes that, in the practice of grammar-translation method, the precise grammar rules and extensive vocabulary knowledge make the language input easier for understanding, enabling the foreign language learners to systemize the language phenomena that contact with and manipulate the language in various levels; the grammar-translation method can help the foreign language learners to affirm or negate their conscious or unconscious hypothesis that they make in the process of learning and distinguish the differences between the mother tongue and target language; and the grammar-translation method can help them to internalize the structures of the target language so as to improve their expression of the foreign language they are learning.

Maritime English teaching certainly is not a matter of adhering to one sole method through to the end, because the grammar-translation method has its limitations and is not the solution to teaching. For example, it is of less help in improving the listening and speaking of the maritime English learners. In this case, we need to resort to structural linguistics theories and the audio-lingual method derived here.

Structural linguistics and audio-lingual teaching method

Structural linguistics has inherited and developed the semiotics theories of Ferdinand de Saussure and conducted structural studies and analysis to make it better understood, commanded and

applied. It classifies the body of language into various levels for analysis and studies and observes the overall change of the language. In its three divisions, the Prague School emphasizes the functional studies of language structure, stresses synchronic language studies, recognizes language as a value system for studies, analysis and achieving the functions and conducts research into the forms from the functions of a language. The Copenhagen School regards the language as a social system, performs synchronic studies on the language structure and holds that a language is a structural system formed by the relationship of the components, while American structural linguistics lays stress on the description of structural forms and recognize language as a structure whose components include phonemes, morphemes, vocabularies, phrases and sentences which are regulated by a fixed system and therefore the learning of a language is that of the various structural components within the system to "constitute a language integrity and have command of the rules that regulate the structural system [7]."

Structural linguistics enhanced and developed language teaching and play an important role in guiding the practice of language teaching by stressing that teaching should be student-centered to get the student into learning and thinking and emphasizes the guiding role of teachers to get the teachers into learning to teach and introspections. Structural linguistics are extensively used in language teaching and bring forth the audio-lingual teaching method by stressing the principle of the priority of speaking in the description of language and the practice of language teaching.

Structural linguistics regard language as a hierarchical and complete system composed of phonetics, vocabularies, phrases and sentences, etc and categorize language skills into listening, speaking, reading, writing and translation. The teaching characteristics of structural linguistics include, (1) the English language skills are listening, speaking, reading, writing and translation with the priority of listening and speaking and the assistance of reading and writing; (2) sentence patterns are the basic components of language and the purpose of language learning is to command and use various sentence patterns; (3) language teaching is a process of habit forming via "stimulus-response" and the practical activities of imitation, practice, repetition and sentence making should be stressed in the process of teaching; (4) the aim of language teaching is to improve the language ability of the students not the teaching of language knowledge; (5) the target language should be used and visual means and language environment should be created.

The audio-lingual teaching method stems from linguistic and psychological theories and suits the learning psychology and habits of the students in that it categorizes the language system into

various levels and structures, which is convenient for the command by the students and its principle of speaking priority is useful in solving the problem of "dumb English." It emphasizes imitation and practice, which is convenient for the students to turn the knowledge into habits to achieve the goal of familiarization. The learning of sentence patterns is focused on vocabulary, which suits the learning pattern of the students and it creates a good language environment in that it uses the target language in the process of teaching and learning. Therefore crash course textbooks such as "Lado English Series," "English 900" and "English for Today," etc, compiled following the guidance of structural linguistic theories were extensively used and widely accepted.

Maritime English is composed of daily and professional communication and STCW and SOLAS Conventions stipulate that the English level of the duty officers should enable them to conduct communication with seafarers and staff members from other ships, land stations with different language backgrounds, with adequate capabilities in language and communication. ISM regulations place stress on the importance of using English in shipboard operations and maritime safety. Therefore, teachers should learn and study, under the guidance of structural linguistic theories, to compile oral English textbooks that suit the learning of the students, in accordance with the maritime practice, reflect the authentic target, situation, language and task [8], and conduct rational course design to reflect that the course design suits the special seafaring needs, the teaching contents will be related to the maritime profession and activities and the phonetics, vocabulary, discourse and style will fit the "special activities at sea [9]." Teachers should use teaching methods that are different from the general English, study and practice displacement and bilingual teaching and reform the teaching methods to reflect the principles of, needs analysis of course design, relativity of course contents, practicality of objective, adjustability of teaching methods, systematization of teaching process, periodicity of teaching implementation, three dimension of textbook compilation and "research-base of students learning", in maritime English teaching [10].

The audio-lingual teaching method, however, is by no means "all perfect," in that, the process of "stimulus-reaction" can only reflect limited and mechanical language patterns and the students will not be able to find the complete equivalence in practical life; the lack of grammatical rules in sentence patterns and semantic analysis in vocabulary teaching result in the students' incomplete understanding of the language system; the repeated practice and memory do not give full play to the students creativity and do not improve the students integrated cultural qualifications; the method is teacher centered, which will not arouse the student participation and the

language practice is removed from the real environment and background will not create the "natural language communication competence [11]" of the students.

Most teachers find in the process that the teaching of oral maritime English should reflect the actual situation of onboard communication and that the accurate expression and fluent oral English is merely the basis for successful communication. What is of greater importance is to teach the students to produce correct utterances in the correct place at the correct time. This needs to put the cultivation of students' communicative competence in relative situations, take reference from the communicative approach derived from the sociolinguistic theories and conduct study and practice in the interaction between language and situation.

Sociolinguistics and communicative approach

Sociolinguistics is a science to study the relationship between language and society, with its core placed on that between the language use and users and it observes the language from the "points of various social sciences [12]" (including sociology, anthropology, ethnology, psychology, geography and history, etc), sees the language as a social phenomenon and studies the language against the background of society.

Sociolinguistics has four main branches, social dialectology, represented by Labov and Trudgill, makes studies into the variation of language; linguistic sociology, represented by Fishman, makes studies into the phenomenon of bilingualism; ethnography of communication, represented by Hymes, describes the use of language from the point of culture and social psychology of language, represented by Lambert, Giles and Smith, that makes studies into the adaptability of language.

The birth of sociolinguistics represents the further development of language studies. By the 60's, population migration and national amalgamation caused the attention in the aspects of politics, culture and society and the social and cultural entities of language became the emphasis of linguists. The self-evolution of language enhanced the appearance of new theories. Meanwhile, transformational and generative linguistics attracted the interest of linguists, while the research results of psychology began to be applied to language teaching and studies. Against a background like this, sociolinguistics came into being and gave birth to the communicative teaching approach in the field of language teaching.

Traditional and structural linguistics conduct static studies on language, giving emphasis to the form of language but ignoring the situation in which the language is used, while sociolinguistics studies the language and the rules of language acquisition from the points of the interaction between language and society, which opens a more practical and wider horizon for language teaching. When the research results of sociolinguistics are put to use in language teaching, people begin to realize, (1) the learning of English is inseparable from the core vocabulary and structure of the language, which in turn, produces the concept of "language core" and results in the appearance of the theories and practice of "College Core English" Band-4 and Band-6 examinations (the most popular and standardized official examination to judge university graduates' English level in China), exerting great influence for nearly 30 years and making contributions to the improvement of English levels in China; (2) the extension of English language common core is English for Special Purposes, concerning the actual industries and including Legal English, Medical English and Maritime English, etc. These are not to be replaced by "College Core English." ESP is an approach of teaching and it tells us that any language has its scope and purpose of application and the clearer the scope and purpose are, the more practical the teaching is; (3) although the English teaching practice in the past used to emphasize the code and structure, yet failed to go further into the situation in which the language is used, causing the mechanical and unsuitable use of English and the students were at a loss for what kind of the language forms and structures were to be used in different situations; (4) the purpose of language teaching is the use of the target language to train the students to have a command of the "rules of speaking" so that they can make correct responses in various situations; (5) the acquisition of a language is not to be separated from its culture and in the process of teaching English as a foreign language, cross-cultural communication is indispensible.

The communicative approach lays emphasis on the learning of English in the communication between teachers and students and the teaching effect depends on the interaction between teaching and learning. Its essence is that students will participate in the actual situation of communication after they have acquired the basis of language knowledge and improve their expression in the process.

Maritime English has all the characteristics of ESP and the shipping industry has provided the natural situation for the use of maritime English. Therefore, in the teaching of maritime English, the study and use of the communicative approach bears special meaning. Importance should be attached to the improvement of communicative competence in the teaching of maritime English

Sociolinguist Dell Hymes believes that, “the communicative competence includes the integration of the knowledge in the function of actual communication using the basic grammatical rules and the language and the guidance on the principles for speech and communicative functions.”

The final purpose of maritime English teaching is business communication and the students’ communicative competence includes not only the grammatical entity of English, i.e. the correctness of their grammar, but also the acceptability of their English, the “feasibility in culture and appropriateness in situation [13].” This falls in the coincidence of the present dilemma, in that, teachers find, after a period of teaching, that the problem lies not in “cannot say,” but “unable to say.” This is the center for the studies of sociolinguistics and sociolinguists believe that, language learning can not be separated from the situation of social culture and language teaching should aim at improving the students’ communicative competence, including, (1) knowledge competence, the ability in the correct use of phonetics, grammar and vocabulary; (2) language competence, the ability in the correct use of varieties and functions of the language; (3) speech competence, the ability in the expression of the thoughts by using the target language and (4) strategy competence, the ability in starting, maintaining and ending the talk by using the communicative techniques.

Therefore, in the teaching of maritime English, the teachers should, (1) make adequate investigation and research of that typical part of English used in the practical operation of the shipping industry, provide and summarize the vocabulary and structure with practical value for the students. “SMCP” and “IMO Model Course 3.17 Maritime English” are useful materials for compiling maritime English textbooks, with great reference value; (2) combine the language function and notions in the use of textbooks and process of teaching to cultivate the competence of “doing by using the language” of the students, such as contacting the pilot, organizing fire drills and writing accident reports, etc; (3) create situations in which English is used and organize teaching materials in accordance with realistic shipping operations, so that the students will practice their language communication in the situation, such as the vocabulary and structure used in life saving exercises, the fixed use in mooring and unmooring, etc; (4) teach and take the students to practice the expression of connected thoughts using the communicative means, such as complete discourse of introduction, discussion and summarizing, etc; (5) teach the students to influence others via the means of language, for example intervening in a conversation, changing the topic, etc.

2. Importance should be attached to the influence of society and culture in the teaching of maritime English

Language is an important component of the social culture of a certain nation and it reflects the cultural characteristics of the nation. The social culture of maritime English reflects not only the culture of English nationality but also nautical culture. Therefore, the teaching of maritime English should include not only the teaching of language knowledge but also the teaching of maritime culture closely related to the target language and working environment to improve the application of the language and the appropriateness of communication. As Fishman puts it, sociolinguistics investigates "who talks to whom in what situation and using what language[14]," because the teaching content of social culture mainly includes, the world view, sense of worth, the social characteristics of language behavior, non-verbal means of communication and acceptable communicative rules. Hymes believes that, "to exercise effective communication, the students should command, in addition to language forms and rules, who, what, how, when and where and how long to talk (to) and any breaches will result in failure or conflict of cross-cultural communication[15]," such as, difference in social life, address and greetings, etc; difference in sense of worth, privacy and taboos, etc; difference in cultural content, humbleness and civilities, etc; difference in daily communication, hand-shaking and posture, etc; difference in body language, eye contact and distance, etc.

3. Importance should be attached to the use of discourse in the teaching of maritime English

The expression of a language is the vocabulary and sentences, but sociolinguistics believes that the conveyance of the complete meaning is through the discourse in certain contexts.

A discourse sees the text as a complete entity, starts from the levels of the discourse composed of complete meaning and expression, combines the expressed communicative function and notion and centers round the details and layout of the main idea, paragraph meaning and plot development, etc, so that the students are able to have hierarchical command of the basic language phenomena of vocabulary, sentence patterns and grammar points, etc to further their understanding of the communicative function of the language and explore their communicative competence via the use of the language.

The purpose of maritime English teaching is to train the students' competence in business communication and this determines that the classroom teaching of maritime English should be organized in the discourse level, from the entirety of the text to the detail of language.

Harmer believes that teachers practicing the discourse method should conduct the design as follows, (1) infer the contents, teach the students to infer the contents of the discourse on basis of the known information and compare the results in the process of teaching; (2) extract the details, teach the students to organize the structure of the discourse in accordance with the information provided; (3) summarize the main idea, teach the students to summarize the main idea in accordance with the title and topic sentences of the paragraphs; (4) infer the viewpoints, teach the students to infer the viewpoints and attitude of the author in accordance with the understanding of the style and meaning; (5) guess the word meaning, teach the students to guess the meaning and function of the new words in accordance with the context; (6) recognize the functions, teach the students to learn the development means of the paragraphs and recognize the marks of the discourse and context in accordance with the model and wording of the discourse[16].

Hence, the course design of a text on marine diesel engines can be conducted in accordance with the following idea, (1) discuss the function of the diesel engines; (2) study the classification of diesel engines; (3) compare and contrast the advantages and disadvantages of various diesel engines; (4) study the repair and maintenance of various diesel engines; (5) guess and learn the relevant vocabulary.

The advantage of the teaching model with the discourse as the center is that, the teaching using the macroscopic semantic analysis helps in "overcoming the abuse of isolated explanation of language form and benefits the students in effective and appropriate use of the language [17]." The students are immersed in the major context of "diesel engines" and their thinking is closely tied with the learning contents. They no longer merely care about the meaning of words and are limited in the partial understanding, but focus their attention on the overall description of the diesel engines from their subjective angle. The teachers and students cooperatively develop their thinking as well and create a synchronized classroom atmosphere. The students focus more on the learning contents instead of the language form and they will not be jammed in the meanings of individual words; actually the words learned in this situation are more impressive. The situation is more helpful in establishing the students' sensitiveness to the language form related to the contents of learning, i.e. the sense of language.

The teaching of discourse using the communicative approach helps to build up the communicative competence of the students, stimulates the activeness and initiative of the students in language learning which will gradually develop into a student-centered classroom, benefits in improving their reading habits, improves their ability to think independently, cultivates their ability in analyzing, inferring and integrating the learning materials, enhancing the overall level of language learning and helps to create the communicative situation in which language is learned and practiced.

Conclusion

The above analysis shows that linguistic studies expounded the nature of language, explained the common views towards language, developed the theories of language teaching methods, opened up the practice of language teaching and improved the effect of English teaching.

One of the important purposes of studying linguistic theories is to reveal the regulations of maritime English teaching and construct the teaching models characterized in maritime English. Therefore, the teachers engaged in maritime English teaching, either language teachers or navigational teachers, need to learn the linguistic theories and practice the language teaching methods and take reference from linguistics and teaching methodology to establish the peculiar models of maritime English teaching.

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Turning “Salted” into “Needed”: the New Model Course 3.17

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Abstract

This paper reviews the acceptance of the 3.17 Model Course in IMO and discusses the approach to integrate maritime knowledge into general English and especially on how to make the task-based 3.17 course more relevant to the competence requirement as set by MARPOL 2010. It attempts to explain why inserting more specialized maritime knowledge into the old version of 3.17 is a great step forward to turning the already “salty” ME (Maritime) into a “needy” ME. The new 3.17 echoes the call by the globalized shipping industry for a more precise problem-solution communication competence.

keywords: *technical communication; Maritime English; ESP*

Introduction

The call for crew on board to use English effectively in communication is surging as an increasing number of shipping companies find that crews are multi-lingual globally, a trend that has changed the picture of crews belonging to one nationality. Furthermore, the general secretary of the IMO pointed out several times that human elements are the key factor to safety and security. Failure to communicate effectively is one of the direct causes of accidents, particularly when the ship is to moor, dock, be towed or load, which poignantly points at the time when communication is made over board, that is, communication exchanged outside the ship where the crew is on. This finding puts the issue of receiving standardized ME (maritime English) at the core.

After almost one year’s innovative planning and revision, the new version of Model Course 3.17 presented to the IMO was successfully passed in the HTW 94 conference in 2015. This new

version, structurally divided into two parts, GME (general Maritime English) and SME (Special Maritime English) definitely takes several factors into consideration. Firstly, the high demand for competent seafarers in using English to communicate, more than that, to solve specific problems through communication. Secondly, in the context of this industry demand, seafarers can feel improved and upgraded via a well-designed system that can ease their concerns and worries about incompetence, and eventually lead them to the destination. Thirdly, all seafarers are supposed to move from GME to SME. Fourthly, seafarers can reinforce their maritime knowledge systematically in the immersion of English communication.

By this modification and arrangement, the new version corresponds well to the new requirement of STCW 1978, which is to "meet the requirements of the STCW Convention, 1978, as amended, and the minimum standards in the STCW Code".

Literature review

Though several papers discuss the importance of adapting ME to industry needs, few of them explore how to present ME in an appropriate manner that can cover future industry needs for qualified seafarers. Cole etc. (2007) describes the various types of Maritime English instructors presently employed at higher Maritime Education and Training institutions worldwide, ESP and social demand. In "A Basic Study on Maritime English Education and the Need for Raising the Instructor Profile", James (2010) studies "what type of English instructor is best suited to help cadets have at least a basic grasp of Maritime English communication". Zhiyi Fu (2008) discusses the possibilities of using translation in ME education. "Teaching Maritime English: A Linguistic Approach" focuses on how new learners can adapt to the maritime academic career linguistically. (Demydenko, 2012).

These papers made pioneer research on the relations of ESP and ME, and it is truly significant for them to arrive at the conclusion that ME should be classified into ESP. Methods of ESP education should be referred to when ME wants to be further developed. Yet regrettably these papers rarely explore how to implement the integration of ESP to ME.

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Increased or squeezed – Personal language in Multi-lingualism?

According to the latest Maritime Review 2015 by UNCTAD, 85% of world commodities are traded with the aid of maritime transportation, down from 92%. The drop is a sign that other transportation modes begin to reduce the share of the shipping industry. This drop forces the shipping industry to cut costs, including labor costs to maintain their profit or even survive on a market plagued by overcapacity. As a consequence, low cost labor resources came into the market and the labor market is becoming multi-nationalized. A report by the Seafarers' International Research Centre of 2001 is most self-evident.

table 1

Ship	Number of nationalities	Number of native speakers
1	2	0
2	4	7/36
3	2	0
4	3	14/37
5	3	1/7
6	4	14/29
7	3	0
8	3	0
9	6	4/25
10	5	2/34
11	4	0
12	6	1/7
13	14	0
14	5	0

source: Seafarers' International Research Centre (SIRC) Cardiff, UK 2001.

Though the data was collected almost a decade ago, the situation seems to be clear with the development of globalization. It should be noted that this data is not as conclusive as its subject are native speakers of English on one ship. Multi-lingualism is more complicated than the identification of using English by crews of different nations who are on one ship. It should include communication between ships, between ship and on-shore staff, and etc.

We conducted a research on the content of crew communication on several ships of different nationalities (a survey using questionnaires). We found that the content bears on certain topics, like nation, love, emotions, religion, food, culture of one nation, accommodation etc. We made these topics into two groups:

Physical------food, accommodation, personal identification, daily necessities etc

Spiritual------culture, religion, feelings.

The communication of each crew in terms of language is indicative of strong personal attributes. A crew members may choose to use English that is characteristic of his nation despite it is right or wrong. But except these personal attributes, he is likely to choose the standardized structure or word to express his needs and wants. For example, African crew members tend to answer “no problem” before he seriously considers whether there is a problem waiting for him.

Interestingly the report shows that those who consider themselves incompetent in English are more willing to communicate with others superior to them, of course in their minds, but frequently waiting for others to break the ice. They are poised to learn by using Maritime English, a common phenomenon of passiveness on board. But amazingly it does not affect much the smooth operation of the ship as most of them strictly observe the key words in their exchange of information concerning technical knowledge. So in general, the use of Maritime English turns to be more technical information-focused (TI-focused). See table 2.

This survey shows that seafarers’ caution rate increases when their duties become more technically serious and professional. No one likes to commit mistakes caused by communication. Therefore the best approach to crews on board is to minimize the risks of making a mess by observing the universally acknowledged language or reducing the possibility of misunderstanding. In other words, personal language is a kind of barrier to effective technical communication.

table 2: Use of personal language at different levels

Use of personal language	General topics	Technical exchange	Orders
English	strong	strong	few
GME	medium	few	slight
SME	slight	rare	rare

Notes:"strong" means the user almost uses personal language in every sentence.

"medium" means the user uses personal language half of his speech.

"slight" means the user only uses personal language when he is forced to do so.

"few" means the user uses personal language no more than 1/5 of his speech.

"rare" means the user uses personal language no more than 1/10 of his speech.

As mentioned, seafarers consciously stay away from using personal language in technical communication to avoid potential mistakes beyond their control, sometimes generated by too much personal language, sometimes by their inability to use technical communication flexibly. This self-consciousness is accompanied with deep worries of incompetence in times of crucial decisions, which are a risk to ship safety and security and should be overcome. Increasing the technical communication competence is more pressing against the de facto multi-lingualism, and it is challenging as well when industry demand actually increases.

"Salted" to "needed"

It is definitely sharp that ME is tagged with "salted" to indicate its marine or maritime characteristics, but we are not so sure who actually first used this tag. ME, by its very name is bound to be salted or marinated. Almost everyone will hail this intelligent inventive word when they come across the shipping industry for the first time. It seems that "marinated" is such a perfect simile that leaves no room for a second thought about any possible deeper exploration. But this term is hazy and vague, given its range and depth. Will the use of a few marine or maritime related words or phrases turn general English into "salted"? Or will the "salted" ME be the same as the English used by today's shipping industry? These questions deserves careful study.

It can be seen that these questions are not intended to deny the distinct feature of ME---"salted", but rather to draw attention to its connotation, the extent, range, quantity, users etc. From the perspective of diachronic linguistics, "salted" also evolved from the 15th century. For example, *galleon* used to be a very "salted" term but not many people use it any longer now. This example shows that "salted" is just not enough for ME; it must keep pace with the development and need of the time.

As mentioned in 3, personal language is squeezed out of technical communication as a result of industry demand. This fact clearly symbolizes that the old "salted" ME, which deals much with the non-technical situation is falling behind the actual demand. The shipping industry requires seafarers and officers to cope with technique-related issues so as to avoid the risks of accidents. But the multi-linguistic situation on ships just complicates the matter because of the involvement of personal language. On one side, multi-lingualism sees the rise of diverse personal languages. On the other side, technical communication squeezes the personal language out of the duty performance. These two contradictory forces dampen the whole situation in the surge of multi-lingualism and higher technical demand. Therefore it is concluded that a slightly "salted" ME is not sufficient to solve the contradiction. The old "salted" ME has to be expanded, upgraded and "re-marinated" to incorporate the need from the industry. In one word, ME has to add "needed" to "salted".

The new model course 3.17

The new model course 3.17 is framed out upon the previous findings. To reflect the term "needed", the new version added SME (navigation, engine and electrics) as a fairly professional part. Almost all the working procedures concerned are listed in detail in the syllabus so that seafarers can have a systematic practice and knowledge in the immersion of English. This demand-oriented design, though heavy-loaded for trainees, provides much confidence in and flexibility for seafarers to their competence as the subjects are of a holistic nature.

In terms of pedagogy, it uses mode or typology methods to simulate/motivate the trainees' competence. To precisely upgrade the requirement level, careful consideration is given to the different levels of trainees. Tasks are classified not only according to content, but also to the intensity of expected practice. As a result, a table of verb choices in the model course revision is worked out. See table 3.

More importantly, the new model course 3.17 adds oral and listening parts to each task. This is because most seafarers find listening and oral practice is what they need most. Listening and oral communication is the tool to break the ice and the most effective way to cope with emergent situations.

This immense supplementation of holistic technical SME mirrors of industry deeds, consolidates the technical communication which are scattered in different areas and textbooks, and provides shield from failed acts caused partly incompetent technical communication.

Conclusion

The revision of Model Course 3.17 is a huge project that has taken almost one year and a half. As it is intended to echo the industry needs, it supplements and deletes some parts of the old version. This paper, through detailed analysis of the structure and content from the perspective of ME, proposes that technical communication plays an increasing part in the successful implementation of seafarers and officers' duties while personal language is reduced. It also finds out that multi-lingualism is a trend that has a twofold impact. One is that multi-lingualism goes against the efficient and effective communication in the context of industry demand. The other is that multi-lingualism is a de facto, which can be solved by adding the weight of SME instead of GME, GE, because any change has to follow the tide of industry needs. This paper concludes that the new model course 3.17 fulfills this task on the whole.

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table 3: word list for verbs

NO.	Capabilities required by model course 3.17	Understanding	Obtaining	describe	Interaction (no)
1	Basic requirements 1 passive 2 simple	understand	Listen	pronounce	do Follow instructions
2		comprehend	read	describe	Repeat share
3			Refer to Locate the information	express	memorize recite learn by heart
+					Practice
++					
	Intermediate (basic ability +knowledge) 1 convey 2 understand 3 demonstrate 4 ask	Understanding-- explanation	Obtain --specific info	describe-- Role play (one--more)	Action --interaction/response
1		interpret	Listen to	Describe	coordinate
2		explain	find Ask for	demonstrate	respond to
3			recognize	Illustrate （有图的） draw	react to Reformulate Construct
+			consult	Simulate (单人模拟)	Perform...as instructed by ...// Inform...of...
++			Scan read		

	Advanced Free communication Team Question judge	Understand --brainstorm	Obtain --specific info (fast)	Describe --interactive describe	Act --judge/decide
1		brainstorm	Obtain ...from... Acquire...from... Skim read Consult verbally about Request for ...	Exercise role-play with Respond to Process information	Judge Evaluate Assess Pool information
2		debate	Select Pick out	negotiate	advise
3		negotiate	Single out ...pertinent to...as required Identify...from...on scene		determine

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Intercomprehension workshop: understanding unknown languages (workshop)

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Abstract

"Understanding a text is a special case of understanding the world" (de Beaugrande, 1989). Understanding other people's communications, whether spoken (discourse) or written (text), implies listening carefully or reading attentively whilst actively using the most important ingredient of our communicative competences, namely cognitive recognition, i.e. that which we already know. An underlying assumption is that our native languages are the true homes of our respective cultures and hence that we become more culturally tolerant and enriched if we appreciate other languages. The complicated multi-ethnic, multilingual makeup of current merchant marine crew requires the professional seafaring officer to have advanced and specific linguistic and (inter)cultural skills when dealing with the multilingual crew. In a community where English dominates and competence in Maritime English serves professional purposes, thus ensuring safety on board, the ability to accept that colleagues use their own languages where it is practical to do so can only serve to accrue linguistic and cultural capital.

This workshop aims at clarifying the various dimensions of understanding by using intercomprehension. Participants in the workshop will try to understand languages they have never studied before in practical situations where language is used in different contexts, some maritime. With reference to the EU-funded INTERMAR project (www.intermar.ax), the activities are of an 'icebreaker' type, meaning that they can be used for teambuilding purposes in international working environments.

keywords: *cognitive recognition, intercomprehension, INTERMAR, icebreaker, communicative competences, cultural capital*

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"It is a fact that English remains the professional maritime language, but in many situations, good communication fails due to a single-minded belief that anything that is not English is incomprehensible." (INTERMAR, 2013)

Introduction

For a football team to excel it is essential that each player communicates well with every other player. This is called 'talking', but it involves much more than verbal communication, mainly body language, position and direction of movement. 'Talking' is mutually understood because the overall intention is shared by everyone in the team. The opponents might not understand all the details because they are not familiar with the personalities of individual players and are hence unable to decode them efficiently (INTERMAR, 2013).

Obviously some players will assume a more central and verbal role in the communication and some will be quieter, but a match is a very complex phenomenon and even the latter need to inform co-players now and then of their intentions or warn others of the opponents' objectives. Today most high level football teams include players from several different countries with different native languages. So do ship crews.

Purpose and rationale

The purpose of this intercomprehension workshop is to allow participants to see for themselves how communication works in practical situations if English is not used all the time. The idea is that it is not necessary to require a high (or sufficient) level of competence in English for crew members to communicate in INFORMAL situations, because communication is redundant and rich, allowing people to understand intentions and even details of utterances in languages they have never studied.

This is important because many crewmembers do not have the sufficient English skills postulated by the IMO and company policy documents - yet they are employed to work on ships in international trade (Trygg Månsson, 2014). It may not be realistic to hope for a major improvement in English language skills in the near (or distant) future, especially when it comes to formal language training. Yet it is possible to work for substantial improvements in communication

on board. Intercomprehension is a way to remove some of the inhibitions related to insufficient proficiency in English.

Indeed, intercomprehension changes what is often described as the "problem" of multilingualism into a world of opportunities for learning languages and accessing competences amongst co-workers from very different backgrounds. Not only do crewmembers come from many different countries, but also from many different socioeconomic groups. This plays out as different learning styles and varying levels of difficulty to benefit from formal language training. Intercomprehension helps to raise awareness of less cognitive and more natural ways of learning languages. (Hutchison, 2015)

What stops people from trying to understand foreign languages is many times a learned conception of how languages are trained. This conception is related to conventional school methods and "a single-minded belief that anything that is not English is incomprehensible" (Intermar, 2015).

Intuitive comprehension and reasoning

"Jumping to conclusions is efficient if the conclusions are likely to be correct and the costs of an occasional mistake acceptable, and if the jump saves much time and effort" (Kahneman, 2012).

Our mind has two ways of understanding. Intuition works effortlessly and is based on familiarity with situations and phenomena. Reasoning takes much effort and is slow, but can handle new (combinations of) phenomena (Kahneman, 2012). This simple fact is too often disregarded in foreign language training. In addition it is likely that students from families that are not exposed to higher education rely more on the intuitive understanding than on deduction, at least this is indicated by studies of the linguistic codes of the working class. "The way language is used within a particular societal class affects the way people assign significance and meaning to the things about which they are speaking" (Bernstein, 1971)

The effortlessness in intuitive understanding mentioned here is what this workshop aims to exploit. If the languages used are of the same family or contain numerous loan words it is expected that understanding takes place more easily. Nonverbal communication and context provide the rest of the cues.

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Workshop activities

In the following a number of simple intercomprehension activities are described. The purpose of these is to allow participants to experience first-hand what it is like to try to understand the meaning of utterances in languages they have never learned. This experience will lead to an improved idea of the potential of intercomprehension and of how languages can be learned.

Lost in the fog

One participant is blindfolded and another one is given the task to guide the first across the classroom floor past a number of obstacles so that none of them is touched. The obstacles can be anything that is at hand, such as papers, shoes, cups, pieces of string, etc. The participants are encouraged to communicate a lot and give a lot of feedback - in their native languages. What typically happens is that the blindfolded person understands some cues and others not.

When about to make a mistake the guide needs to prevent the "accident" by calling out. In the end the blindfolded person will have somehow managed to walk through the trail. Clearly the oral interactions with the guide will have played a crucial role. This is obviously due to the fact that there is a lot of information other than the purely verbal in voice utterances. It is also because it is fairly clear what the utterances could possibly mean in this type of limited context. The following activities build on the same principles.

My family and friends

Each participant brings a photograph of her/his family and/or friends. In small groups the individuals are pointed out and described (in a language other than English) as to basic information such as name, age, domicile, profession and interests. Other group members are supposed to ask simple questions in their own language regarding the persons in the picture.

The information is recorded by one group member as a list of keywords. In order to enhance the intensity of the communication and to promote the acquisition of a few words in a new language, participants are encouraged to repeat keywords uttered by the person describing the photograph.

A map of my country

A map can be used very much in the same way as the photograph in 3.2. The main features of the map will be natural phenomena and names of places. These are to be described a little using adjectives such as high, wide, or big. The person who describes and points out things can also say something about what s/he thinks about the places and if s/he has been there or not. Other participants should ask simple things about the places in her/his own language.

One's own country is an interesting thing to talk about for most people since we all seem to enjoy sharing information about our own country if there are people around who want to listen. Even quite shy people tend to forget their shyness if others show interest in what they have to say.

A normal day

A dial of a clock or a list of the hours of the day is used here as the physical object of discussion. In small groups participants ask each other what they normally do at certain hours of the day. One good thing here is that the verb tense will be the present which is the easiest in most languages. As in the other activities it is recommended that the others repeat what is said and that one person records what is understood in the form of a list of keywords with one entry for each hour.

This way participants will get to know each other better and will notice differences in habits, some of which are cultural.

Small talk

Participants write up the equivalents of Hello, How are you? Fine thanks, and See you later in their own language (if necessary transcribed into Latin letters). They show each other the words and teach each other how to say them, including the correct intonation. Then everyone is supposed to use these phrases as they greet each other. One language is dealt with at a time.

As our mother tongues are keys to our "hearts" (deeper layers of our identities) participants are going to find hearing these simple greetings in their own languages pleasant. The pleasure in itself is a powerful motivator for continued communication and hence learning, both about the other person and her/his language.

Bad English

Participants are asked to give an example of a phrase in English with a typical mistake made by native-speakers of her/his language. The other participants are asked to imitate the phrase many times until they sound like a native.

The idea is that there is a lot of information about the native language inherent in the mistakes. This is supposed to be discussed in the group. A few pieces of information about the rules of the native languages can facilitate the understanding of so-called 'bad English'.

Conclusion

This workshop is very practical and aims at strengthening awareness of nonverbal aspects of communication such as background knowledge and cognitive referencing in the decoding process of verbal utterances. Silence among group members can be due to many reasons. It is documented in the literature that bridge team communication can be compromised by an officer electing to remain silent (Pyne & Koester 2005). On occasion this has been due to uncertainty about use of the language, namely English. Promoting interaction in more languages than just English is one way of increasing communicative awareness and reducing the risk that silence is involuntary. By celebrating the presence of multilingualism in today's shipping, social cohesion is strengthened on board ships. This will reduce misunderstanding due to lack of knowledge of the other crewmembers' cultures and personalities.

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Creating a Maritime English Board Game (workshop)

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Abstract

Proficiency in Maritime English sits on a substantial lexical basis. Indeed before a mariner can even begin to act through communication by use of the English language, he/she needs to learn (i.e. memorize) a significant number of new words, some of which are uncommon even to the native speaker. Ship parts, standard position indicators, or VHF pro-words, to name only a few make up a whole new vocabulary, which the ME learner must master first, before being able to re-use it in sentences compliant with the very specific SMCP grammar. Research has shown that repeated quizzing may be a key factor in remembering lexical items. However, repeated quizzing may be tedious to learners and is therefore difficult to implement. One possible solution to overcome this difficulty may be the creation of a board game which would allow frequent repetition of key lexical items while maintaining learner attention and motivation. This paper will first shortly explain the reasons which led us to create such a learning instrument and what the benefits of game-based learning are, before describing the board game currently being designed at Ecole Navale.

keywords: *game-based learning, playification, gamification, activity theory, feedback, memory*

Introduction

Research has shown (Roediger & Karpicke [9], Larsen, Butler & Roediger [7]) that frequent quizzing of learners tends to both slow down and reduce forgetfulness and may therefore be one of the best guarantees of success in an exam. Therefore, we have sought to increase the amount of time devoted to quizzing within the first year Maritime English Basics course of the French

naval officer curriculum. However, as class hours are limited and not all learners like to spend time studying, we have sought to create tools for revision. Some of these tools are computer-based and have been described in previous IMEC papers (Ferreira, [4]). However, these seldom allow for collective revision. Thus we have endeavored to create a learning tool that would allow students to quiz each other while still being enjoyable. We decided to create a board game. This article will first shortly explain the reasons which led us to create such a learning instrument and what the benefits of game-based learning are, before describing the board game itself.

Games and learning: why play?

"Game-based learning" has recently been restricted to the use of computer games in education, the games used being either off-the-shelf commercial games (also known as "serious gaming") or purpose-built products (known as "serious games"). However, non-digital games can also be used for learning, including board games, card games, role-playing games, etc.

Game-based learning is constructivist (even socio-constructivist) learning. It is built on theories such as situated learning, experiential learning and activity theory. In situated learning, games provide information in a relevant context or setting. Learning takes place alongside social interaction and collaboration (Anderson et. al., [1]). Experiential learning advocates learning by doing (Kolb, [6]). Similarly, activity theory describes learners as part of a system which must take into account interactions with objects and other learners, to attain a desired outcome, and posits that games allow learners to participate and experiment in non-threatening scenarios (Bedny & Meister, [2]; Verenikina & Gould, [10]).

While game-based learning may not work in every situation, the potential benefits are significant. (Mann et al. [8]) shows that they appeal to learners, create a better learning atmosphere and keep learners more focused (see also Heinich, et al. [5]). As to the measurable learning effect in tests, we have not had an opportunity to test them yet, since the game is currently only being created, and has only reached pre-artwork prototyping, but plan to do so as soon as the game is ready.

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The game

The game board

The game is played on a board picturing a map of the world. Other game material includes ship cards, destination cards (Fig.1), and question cards, as well a six-sided die. A smart phone can be used to listen to audio questions.

The game map is divided into hexagon tiles, each of them being numbered for easy location of a particular tile. On some of these tiles, harbors are marked. Their position is of course consistent with that of the corresponding harbor, even though we sometimes had to make minor adjustments for the sake of readability. We chose the 50 largest commercial harbors, in terms of tonnage (World Shipping Council, [11]) to which we added a dozen extra ports (either because they were famous ports, or large military harbors like Norfolk, which our officer cadets are likely to call at). We only kept one port when two happened to be on the same tile, and we also ensured that ports were spread out through the whole world, for playability.

figure 1: Destination cards

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Playing the game

The goal of the game is to earn victory points, by travelling from one port to another. The player with the most victory points at the end of the game is the winner. However, in order to be able to move on the board, players must answer maritime English-related questions.

In the beginning of the game, each player draws a ship card (Fig. 2). These are 10 x 15 cm cards which list the data about a vessel. We have chosen both commercial and military vessels, one of the goals being to revise ship types. Each vessel has a name and identification information (IMO number, MMSI number, call sign) as well as an assigned port of registry and a port of departure (sometimes different). Each card also mentions the physical characteristics for each vessel (LOA, beam, draft, summer deadweight or displacement), as well as other information which may be needed in game (number of people onboard, etc.). Also, some of the vessels have restrictions such as being too large for the Panama or Suez canals. This will have an impact on the possible routes for those vessels. All data has been based on existing vessels ①, to ensure consistency.

figure 2: Ship Cards

① All data from http://www.marinetraffic.com

When the game begins, each player also draws a destination card, which he/she places on the table, before him/herself, visible to everyone. These are 6 x 10 cm cards which show one of the ports of destination (with its name and a picture), and its position on the map, as well as a digit representing the number of "victory" points which the player gets for reaching his/her destination. There are 3 cards for each destination, each paying between 1 and 7 points. For each destination, there is one yellow card which pays the "base" rate for that destination, as well as a green card which pays the base rate +1 and a red card which pays -1. The number of points for each port has been set based on the geographic location of the ports. Thus, a port that is very central on the playing board (such as Marseilles, France) will yield fewer points, while a port that is far on the outside edges of the board (Vancouver, Canada) will yield more points (because it will take more time to get there, thus being realistic: in real life the cost of maritime transportation is based primarily on the distance to cross). If a player is lucky he/she will draw destination cards of nearby ports, but if not, they may have to cross the whole board several times (thus boosting fun, thanks to unpredictability).

When it is a player's turn to play, he/she rolls the dice and moves forward a number of tiles equal to the dice roll, in the direction of his/her destination. Then, the player sitting to their right must draw a "question card". They will ask the question on the card, and if answered correctly, the player will roll again, and move forward a number of tiles equal to the dice roll. After which, it is the next player's turn to play. In other words, when it is your turn to play, you always move once, and may move twice if you answer correctly. However, each player only gets to answer one question, because we wanted the game to be fast-paced, and avoid inactive players getting bored while a knowledgeable player successfully answered every question. This also ensures that all (good) players remain within a few points from each other in order not to discourage them and preserve their hopes of winning. When a player's ship comes into the destination port, he/she discards the destination card and draws another one. The game ends either after a set amount of time, after a number of turns, or when a player reaches a target score.

The questions:

Questions are of several types:

- multiple choice questions
- open-ended questions

- visual questions
- pro-words
- find the odd one
- say it in maritime English
- audio (comprehension)
- dialogue

Each type of question is described below, with an example question.

1. **multiple choice:** this is the most basic type of question. They are used to check the knowledge of lexical items.

e.g: What is a ship steered with?

a) the rudder

b) the radar

c) the propeller

d) the steering wheel

2. **open-ended questions:** in open-ended questions, no proposed answers are given.

e.g: What is sea 4 on the Douglas sea state scale? (moderate)

3. **visual questions:** there is always a picture in visual questions. The player asking the question will read it out loud, then put his/her finger on the answer and show the card to the quizzed player.

e.g: What kind of ship is this? (showing a LNG tanker).

4. **pro-words:** pro-word questions may be of two types: either a pro-word is given and a definition is expected, or a paraphrase is given and the correct pro-word must be given. Only one attempt is allowed.

e.g: “please repeat what you said” (“say again”)

e.g: “I require” (“I need and cannot do without”).

5. **Find the odd one:** in this type of question, a list of 4 is given and the player must say which the odd one is, and why.

   e.g: “roll, pitch, yaw, heave” (heave: not a rotation around an axis)

   e.g: “say again, read back, verify, repeat” (repeat: not a verb)

6. **Say it in maritime English:** this type of question requires the player to translate a sentence or phrase from standard English to maritime English.

   e.g: “I will not turn; come closer on my left side” (I intend to maintain my course. Close me on port side).

7. **Audio (comprehension):** The cards for these questions have a QR code printed on them. By scanning the code (Fig. 3), players will hear an audio file. After which they must answer a question about the conversation or message.

   e.g: securite_ushant.mp3: what is the danger being signaled? (safe water buoy unlit)

figure 3: QR Code example

8. **dialogue questions:** On some tiles (Bermuda triangle, west of Africa, Indian ocean, strait of Malacca, Cape horn) players must always stop. They will be handed a scenario and will have to act it out, as if they were speaking on the VHF of a vessel. When they are done, the rest of the players decide whether they did well enough and they get 5 extra points if they did.

e.g: Imagine the conversation between *Croix du Sud* and St Mathieu Signal Station. Play it with a partner. Begin with the distress message. (Note the vocabulary is in the player's local language – French – in order not to give them the solution).

Infos :

- Longueur 51,50 m
- Maître-bau 8,96 m
- Tirant d'eau 3,60 m
- Tirant d'air 18,50 m
- Déplacement 560 t

Scenario :

- Feu dans salle des machines origine inconnue,
- navire brûle,
- équipage (44 PAX) évacue dans radeau
- 1 brulé grave : demande medévac par hélico

The importance of feedback

Research (Fazio, et al. [3]) has shown that in the case of multiple-choice questions, no feedback or simple right/wrong feedback may hinder learning or facilitate memorization of wrong information. It is therefore of utmost importance that players get proper feedback when they give a wrong answer. Thus, a short feedback text is included on each question card.

Copyright and license

The workshop

The goal of the IMEC workshop is to invite participants to create questions of their own which will then be included in the final distribution kit for the game. Participants will be given an opportunity to collaboratively create questions of each type, and test them with the conference's attendees. Contact information will also be given for later participation to the project.

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Using Computer Dialogue Systems for Providing a Student-Centred Teaching Approach in SMCP-Based Maritime Communication (workshop)

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Abstract

The workshop focuses on training SMCP-based maritime communication with the help of computer dialogue systems (aka ChatBots). The communication competencies put forth in the STCW code (chapter II, table A-II/1) are acquired by practising relevant maritime communication at the student's own individual learning pace thus catering for a student-centred education approach. On the one hand, the exercises presented in the workshop will target the compulsory part A of the SMCP in their use in communication on VHF. On the other hand, a simulated phone call challenges participants to develop an efficient communication strategy in order to obtain relevant details on a navigational accident. Response from conference participants will be used to further improve the developed exercises. In addition participants will be trained to use the ChatBot technology and exercises as teaching material in the classroom once the computer dialogues are freely available on the Internet.

keywords: *computer-assisted learning, Maritime ChatBot, SMCP training*

Workshop Rationale and Outline

In recent years, language teaching has experienced a major qualitative shift. The massive advance of computer technology has enabled teachers to take a step back from the classroom's centre stage and leave it to a newly structured didactic design which assigns more central roles

to learners. By handing over protagonism to students, the teacher's role changes into that of a promotor or scaffolder of learning who assists the students in a personalised, constructivist learning environment which extensively applies new media technology.

Academic research has reported this highly significant trend away from a teacher-centred or *behaviouristic* learning environment and towards a student-centred, *constructivist* didactic design①. A learner-oriented environment supports students in constructing skills and knowledge in an experimental setting, instead of being assigned a rather passive role as listeners of lectures which are centred around the teacher's presentation of the topics to be studied. While positioning the learners in the foreground, the new design simultaneously reduces the teachers' speaking time in class which allows them to attend to slow-progression students who are most in need of help in their learning process.

Maritime English teaching has widely adopted computer-assisted learning trends, mostly by integrating multi-media content [1] [2] [3] and e-learning exercises [4]. Other innovative teaching methods involve the use of full-mission simulators for collaborative teaching or *twinning* with navigational instructors [5] [6], and the use of web conferencing software in low-fi simulation exercises [7] [8].

The revised version of the IMO Model Course 3.17 for Maritime English② recognises the need for a student-centred learning approach by recommending active student involvement and suggesting an Individual Learning Plan (ILP) which "should contain the learner's long-term goals in terms of items to be learned and communicative abilities the learner wishes to achieve"[9]. In order to accomplish required communicative abilities, the Model Course makes reference to videos, e-learning and Internet resources, among other learning material.

Another educational aspect highlighted by the revised Model Course 3.17 is the requirement for a communicative approach in Maritime English teaching. For this reason, it provides "explanations and suggestions for practical, communicative classroom activities to assist the instructor to implement this model course effectively"[9].

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① A Google scholar search for the term "student-centred" revealed over 2,400 occurrences in the first semester of 2015 alone.

② Model Course 3.17 Maritime English has undergone extensive revision over the last twelve months (2014-3015). The revised version was validated by the IMO HTW (Human Element, Training & Watchkeeping) in February 2015 and is due to be published at the end of October 2015.

The outlined communicative approach is easily attainable in a classroom environment. However, it poses serious challenges for self-study activities by means of e-learning, video material, etc. While the new media enable learners to practise relevant maritime terminology, fixed expressions, grammar and so on, to the author's knowledge they do not cater yet for a truly communicative approach where relevant communication skills be applied in simulated discourse exercises which resemble the communicative situation future nautical officers will encounter on board their ship.

Maritime Communication exercises using ChatBot technology

At this workshop, a computer technology known as ChatterBot or ChatBot is presented. ChatBots are computer dialogue systems which build on Artificial Intelligence (AI). They allow users to interact with computers in a natural discursive manner by providing realistic dialogues. ChatBots are widely used on the Internet, for example to assist on-line customers in selecting products (e.g. Ikea's *Anna* ChatBot) and to help library users[①]. They are also programmed to function as virtual communication partners in chatrooms[②].

However, very few attempts have been made so far to use this fascinating technology for teaching purposes in general, and no project is known to have been undertaken yet to deploy ChatBot computer dialogues in Maritime Education and Training (MET). This challenge has been taken on by the VTS-Bot research project supported by the International Asssociation of Maritime Universities and funded by the Nippon Foundation of Japan[③]. The project's aim is to develop a series of computer dialogue exercises which provide realistic scenarios of maritime communication in which students can practise their communication skills individually and at their own pace. Maritime ChatBots close the gap between communicative classroom acitivities on the one hand and non-communicative, computer-assisted learning activities on the other

① Chapter 1 of Library Technology Reports (vol. 49, no. 8), "*Streamlining Information Services Using Chatbots*," makes for interesting reading. It presents a brief history of chatbots, computer programs that use natural language to interact with users. They have existed for nearly fifty years and have been used in libraries since the mid-2000s; chatbots from ELIZA (1966) to Pixel (2010) are introduced.

② See https://www.chatbots.org

③ Nippon Foundation research grant. http://www.nippon-foundation.or.jp/en/

hand. They cater for a constructivist learning environment while providing students with an instant feedback on their learning progress.

Exercises presented at the IMEC workshop

At the time of this workshop, two exercises have been implemented which are intended to display the functionality maritime ChatBot dialogues are capable to offer. The first exercise deals with the routine task of learning and retaining the compulsory Standard Marine Communication Phrases (SMCP). It is understood that learning the SMCP involves the time-consuming process of memorising a considerable amount of fixed phraseology while at the same time understanding the underlying system the SMCP employs. The SMCP ChatBot exercise focuses on the use of message markers, the spelling of ship names using the international spelling alphabet and correcting phrases which include one or more incorrect terms.

The second ChatBot exercise allows students to practise General Maritime English (GME) in a simulated phone call. Here, participants enter a discourse with a crew member on board a ship which has been involved in a navigational accident. The objective is to enquire all relevant information necessary to prepare an incident report. As the communication partner is not very forthcoming, different communication strategies have to be tried out to achieve the required information.

While the SMCP exercise shows the possibility of using ChatBots for simple memorisation and drilling purposes, the phone call simulation includes a number of highly complex communication patterns, such as questions and answers, user input as variables the system remembers, provocative dialogue, and others. Suggestions will be given for a possible integration of the exercises into classroom teaching.

Response from conference participants

The workshop will provide an on-line questionnaire to seek the feedback from conference participants upon completion of the two ChatBot exercises. It is expected that this response will provide valuable hints at improving the computer dialogues as well as outline further areas for the development of exercises.

The conference feedback will be included into the IAMU Research Final Report which will be published after the project's completion in May 2016.

After May 2016, all exercises will be freely available on the Internet at www.smcpexamples.com.

This research is within the framework of the IAMU 2015 Research Project 20150104 "VTS-Bot: analysis and implementation of a student-centred learning approach by using a ChatBot computer programme to provide for an outcome-based maritime communication training" which is funded by The Nippon Foundation of Japan. The VTS-Bot research partners are the authors of this paper and, in addition, Dr. Benjamin Brooks (Australian Maritime College, University of Tasmania (Australia)) and Sylvia Besher Fahkry Besher Farag (Jade University of Applied Sciences (Germany)).

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Language Learning Strategies for Continuous Language Improvement (workshop)

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Abstract

Language learning does not stop at the door of the classroom. Indeed, when students exit the academic environment, some may argue that only then does 'real' learning take place. The theoretical, scripted, and repetitive grammar drills often used in the classroom are forgotten or quickly abandoned, as the learner is thrust into an unpredictable, noisy and confusing environment in which they are expected to function and perform their duties using English. In the maritime environment, this language is not limited to the Standard Marine Communication Phrases, but includes day to day living discussions related to meals, laundry, time-off, as well as interaction with shore-based personnel such as Customs and Immigration officials, Coast Guard personnel, ship and cargo inspectors, as well as personnel conducting environmental inspections and other officials. Time allotted for English language instruction in cadet programs at maritime universities is limited and no curriculum could possibly identify or prepare students for every scenario in which they will use English. Therefore, we suggest that it is equally important to not only teach grammar and vocabulary, but life-time language learning strategies to cadets. This workshop seeks to identify language learning strategies which mariners have used/may use to continuously improve their English language skills upon entering the maritime workforce. Additionally, participants in the workshop will be given the opportunity to share their own life-long language learning techniques, as well as how those are incorporated into the classroom.

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Introduction

At IMEC21, in Szczecin, 2009, the chair of IMEC, Prof. Dr. Peter Trenkner [1] elaborated on the provisions of the STCW Manila Amendments, then still to come, expressing concern upon the Code's tacit and not explicit requirement of "sound command of Maritime English". The same year, Prof. Trenkner and the vice chair of IMEC, Prof. Clive Cole, published The Yard-stick for Maritime English STCW Assessment Purposes [2] in which they state that Maritime English is a well-established research topic that no longer requires a definition to be understood in an academic context. At IMLA23, in Durban 2015, however, a number of prominent MET-teachers and researchers [3] explain that "(…) over the past 25 years Maritime English has ac-cumulated fourteen different definitions, with no consensus on content and scope." (idem. 220) and that it is "a mixture of nautical and communication English and there is controversy as to whether it is for specific purposes or simply a terminology" (idem. 220).

The same article [2] finds that 80% of nations worldwide use English as a second language in industry, and that we have multinational crews on 80% of our merchant vessels, whereas there are less than 9% English first language speakers worldwide. From this, one can perhaps draw two conclusions; that Maritime English, albeit a well-established research topic, and subject at MET institutions, needs – as most comprehensive and significant academic topics do – continu-ous discussion to be determined and understood in order to be applied in all its various contexts, and that Maritime English, due to its specific purpose/s, does not belong, with its definition - whatever that may be - to one nationality or one vessel or one classroom, but all its internation-al contexts must be considered and translated according to the situatedness of a specific context.

This being said we would like to agree that the teaching and learning activities of Maritime English will be expressively different, depending on the student's nationality, background, needs, skills and goals. This workshop aims to clarify and elaborate on the circumstances of non English speaking students, and the contexts in which they develop language learning strategies (LLS) to acquire English as a second (or foreign) language, a process which MET institutions must deal with many times before their cadets can be trained in the more specific purpose of Maritime English. Having second LLS at its core, the workshop focuses on four main questions, aimed to generate discussion about classroom activities designed to raise student understanding of learning as a constantly ongoing process, throughout life. This, of course, implicitly requires a look at student prerequisites, cognition and metacognition, self-regulated learning, incidental

learning, affective aspects of learning, and cultural/national contexts of learning, and how Maritime English trainers integrate all of this in their comprehensively diverse classrooms.

It may be so that in the discussion, the Maritime English trainer competence will rightly be brought up. Becoming a Maritime English trainer does not require internationally certified competences [2, 4] but according to STCW (Manila, 2010) each MET institution is to take responsibility for MET tutor competence, as recommended by IMO. Therefore, as Maritime English trainers we are depending on the internationally outreaching dialogue which IMEC facilitates, in our trials to converge towards common IMO standards.

Instructions

Language learning strategies [5] can be summed up as techniques used by learners to increase their knowledge, understanding, and use of a second or foreign language. The use of LLS by learners increases their independence in the learning process. Oxford [5] categorized LLS into six components, namely memory strategies, compensation strategies, cognitive strategies, metacognitive strategies, affective strategies, and social strategies. Memory strategies assist students with remembering language for long-term memory. Affective strategies deal with becoming aware of feelings and attitudes in the language learning process. Compensation strategies allow learners to identify gaps in their language knowledge and find work-arounds in the language. Social strategies involve interaction with others in the language learning process. Cognitive strategies refer to the mental processes used while sending and receiving messages in a foreign language. Metacognitive strategies indicate an emphasis on planning, preparing, and structuring the learning process.

All learners encounter limitations in their learning process, and develop different strategies to overcome those limitations. Much like a person may use a step-ladder to change a light bulb which is too high to reach, students learning a foreign/second language employ different tools to assist them in the learning process. The six categories established by Oxford [5] were studied in greater detail by Griffiths and Parr [6] who arrived at the conclusion that teacher and student conception about suitable LLS may differ; see the tables below.

TABLE 1
Rank ordering of rate of language learning strategy group usage, as reported by students

6 (most frequent)	Social strategies
5	Metacognitive strategies
4	Compensation strategies
3	Cognitive strategies
2	Affective strategies
1 (least frequent)	Memory strategies

TABLE 2
Rank ordering of teacher perceptions of students' rate of language-learning strategy usage

6 (most frequent)	Memory strategies
5	Cognitive strategies
4	Social strategies
3	Metacognitive strategies
2	Compensation strategies
1 (least frequent)	Affective strategies

Based on the above, we have divided this workshop in four different topics described below, each followed by questions to discuss. Participants, in groups of three or four people, are asked to discuss the topics, based on the questions. One topic is to be assigned to each group.

Questions:

(it is recommended that each group first brain-storm about the topic, as to bring everyone on the same page, conceptually)

Metacognitive second language learning strategies

Metacognition in learning processes has been long researched and conceptually elaborated on. Flavell and Wellman and Wenden [7, 18]] described the concept as “metamemory”, or one’s awareness of knowledge and memory. Throughout the preceding decades, the concept evolved to “metacognition” [8,9] can be defined as that information that one knows about one’s own cognitive processes. Metacognitive second LLS [9, 19] can be taught and having an idea about cognitive processes in order to develop individually suitable learning strategies is essential in all learning, not only for second language learners [20].

Keeping this in mind try to exemplify the following:

- Which language learning activities may help students become aware of the cognitive processes in which they are involved?
- How do students become aware of their language learning process and their progress in the language?
- Which learning activities are aimed to scaffold the learning process: what do students need to know, and prepare for?
- Identify learning activities aimed to help students utilize different learning strategies.
- What kinds of learning activities enable students to conceptualize learning as a process which may involve various strategies?

Incidental learning (Compensation Learning)

As it sounds, incidental learning suggests that students, without certain preparation or expectation, acquire new knowledge [10). Some may argue that incidental learning is actually learning from experience [11] and that it is not structured, nor does it take place in a classroom or an institution. Nevertheless, incidental learning can be triggered in a classroom, albeit unplanned. It may be highly dependent on student ability to associate, relate to and assimilate new knowledge, and it also may have strong connection to student metacognitive skills. Incidental learning can, or is likely to occur in Content and Language Integrated Learning (CLIL) [12] contexts, or Twinning [4] when students are focused on learning about a particular topic but in a second language.

1. How do you define incidental learning? How might incidental learning take place, in your classroom, in your courses or in cross-curricular teaching and learning settings?
2. Discuss classroom situations/learning activities when students incidentally have acquired knowledge which was not planned. How did the instructor/students capitalize on the situation?
3. Identify situations when incidental second language learning may or has taken place due to twinning, or CLIL contexts? Elaborate on possibilities that language teachers may have to trigger incidental learning due to twinned or CLIL environments?

Self-regulating/Self-evaluation

Becoming a self-regulated learner is, in essence, becoming a life-long learner. Zimmerman and Schunk [13] used the term self-regulated learning to define those who became "masters of their own learning". A self-regulated learner is one who uses deliberate strategies to acquire knowledge, self-evaluates the effectiveness of their learning, and finally has a motivation to learn, [14] In the maritime environment, it is critical that students develop the confidence, diligence and resourcefulness to continue to develop and advance their skills and knowledge. As technology advances bringing with it updated communication, navigation, and engineering systems and multinational crews are the norm aboard vessels, the mariners of today must embrace continuous learning and define for themselves methodical, systematic and controllable ways of acquiring the knowledge they need after they leave the classroom. They must be able to self-evaluate and reflect upon what they do not know, and devise a strategy to acquire the knowledge needed. In terms of language use, this is certainly the case as classrooms are no substitute for the real-world use of language and our students will encounter situations aboard vessels in which they are at a loss for vocabulary and grammatical constructions.

As language educators:

- How might we promote our students to become self-regulated learners?
- What techniques for acquiring knowledge do you use, and how might they be adapted to the language classroom?
- Motivation for learning is at the core of being a self-regulated learner, what is our role as language educators in developing motivation within our students to become life-long learners?
- Reflecting upon students who have 'mastered' English, what techniques have they used to study, and continue to study the language?

Affective domain

The affective domain of learning centers on feelings and emotions towards learning in general. A taxonomy of the affective domain was characterized by Krathwohl, Bloom and Masia [15] as:

Receiving - a willingness and openness to receiving new information

Responding - demonstrating some new thinking or behavior due to the information received

Valuing - finding worth or value in the subject

Organizing - integrating new information into one's' own value set and Value concept.

Factors contributing to the affective domain include self-esteem, empathy, anxiety, and motivation. Each of these factors may have debilitating effects on students and impede their growth as language learners, however, factors such as anxiety can prove to motivate or drive students, [16] While many studies have been conducted on not only the affective domain but the contributing factors as well, we only scratch the surface of this topic. That said, understanding the affective domain of our students will provide a means by which we can prompt students to become aware of factors which may unwittingly hinder their language achievement.

With this in mind, discuss the following:

- How, as teachers, can we assist learners to recognize and overcome elements within the affective domain such as anxiety, motivation and self-efficacy so that they can learn language more effectively?
- What learning strategies might assist students in so that the affective factors are beneficial to language learning?
- How might those strategies be taught in a classroom given consideration to time as well as student and management expectations of an English language class?

Nationality and culture in the process of foreign language acquisition

The multicultural environment we have on 80% of our vessels can be considered to be the exceptional research setting for the study of language learning, in any context. Due to this setting, the idea of globalization [17] and the importance of globalization for the maritime industry, must come very close to mariners in particular with regard to language learning strategies and opportunities. Keeping this in mind, and based on your own professional experience, please elaborate on the following questions:

- How can we design learning activities which include or at least relate to the cultural diversity found on-board?
- To what extent can we create international learning environments for peer-learning, to help cadets learn how to interact with and adapt to the multi-cultural environment on board ships? What is the conception of peer-groups in a cross-cultural learning environment amongst our cadets?
- Discuss cross-cultural aspects in the learning of Maritime English, which you may have encountered in your own teaching environment, and try to identify language learning strategies to help cadets become aware of the different needs of different learners, depending on nationality and background.
- What are our respective strengths and weaknesses as Maritime English tutors, from an international perspective, considering national and international requirements and standards? What can we do to prepare cadets for their future international working environment?

Summary

As indicated above, we scarcely scratch the surface of this realm of pedagogy related to learning strategies and particularly foreign language learning strategies but we do aim to trigger an ongoing discussion about learning strategies which students need to master before they leave MET, if they are to continue learning in their professional lives. With regards to our students, we are positioned as instructors to assist them in the realization of strategies which best suit their language learning needs and interests, not only for the moment, but throughout their lives. Further, it is in our best interest to ensure they have strategies which will compel them to be continuous, autonomous learners, not only of language, but of culture and the world in which they live, as language is, indeed, the key to communication, hence understanding of the world. It is our sincere desire that through this workshop, we are able to collaborate further with Maritime English instructors and mariners to identify within our specialized field of English, those learning strategies that assist our students after they leave our classrooms.

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