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Congratulation Letter to IMLA-IMEC 24, held at Yangon Myanmar, October 1st to 4th, 2012

Prof. Dr. Peter Trenkner, Chairman of IMLA-IMEC
Dear colleagues and friends,

First of all, on behalf of International Maritime Lecturers Association, I would like to extend sincere congratulations on the opening of the 24th International Maritime English Conference, and a very warm welcome to all local and international participants and presenters. Your gathering is a laudable effort to bring the fraternity together and I am heartened by your passion for the maritime professional language and for maritime education.

Most of the maritime institutes are aware that mastering communication skills is one of the important components which ensure the safety at sea. New technologies have great potential for teaching and learning in maritime English. In order to cultivate high-quality seafarers, maritime English lecturers and professors endeavour to adopt new teaching methods using these updated technologies. The studies and discussions on the practices of maritime English education, applications of new technologies for training, research and analysis are critical to the manpower training and human recourses developments in maritime.

As a community, you are coming together to affirm the value of and your commitment to maritime education. It is a conference that brings together like-minded maritime educators to network and share ideas and best practices. I strongly encourage all of you to seize the opportunity to learn from the sessions helmed by experienced academics and practitioners in the field of maritime English. I hope that many insights and ideas will be exchanged and enriched as a result of the sharing.

I would like to thank Prof. Dr. Peter Trenkner for his commitment and dynamism as always to IMLA-IMEC. And special gratitude to the Uniteam Marine Training Centre and Myanmar Maritime University who have made great efforts in organizing this conference. Lastly, wish all of you a fruitful and invigorating conference ahead. Thank you.

Dr. Prof. Jin Yongxing
Hon. Chair of IMLA

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Whither Maritime English? – 2012

Abstract

In 2004, at IMEC 16 in Manila, the authors of this paper took up the question "Whither Maritime English?" which Captain Fred Weeks, a founding father of IMLA and the first chair of its Maritime English sub-committee, had asked at WOME 9 in 1997. Now 15 years later, it seems timely to address this question anew.

This paper has three parts. To appreciate the present, and anticipate the future, we need to have an understanding of the past. Thus Part One maps the history of Maritime English and revisits the predictions and recommendations of Weeks in 1997. Part Two, is an update, an account of what has actually happened over the last 15 years and includes the general trends, areas of interest and issues encountered. In particular, the impact of IMO's influence is recognised, international research projects are commented upon, the application of new teaching methods is presented, the development of new materials are noted and the expansion of IMLA-IMEC is explained. Part Three looks to the future by once again seeking an answer to the question "Maritime English – What Course to Steer?" and critically examines whether present technological developments are capable of making human linguistic exchanges redundant. A road map for IMEC is presented with the intention of promoting enhanced standards of teaching and learning through the co-operative efforts of IMEC members while at the same time establishing a more comprehensive Maritime English framework. Further, the authors consider the professional profile of Maritime English instructors and the question whether a Quality Management System for Maritime English instruction is desirable, useful or even necessary.

INTRODUCTION

In his last presentation as an active member of IMLA, (WOME 9, Malmö, 1997), Captain Fred Weeks, a founding father of our Association and the first chair of its Maritime English sub-committee, asked the question "Whither Maritime English?" At the time he reflected on the role of the Maritime English Lecturer and his own experience as a young Apprentice.

> ***A Maritime English Lecturer will always have in mind the well-being of his students, and, if he will admit it, the well-being of his own society. Part of that well-being is based on the concept that everyone should be educated to his maximum potential, so that, through his success, society will benefit. Training, however, as opposed to education, fits a person to do one job (that for which he gets paid) and not, necessarily, any other. Society wants educated persons, ship owners want trained officers and crew; and wants them to stay. Another consideration is that the 'upper echelons' of the maritime world must be provided with suitably educated persons. So the Maritime English Lecturer has yet another decision. Should he equip his students with the English language armoury that will enable him to prosper after what, in many cases, is a short sea career, or should he not? When I was a young***

Apprentice, both my company and my Lecturers made the right choice, giving me both the training and the broad education which opened every door in the maritime hierarchy. Then it was up to me.

Capt. Fred Weeks (1997)

The authors of this paper, the current Chair and Vice Chair of what is now called the IMLA International Maritime English Conference (IMEC), pick up this thread anew, and as a result of the significant events that have occurred in the meantime, consider the impact of these developments and the challenges that lay ahead.

This paper has three parts. To appreciate the present, and anticipate the future, we need to have an understanding of the past. Thus Part One briefly maps the history of Maritime English and revisits the predictions and recommendations of Weeks in 1997. Part Two, is an update, an account of what has actually happened over the last 15 years and includes the general trends, areas of interest and issues encountered. In particular, the impact of IMO's influence is recognised, international research projects are commented upon, the application of new teaching methods is presented, the development of new materials are noted and the expansion of IMLA-IMEC is explained. Part Three looks to the future by once again seeking an answer to the question "Maritime English – *What Course to Steer?"*and critically examines whether present technological developments are capable of making human linguistic exchanges redundant. A road map for IMEC is presented with the intention of promoting enhanced standards of teaching and learning through the cooperative efforts of IMLA-IMEC members along with other interested parties, while at the same time establishing a more comprehensive Maritime English Framework. Further, the authors consider the professional profile of Maritime English instructors, and the question whether a Quality Management System for Maritime English instruction is desirable, useful or even necessary.

PART 1 – A brief history of Maritime English

It is estimated that at the end of the reign of Elizabeth I (1588) there were around 6 million native speakers of English, most living within the British Isles. By the time Elizabeth II acceded to the throne in 1952 this figure had increased to around 250 million of which four-fifths were living outside the British Isles, mostly in North America. These significant developments paved the way for English to evolve into its current position as *a*, maybe *the*, world language.

Today it is estimated that 328 million people use English as a first language, that around 375 million use it as a second language, and that in 112 countries, around 55% of the world total, it has official or special status (www.ethnologue.com latest update February 2009). Further, Crystal (2003) calculates that one in five of the world's population use English "competently" and that one in three are exposed to it daily.Clearly a major contributory factor in the spread of English throughout the world was through the military expansion and trading desires of the island nation, Great Britain, which involved traversing the globe by sea. Thus, where Britain ruled the waves, or at least the adjacent *terra firma*, crews and passengers would be deposited together with their cultural/linguistic, baggage. As the dominating partner, they would then expect the local inhabitants to communicate in English if they wished to do business with British vessels. As Weeks (1997) suggests, "this probably formed the basis of the pre-eminent usage of English language Bills of Lading and Charter Parties."[1]

[1] *According to Seidlhofer (2011) three out of four people who communicate in English today are non-native speakers.*

For British seafarers on British ships their "Maritime English" was for specific, i.e. nautical purposes and consisted of knowing and understanding special terms, the use of which would identify them as belonging to the mariners "club". Until only a few decades ago this would be much the same for seafarers from other countries who would largely serve on 'own flag,' and consequently monolingual vessels where the working language would be their own: Greek ship, Greek crew, Greek spoken; Russian ship, Russian crew, Russian spoken and so on. However, as Weeks (1997) observes, in the vast majority of ports of the 18th and 19th centuries English became the shore language and the non-native speaking mariner "would *have* to speak maritime business English to conduct the ship's affairs". Naturally, any crossing over of officers or crews to other nations' vessels would usually require the acquisition of the new "club" language.

It is worth noting, however, that on board Imperial German men-of-war of the period, at a time when relationships with the British Royal Navy were far from congenial, amazingly English **was** the command language up until 1905**,** and was frequently the medium of understanding among German navy men on shipboard, too. The crews for on board service were not drafted from conscripts but recruited from volunteers of the German merchant marine where English had already widely been accepted as sort of working language. From the last quarter of the 19th century until the 1920s and 30s so-called mixed crews were anything else but isolated cases, and ship owners or senior officers simply expected their ratings and junior officers to have sufficient English language skills to enable them to properly do their work on board – in fact, an insufficient command of English was regarded as "bad seamanship."

As for ship-to-ship and ship-to-shore communications this was carried out using flags up until around 1900 when the development of wireless radio for navigation purposes was gradually introduced. Just like today, this technical development at once both facilitated communication and set new challenging parameters, not the least of which at a later stage involved oral and aural language skills.

It is worth noting at this point that at the turn of 19th to the 20th century English, while dominating in certain fields, was still only one of several important languages being used for communicating across borders. French, for example, was the language of diplomacy and, for the first three decades also the language of aviation. Indeed, the situation did not change much until after the Second World War, when as a result of the dramatic increase in British-American trade and commerce, supported and facilitated by their dominant military and merchant fleets, that together with American scientific/technological progress and the impact of American lifestyle/culture upon several post-war generations, the use of English internationally became consolidated, not only at sea and in the air, but also in many, maybe most, other walks of life.

At first this all had little effect on the teaching of Maritime English. As Weeks (1997) points out, "until about 1960 there was little if any need to teach the difficult linguistic skills necessary for ship-to-ship and ship-to-shore oral communication, because VHF was still a novelty." In fact, in maritime academies where English was taught as a foreign language the (Maritime) English lecturer would "confidently base his lessons on *Standard English* with the additions of 'belonging' language and the language of the ship's business," (Weeks, 1997). However, as early as in the 1950sUS vessels used VHF to prevent collisions, and in 1961 VHF was officially admitted for voice communication within port/VTS areas and as a consequence the development of Maritime English as we know it today was initiated.

At this stage, some four or so decades ago, it would still have been difficult to forecast the massive impact English would have on the maritime industry. While, as described above, history reveals that there were several indicators it may, in fact, be argued that six significant developments have since contributed to the domination of English, and consequently the evolution of the subject that today is called Maritime English (with a capital "M"!).

These are:

- flagging out
- cheap multinational labour
- rapid advances in user-friendly communication technology permitting a practically unrestricted and undisturbed voice communication to and from any point in the world
- the globalisation of the maritime industry and maritime training
- the fact that a *seafaring career* has now become a *maritime career* where the sea experience component consists of just 5-10 years, and
- the legal obligations in STCW and SOLAS that require Maritime English o be taught at MET institutions and to be used in shipboard, ship-to-ship and ship-to-shore communications.

The result of these developments has been a dramatic and consistent widening of the field that the Maritime English lecturer is expected to cover. In this respect it is both remarkable and honourable that the founding fathers of the International Maritime Lecturers Association (IMLA), which had come into being at Plymouth (UK) in 1977, recognized what was afoot and held its first IMLA *Workshop On Maritime English* in Hamburg, Germany on the 11th and 12th of June 1981[2] under the guiding hand of its Chairman, the veritable Captain Fred Weeks himself[3].

English had, in fact, been an examinable subject in European nautical colleges for many years, being among the first subjects taught and examined at navigation schools in European non-English speaking countries since the mid-19th century. However, as the first conference report from 31 years ago informs us "it is only since the formal adoption by IMCO (today's IMO) of English as the international language of the sea, and the introduction of the Standard Marine Navigational Vocabulary (1978), that the lecturers have had the opportunity to meet each other." The report goes on to say "many of the lecturers are graduates in English and well equipped to teach general English at various levels, but they have found themselves ill prepared for working to the technical idiom which the new emphasis demands."

Thus, given that they rarely came from a seafaring background, it is important to remember the admirable concern that these pioneers of our Association had for the maritime context of their subject. Indeed, the 1980s was a productive decade as evidenced at the IMLA Maritime English Workshops of the time. Apart from the many creative and conscientious individual teachers who were preparing tailor-made materials for their classes, such international classics as Tim Blakey's *Maritime English* (1983) and Fred Week's *Wavelength* (1986) appeared along with a plethora of other specialised materials, often bound into books and used locally. Two major projects also got underway. At Plymouth, the *Seaspeak* project, led by Fred Weeks (WOME's first Chairperson), was destined to have a major impact on global maritime communications, while in Canada, the *Anglo sea* project, directed by James Kelly (WOME's second chairperson), used the rather new technology of video to enliven Maritime English acquisition. This project, an IMLA production, was initiated at WOME 3 held in La Spezia in 1985 and developed with input from the WOMEs that followed in 1987, 1989 and 1991.

At the beginning of the new decade there was considerable unrest in the world. The 1991 WOME, due to be held in Rijeka, was swiftly moved when the Croatian organisers pronounced that they could no longer

[2] *24 international meetings have been held to date in Hamburg, Germany, 1981; St. Malo, France, 1983; La Spezia, Italy, 1985; Plymouth, UK, 1987; Cadiz, Spain, 1989; Lisbon, Portugal, 1991; Amsterdam, Netherlands, 1993; Gdynia, Poland, 1995; Malmö, Sweden, 1997; Shanghai, China 1998, Rijeka, Croatia, 1999, Dalian, China 2000; Varna, Bulgaria, 2001; Qingdao, China 2002; St Petersburg 2003, Manila 2004, Marseille 2005, Rotterdam 2007, Shanghai 2008, Szczecin 2009, Alexandria 2010, Constanta 2011, Yangon 2012.*

[3] *IMEC/WOME has had three Chairpersons: Fred Weeks (UK) 1981-1987, James Kelly (Canada) 1987-1992, Fred Weeks (UK) 1992-1995, Peter Trenkner (Germany) 1995-today.*

guarantee the safety of the participants. Instead, the Workshop was moved to Lisbon, Portugal where the events surrounding the "Scandinavian Star" disaster, when communication deficiencies between the officers, crew and passengers had significantly contributed to the fatality rate, were very much in focus, and IMO eventually felt to take corresponding action.

It was this and similar events that brought home to the general public, through media attention, the simple failings and natural limitations or restrictions of individuals - the human element. Perhaps this is why, in 1993, that Peter Trenkner (WOME's third chairman) was invited to chair another illustrious grouping at IMO to begin work on updating the Standard Marine Navigational Vocabulary. The result, the Standard Marine Communication Phrases (SMCP), took seven years to complete. It, was eventually adopted in 2001, published in 2002, and its inclusion in STCW makes it a mandatory part of the MET curriculum in all of the current 156 ratifying States that represent 99.22% of world tonnage (as of 31 August 2012).

As the nineties progressed, the rapid development of technologies and the respective updates in requirements concerning safer shipping, along with the increasing number of multilingual and multicultural crews, imposed new criteria on communications at sea worldwide. At the same time the fact that a seafaring career was becoming more of a maritime career, where the sea experience component consists of just 5-10 years, was confounding the maritime educational and training systems in many countries. Perhaps this is why in 1997 Fred Weeks was so concerned about what to teach in class in the small number of teaching hours assigned to Maritime English[4]. Perhaps this is why he chided IMO for its failure to guide and establish a precise, common, attainable and professionally acceptable standard. Perhaps this is why he called for IMLA/WOME to "produce a really comprehensive, detailed minimum requirements syllabus for submission to IMO". Let us thus see was has happened in the intervening years.

PART 2 – An update

In the 15 years that have passed since Captain Weeks asked the question "Whither Maritime English?" it may be argued that a flood of water has passed under the Maritime English bridge. During this period, Maritime English has attained the status of a "hot topic" where, mostly as a result of misdemeanours at sea causing loss of life, damage to property and environmental pollution, the legal requirements (i.a., STCW/SOLAS) regarding communicative competency have been considerably sharpened, especially by the 2010 Manila Amendments to the STCW, to specifically promote safety at sea and contribute to cleaner oceans. To further heighten attention, as noted above, the Standard Marine Communication Phrases (SMCP) were adopted in 2001 and published in 2002.

Apart from its role as a regulatory body, the IMO has reacted to Weeks criticism of its previous lack of practical guidance and technical assistance by producing the Maritime English Model Course 3.17[5] (1999,

[4] *Weeks lists seven ESP choices: 1. Standard English; 2. Standard English with "Belonging" English; 3. Survival English for shipboard use; 4. Maritime business English; 5. Technical English; 6. Communication English, specifically for use over voice radio; 7. Standard communication phrases, as exemplified by the IMO Standard Marine Communication Phrases.*

[5] *There are two sections in the model course for Maritime English: Core Sections 1 and 2, both of which contain a separate syllabus. This system allows trainees to enter the course at a point which suits their level of English. It is recommended that instructors carry out a pre-course appraisal in order to assess the existing language level of each trainee. The syllabus in Core Section 1 is designed for trainees who have an elementary or lower intermediate level of English while the syllabus in Core Section 2 is designed for trainees who have lower intermediate or intermediate level of English. The definitions of these language levels and the basic entry requirements for the trainee target groups are given in Part A of both sections of the course. Core Section 1 is intended to prepare trainees for entry to Core Section 2. However, it is possible for trainees to enter directly to Core Section 2 without following Core Section 1, provided that they can satisfy the entry requirements.*

revised 2009), and the Maritime English Instructors Training Course (MEITC, 2002) which has, to date, been delivered by IMO consultants in Africa, Asia, Europe, and South and Central America. Moreover, as a result of Chinese concerns regarding the effectiveness of Maritime English teaching in its numerous MET institutions, the IMO provided for a team of experts to visit, examine and recommend improvements in 2001[6]. The authors applaud the Chinese initiative and IMO's support but wonder why, in the decade that has followed, such surveys have not materialised in other parts of the world where clearly they would be of great benefit in the effort to raise standards. Nonetheless, it was encouraging to see MEITC teacher training courses being delivered regularly for a while, although in recent years the funding has not been made available. The Maritime English Model Course 3.17 has met a broader acceptance compared to its predecessor 1.24 (1991).

From the European point of view, the first significant recent event in the field was the European Commission's 2-year research project entitled *The impact of multicultural and multilingual crews on maritime communication* (MARCOM, 1998). The MARCOM Project was concerned specifically with the problems and practices of Maritime English usage and the training procedures in use and as such its stated aim was to contribute to the enhancement of ship safety, environmental protection and stress-free social interaction. More specifically, its main objectives were:

- to provide an understanding of the significance of communication in the multicultural and linguistically diverse ships of today, and
- to provide English language instructors of Maritime English with detailed information on the nature of on board and ship-to-shore use and misuse of language and the types of accidents which can result.

MARCOM's 22 deliverables offered a unique body of information still relevant today whenever aspects of communication are being discussed. Sadly, acquiring copies of these from the Commission has been notoriously difficult.

MARCOM revealed that English language teachers at MET institutions often do not have sufficient subject knowledge to teach Maritime English with credibility. It therefore recommended that subject teachers and English teachers work in tandem to produce and deliver materials that would facilitate the teaching and learning of subjects in English. This, it suggested, would guarantee the vital element of credibility while ensuring that the quality of Maritime English teaching improves; an issue that has been hotly discussed at many a professional gathering since.

As a result, this "new" approach in methodology was presented in the European Commissions *The Thematic Network on Maritime Education, Training and Mobility of Seafarers* (2003) where, in a small corner (workpackage 7) Maritime English was represented. Here Content-Based Instruction[7] (CBI) was introduced in the Communicative Language Teaching/Learning context via Maritime English back-up materials written to facilitate the teaching of the three extension/enrichment courses.

[6] *This IMO mission went under the title of Technical Assistance for the implementation of STCW95 – upgrading and revision of the training programmes and syllabi in Maritime English.*

[7] *While many English language programmes at maritime education and training institutions have changed little over the years, seemingly content with the comfort and security of the status quo, the trend outside this niche area has been away from discrete-skills instruction and towards new approaches to meet the learners' content learning and communication skills needs. One such approach is referred to as content-based instruction. Although there is no single template for content-based instruction, content-based programmes uniformly use extended content as a foundation for curriculum development; in such settings, content is not selected solely and specifically for the purpose of language-skill instruction and practice. Thus, the content-based approach is particularly appropriate when the language learner has a need to prepare for the content-learning demands of a specific course of study. For this reason it is well suited to the requirements of many Maritime English programmes.*

In this respect, it is reassuring to note that during the last fifteen years new methods in language teaching based on modern research into language acquisition are gradually making in-roads into Maritime English classes. One reason for this is undoubtedly the burning desire of many students, particularly in Asia, to equip themselves with a *lingua franca* that will see them good for lifetime career purposes. Indeed, as the percentage of seafarers in the shipping industry shrinks and the number of internationally employed shore-based personnel increases, Maritime English has become an essential career tool, permitting mobility, flexibility and competitiveness. Thus, demanding students require effective and efficient methods, and this along with the demands of the regulators, whose prime concern is the promotion of safety at sea and in ports, and of the industry at large is tending to force the arm of MET managers to at least be aware of the new requirements when considering the suitability of the qualifications of new staff to the job in hand – teaching Maritime English in the 21st century.

Nonetheless, teaching staff, however good they may be, will rarely blossom out if they work with poor materials or in isolation. In this respect, even though Maritime English is a niche market, there are still authors willing to write and publishers willing to print that Fred Weeks, who himself authored two renowned texts still found in use in various parts of the world[8], would be proud of. Marlins Study Packs (1997, 1998) are good examples of this, particularly for self-study purposes. Three more recent examples are Peter van Kluijven's *The International Maritime English Language Programme* (4th edition 2009), Maria J. Carrasco Cabrera's *Maritime Technical English* (2010), especially useful for Spanish speaking learners, and Tony Grice's *English for the Maritime Industry* (2012). While they are in traditional book form, often with an accompanying CD, there is a trend today to concentrate on computer-only productions, something that was in its infancy fifteen years ago when video was still the dominating visual medium. Two such productions are Marine Soft's *Bridging the difference: marine language training in compliance with IMO Maritime English model course 3.17* (2004) and Cambridge University Press' *Safe sailing: SMCP training for seafarers*; while two others are the outcomes of the European Projects *MarEng* (2004-2007) and *MarEng PLUS* (2008-2010), and are especially appreciated not only for their quality but that they are free of charge. These and a host of other relevant materials are catalogued and reviewed in Boris Pritchard's *A survey of Maritime English teaching materials* (2003, updated at IMLA-IMEC.com) produced as a research project funded by the International Association of Maritime Universities (IAMU).

As for working in isolation, this is no longer necessary in a world of instantaneous communication. The launching of the IMLA-IMEC website[9], having registered thousands of "hits" from many different countries to date, proves that there is a demand for a means to efficiently exchange information, views, methods and tools regarding the teaching of Maritime English. Where, in the past the only opportunity to maintain contact was at the biennial meetings of what was then called IMLA's Workshop on Maritime English (WOME), today it is possible to do this on a daily basis. As a result, in 2002 it was decided to change the name to the International Maritime English Conference (IMEC) to reflect a special interest group promoting cooperation and interaction among its members year round, and thus, by doing so come into line with the other IMLA sub-groups.

Furthermore, with the shift in crewing, shipping and trading patterns, IMLA had recognised already in 1998 that its Maritime English special interest group needed to embrace significant growth regions outside Europe. Thus, Asia was targeted and until2009 IMECs alternated on an annual basis between the two continents before being held in Africa for the first time in 2010 (IMEC 22, Alexandria, Egypt).

[8] *Wavelength* (1986) and *Seaspeak* (1988)

[9] www.imla-imec.com*Thewebsite includes articles and information on Maritime English, with links to "nautical" pages and other sites. There are also pages on engineering and grammar as well as presentations (VHF, SMCP + tests, weather, fuel system and grammar) that can be downloaded and saved.*

Perhaps one might have expected a decrease in attendance at such gatherings due to their regularity and the ease of otherwise keeping in touch. However, it would appear that the IMEC website has stimulated interest and considerably facilitated the dissemination of information of upcoming events. Whereas IMLA's WOMEs in the days of Captain Weeks were relatively small, regional affairs, for better or for worse today's IMECs are major international events attracting as many as 100 participants and intensive scientific programmes and activities compressed into 3-4 full days.

Back in 1997 much of the above would have been difficult to envisage. Thus while it is no easy task to chart the road ahead in this paper there are certain signs that can make an attempt possible.

PART 3 – The course ahead

Among certain groups of technicians in the shipping industry, namely ships officers/engineers and VTS personnel, there is a belief, maybe wishful thinking, that technology will take over communication and widely replace the restricted and limited human being. Two examples briefly illustrate this.

The introduction of GMDSS in the 1990s, a revolutionary innovation, indeed, also regarding Maritime English communication processes, should have set these "optimists" right. However, almost all the officers and students who fail GMDSS examinations do so due to their substandard level in Maritime English and not because they do not know which key to hit, control to press, or frequency to select. They simply get trapped by a light-minded trustfulness in the do-all equipment and assume that the GMDSS will perform all their communications, failing to realise that Maritime English competency will be required to gain the benefits the GMDSS has been designed for. Moreover, it became apparent, that a more demanding level of Maritime English proficiency is required by the users of GMDSS since this system merely provides close to perfect technology and not the language to really benefit from it. Consequently, it is primarily the Maritime English lecturers' task and challenge to change this attitude through enlightenment and discovery.

In addition, the introduction and application of the Automatic Identification System (AIS) should not lead to premature conclusions, despite IALA (2002) arguing that "AIS is found to reduce VHF voice messages and improve safety thus minimising language problems and reducing the chances of misunderstanding messages from VTS centres and vice versa." While this system is of enormous help as long as standard information has to be given, such as name/identification, draft, size, position, course, change of heading, destination and similar data, it will reach its limitations if extraordinary situations, for example, cases of emergency or distress arise when conditions, situations or processes have to be precisely described, controlled and handled communicatively. AIS is, unlike RADAR, a so-called passive system, and its users have to rely on the input given by the sender. Here a considerable number of so-called "errors" usually occur and ships officers often complain about what they call the "data garbage" they have to deal with. This is why still today VTS Operators do not depend solely on the data transmitted, but prefer to rely regularly on the oral (English) back-up information received via VHF.

In short, the authors of this paper feel that internationally much brainwork will continue to be exerted on the development of communication technology to a very high level, while insufficient effort will be spent on improving the language communication proficiency of the people expected to handle such sophisticated equipment created to protect the crew, ship and environment and in the wider perspective the efficiency of the maritime industry. Furthermore, the authors feel that as long as human beings operate vessels and take them via the seas and oceans to their destinations, and this will be the case for the foreseeable future, the development of technology and of the respective faculties of the ships' officers should be paid equal

attention. Consequently, the authors applaud IMO in placing the human element at the centre of its activities, and appreciate the promise of the new Secretary-General of the Organization to intensify this policy.

Furthermore, the authors, having worked extensively in assessing current Maritime English teaching profiles have observed the sudden rise in interest and concern of maritime organisations as to how to accommodate the new demands imposed by recent technological, legal, commercial, etc. developments in general and by relevant IMO Conventions and Documents in particular. Maritime Education and Training institutions, often reluctant to recognise Maritime English on an equal footing to Navigation or Marine Engineering, or to dedicate more instruction hours in an already tight programme, have been keen to find more effective strategies. Often this is attempted by paying little or no attention to the amorphous global body of Maritime English instructors at their disposal. This body, in the experience of the authors, consists of a group of career specialists, a group of English language and literature graduates often employed to teach general English, a group of native English speaking persons who are often not qualified teachers, let alone experienced in maritime matters, and a group of former seafarers who are thought or claim to have a good command of the English language but who seldom have teaching qualifications, let alone qualifications to teach (Maritime) English and/or Teach in English (TIE)[10]. Especially the latter seems to be favoured by the management of a number of MET institutions who encourage or order these ex-seafarers to teach their technical subjects in English and at best leave the English lecturers to teach general English or simply believe that the English they get from former seafarers is sufficient. This policy involves at least two unacceptable consequences regarding Maritime English as a generally recognised academic subject of instruction and research.

Firstly, Maritime English as a highly specialised means of language communication and a branch of applied linguistics requires a permanent theoretical back-up to be provided through co-ordinated global research, assessment and evaluation in the fields of linguistics and methodology to keep this subject of instruction abreast with the technological, legal, organisational and other relevant developments or innovations in the shipping industry which, demands close co-operation with scientists in technical/technological areas.

Secondly, Maritime English as a subject of teaching requires lecturers be they native English speakers or not, to be highly qualified in the areas of language, methodology and applied linguistics and prepared to improve their skills, knowledge and communication proficiency and adopt them to the standards required by lifelong learning.

If these essential elements are not given due support and appropriate consideration in the future, Maritime English as a subject of instruction will wither swiftly and will no longer be able to contribute to the safety of navigation and the organisation of the international seaborne business. The aforesaid two basic requirements cannot, in all fairness, be expected to be met by former seafarers, but this does not mean they cannot play an important role in Maritime English instruction.

To highlight the point in this respect, the late President of IMLA, Prof.Dr.G. Zade (2002), argued:

> …we do not only have to 'marinize' the English lecturers, we also have to ‘anglisize’ the technical lecturers. If we only pursue the former – ‘marinize’ - then the Maritime English Lecturers will always be faced with the superior technical knowledge of their technical colleagues. If we only pursue the latter – ‘anglisize’ – then we put the English lecturers out of business. The closer the two groups come

[10] *Nowadays, more and more MET institutions in non-English speaking countries teach course modules and even complete courses in English as the tuition medium thus, among other things, promoting the exchange of students (“mobility”) at an international level. This has been referred to as TIE (Teaching in English). In at least two cases known to the authors Professional Development train-the-trainer Courses have been run to enhance the English and presentation skills of teachers at MET institutions who are required to deliver courses in English.*

together through knowledge and experience, the closer they can be expected to work together. Both groups can help each other – and they should. Both should be each other's temporary crutch and catalyst.

This approach, often called "twinning" should undoubtedly gather strength in the years to come. Again, this also implies that the position of Maritime English as a discipline equal in status to other subjects such as navigation and engineering should be recognised at all MET institutions and the constant need to justify a co-equal position, which only too frequently seems far away, ceases to be a burden for Maritime English lecturers. In thisway it should be possible to recruit, educate and motivate general English teachers to become qualified Maritime English lecturers who can then look forward to a promising academic career.

Regarding the prospective development of Maritime English as a co-equal subject of instruction and research, specifically the following questions will need to be addressed in respect of future teaching profiles[11]:

- What types of Maritime English instructors are currently employed at MET institutions? What is the usefulness and limitations of each type?
- What are the linguistic and methodical requirements of a "qualified" Maritime English instructor? How can these requirements be met?
- What is the minimum maritime background knowledge required? How can this be best acquired?
- What further qualification measures for Maritime English instructors in the maritime field and in language teaching/ acquisition methodology can be identified?
- Which professional organisation or affiliation would best assist Maritime English instructors in meeting the requirements of the amended STCW?
- Is there a suitable body to oversee developments and advise (IMLA/IMEC) on progress?
- Is a Quality Management System for Maritime English instruction desirable, useful or even necessary?

From the methodological point of view, the trend over the last decade or so has seen many language teachers moving away from the cognitive view of communicative teaching to a more social or socio-cognitive view which places greater emphasis on language use in authentic social contexts. Thus what we are seeing today are task-based, project-based and content-based communicative approaches, which seek to integrate learners in authentic environments while integrating the various skills of language learning and use, making greater inroads into Maritime English syllabi. An interesting repercussion of this trend has resulted in a perspective on technology and language learning, termed integrative CALL (Warschauer & Healey, 1998), a perspective which seeks to integrate the four language skills of listening, speaking, reading and writing with technology in the language learning process. In such approaches, students learn to use a variety of technological tools as an on-going process of language learning and use on their laptops and other mobile devices. Further, when mixed with face-to-face classroom methods and other learning environments, a blended approach occurs where activities may be structured around access to online resources, communicating via social media and/or interaction with distance learners in other (class) rooms or other learning environments. Since language learning takes place when learners interact, (often incidentally), the blended learning approach would seem to provide a suitable vehicle for achieving the "effective communication" status that the amended STCW requires. Moreover, one could imagine that as the integrated uses of technology in daily life advance, it is important to embed them in the Maritime English training of future maritime personnel, both for the seagoing and shore-based career purposes of maritime academy graduates.

[11] *These questions are addressed in the IAMU research project entitled The Professional Profile of a Maritime English Instructor*

A remarkable waypoint on the course ahead was the revision of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, (STCW), 1978. After more than four years of intensive discussions and debates within IMO and on various other occasions the Manila Diplomatic Conference on the STCW Convention approved on 21 June, 2010a number of significant amendments to the STCW 1978 (as previously revised in 1995) Convention which entered into force on 01 January, 2012.
The Maritime English community is presently considering carefully and in depth the corresponding new or amended requirements regarding Maritime English and maritime communication of which there are many. The sooner the greater demands on Maritime English instruction and research are identified, the better position lecturers and researchers will be in to satisfy the new provisions and thus the complex requirements of the maritime industry. This in turn will impact on the design of Maritime English courses, their curricula, the materials development and assessment tools to be used, and even the training of Maritime English teachers, many of whom may need to update their knowledge and skills.

The predecessor to the Manila Amendments (STCW 1978/95) set higher demands first of all on the nautical and technical fields. It gave, for example, special attention to realizing competency-oriented rather than purely knowledge-based MET and assessment (Trenkner, Cole, 2010) leaving, however, further room for improvement as far as Maritime English instruction for deck and engineer officers is concerned.

Regarding Maritime English it is interesting and gratifying to note that this important issue has played an ever growing part regarding the three successive versions of the Convention, i.e. STCW 1978 via STCW 1978, as amended in 1995, and culminating with the Manila Amendments of 2010.

At least one term of reference determined by IMO for the corresponding consideration was highly relevant for our subject: *Requirements for effective communication.* In this context the following amendment in particular entails far reaching advantages for Maritime English as a subject of instruction and research and its reputation as a comparatively newly established knowledge area. The corresponding extracts read:

Regulation I/14

1 Each Administration shall … require every … company to ensure that:…

> *.7 at all times on board ships there shall be effective oral communication in accordance with chapter V, regulation 14, paragraphs 3 and 4 of the SOLAS Convention* (IMO, 2010)

There are at least two items in these tersely worded lines which, however, will have an immense impact on Maritime English as a subject of instruction and research.

Firstly, the modal verb *"shall"* as used in the regulation mentioned above postulates the highest degree of commitment in legal contexts, e.g. conventions, laws, decrees, regulations, provisions, etc., indicating orders or instructions. This means that the clientele to which this regulation applies has to meet the requirements set out as it is not a matter of discretion whether to do so or not. Consequently, Regulation I/14/.7 essentially strengthens the position of Maritime English lecturers and indeed the role of the subject as well.

Secondly, the reference to the SOLAS Convention of 2004 made above is of utmost importance for the future development of Maritime English, both for MET institutions and for the maritime industry and here especially for the complements of the active fleets and their shore based services such as Vessel Traffic Services (VTS) and allied emergency services. The SOLAS regulation referred to reads:

> *English shall be used on the bridge as the working language for bridge-to-bridge and bridge-to-shore safety communication as well as for communications on board between the pilot and bridge watchkeeping personnel* (IMO, 2004).

Here again the modal verb *"shall"* is wisely used with the implication described above, and this regulation is entirely in line with our IMEC policy, providing a solid legal foundation both for our work in class and for our research. Furthermore, it does away with the occasionally advanced argument that IMO has avoided specifically naming English as the binding language of seafaring in its legal documents. As a result, this essential regulation is highly usable at MET institutions and elsewhere, whenever the legal authority of Maritime English, its teaching and its teachers come into question.

Moreover, the SOLAS regulation advises the use of the IMO Standard Marine Communication Phrases (SMCP) in the contexts outlined. This advice strengthens furthermore the part the SMCP plays in maritime communication and thus in promoting safety at sea and in ports.

Although the outcome of the Manila Conference is not the optimum, it is, however, an acceptable common denominator and practicable instrument suited to further develop Maritime English as an essential but relatively new knowledge area in order to satisfy the new provisions and thus the complex requirements of the maritime industry in the foreseeable future. Indeed, there are more than a hundred rules, regulations, provisions, etc., in the STCW 2010 amendments and SOLAS as revised, which tacitly require a sound command in Maritime English otherwise these requirements, will not be met. These are a mandatory component of all future MET planning and thus must never be neglected.

Considering the aforesaid it should be kept in mind that any Maritime English road-map or sailing plan should allow for deviations and creativity, and for the latitude to adapt to the circumstances and conditions prevailing in individual countries and/or MET institutions or systems.

Curricula of Maritime English courses, teaching materials and assessment tools are presently being adapted, updated or newly developed in order to embrace the new or amended requirements set out in the Convention. Appropriate methods are being applied as discussed and promoted at our conferences as, for example, content-based teaching/learning based on a communicative approach. Furthermore, Maritime English lecturers need also to become qualified to enable them to meet the demands set out (Cole, Pritchard, Trenkner, 2005) thus highlighting the need for certification through teacher training courses.

As mentioned above, the question may be asked whether a Quality Management System (QMS) for Maritime English instruction is desirable, useful or even necessary. The general purpose of operating a QMS system is, that the MET objectives shall be achieved based on the requirements of STCW 2010, SOLAS as revised and other relevant legal documents. The corresponding audits at MET institutions include, as a rule, Maritime English as a subject of instruction. At random, classes in progress are observed by the auditor, who is normally not a qualified Maritime English instructor and her/his impression of the instructor's and students' classroom activities is laid down in a corresponding form which does not differ from those used for nautical/technical subjects. The Maritime English/communicative competence of the students, progress made etc. are not subjected to the auditing. At the end of the semester the Maritime English lecturer has to sign a document stating that s/he has met the requirements as laid down in the QMS Manual and that will suffice for re-certification. This leaves the impression that "QS certification is sometimes more important ... than the actual quality of MET" (Loginovsky et al., 2005), which in the case of Maritime English is totally unsatisfactory. Thus, Maritime English/communication needs a QMS system which

- defines in detail the corresponding requirements set out in the STCW 2010 and SOLAS

- refers to appropriate methods to realise the requirements mentioned above
- offers a practicable assessment tool, and
- provides a professional profile for Maritime English instructors.

The authors are aware, that such a system may hardly get a chance to be implemented on a legally binding international basis. However, within IMLA-IMEC an in-depth discussion could be stimulated whether the development of "IMEC internal" quality management guidelines is worth considering.

Last but not least, an appropriate assessment tool has to be developed and a standard yardstick adopted (Cole, C.W., Trenkner, P., 2009) in order to make an instrument available to MET institutions and the industry suited to reliably assess and measure the communication performance of students and/or officers. In this respect, one looks forward to the outcome of the European projects *MarTel* and *MarTelPlus* (2009-2012), which are designed to standardise the testing of Maritime English language proficiency through an interactive platform, as well as the proposed *SeaTalk* project (2012-2015) designed to create a qualification framework for effective communication at sea. Assessment is a challenging task but necessary not only to satisfy the new provisions but also to simply benefit our students by ensuring their safety in the fleets they serve and the safety of shipping in general.

As for any *long-term* map to show the way ahead for Maritime English as a subject of instruction and research, this is bound to be influenced by global developments in geo-politics, commerce and technology that may fundamentally affect the status of the English language in general. Questions such as:

- What will the role of English be in the world in 20 years, 50 years, at the end of the century?
- How will languages be learned and taught?
- Will technology preclude the need to learn other languages at all?

…leave us much to ponder over in the future.

CONCLUSION

Whither Maritime English? Fred Weeks question is as relevant today as it was before. The difference is that his future is now our past and while the issues he raised have been largely addressed, new issues have since emerged. This paper has attempted in a modest way to anticipate the future by appreciating the present and understanding the past.

Are we then on the right course? This will be left for the Maritime English commentators of the future to decide. What we in the profession today must be aware of and anticipate are the changes that can affect the subject we teach and continue to strive to find ways to influence these changes constructively, particularly in the role we play as mentors. In doing this IMLA's International Maritime English Conference is in a strong position to continue playing a leading role.

Finally, a somewhat disheartening quotation for all those who have struggled in vain to master the English language but perhaps one to use to convince managers who fail to observe the stress laid on communication and English language skills in STCW 2010.

> English has become a lingua franca to the point that any literate person is in a very real sense deprived if he does not know English. Poverty, famine, and disease are instantly recognized as the cruellest and least excusable forms of deprivation. Linguistic deprivation is a less easily noticed condition, but nevertheless of great significance. (Burchfield 1985)

To answer the question "Whither Maritime English?" for the time being, we may state that our vessel is on the right course. However, important waypoints have still to be set by careful voyage planning.

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INDUSTRY-UNIVERSITY COLLABORATIONS FOR MET PROGRAMME THROUGH ICT

Abstract

Nowadays, Information Communication Technology (ICT) becomes a valuable and important component for the global maritime industries and maritime educational institutes that presents both new opportunities and challenges. The main question addressed within this paper is the notion of knowledge clusters is used to position how a Maritime Education and Training (MET) institution may interact with a particular segment of marine industry within the cluster. In addition, the feasibility of construction virtual community, or computer environment to support MET programme, as technical web-site prototype design which is the fourth generation technical platforms that can be used to facilitate both social and technical consideration of practice. In this paper, to implement the MET programme, through ICT for educational preparation for the maritime community and how can use the possibilities enhancing ICT technologies to support communication and collaboration with private and public organizations is proposed.

Keywords: Information Communication Technology, maritime industry, virtual community, knowledge cluster, maritime education and training

1. Introduction

Increasingly, Information Communication Technology (ICT) is an important component for the global maritime industries and maritime educational institutes that presents both new opportunities and challenges (Hersham, 2003; Constantinescu, 2003). It can be recognized that for Maritime Education and Training (MET) Institutions, both national and international relationships have a high priority to further, for example, students' qualification development and certification training. Within a maritime community, strong interaction and collaboration with the shipping industry is therefore important to support education and training activities.

In the maritime sectors, MET is the key role to deliver the skills and knowledge for the next generation of seafarers. English may also be the main communication language of the sea and all the trainer and learners come from many different places and thus English is widely gap in seafaring community. Arguably especially for a developing country, this is of essence to improve the national maritime competency base. The main question addressed within this study is how MET institutions may use the possibilities arising from ICT technologies to support communication and collaboration with private and public organizations to support education and training?

The objective is to further the understanding of how MET institutions can utilize ICT to improve working communication and collaboration within a given maritime community to improve education and training. For investigation, one case that targets the feasibility of constructing a virtual community by using ICT is explored. Both opportunities as well as challenges of developing a maritime community through ICT are

investigated. The case uses the development of ICT at the Myanmar Maritime University to support a MET programme as a unit of investigation. The application of ICT in the context of the MET programme is argued not only to have the potential to improve the students' education and training but may also concretely result in the increase of job opportunities both nationally and internationally.

The society we live in is rapidly changing into a knowledge society (Nonaka, 1994). The successful management of knowledge plays a key role in the interplay between technical product development and strategic organizational development. This paper gives an introductory overview of how ICT can be used to further the management of knowledge with a focus on the actors in the maritime cluster. Four areas of interest are described:

1) Knowledge clusters: An overview is provided of how ICT may be put to use in the knowledge cluster with a focus on the development of human resources, not only in the education sector but also recruitment in interaction with the shipping industries. Knowledge clusters are used to position the contribution of this study.
2) Information Communication Technology (ICT): The capabilities of ICT systems are rapidly developing, which opens for new possibilities to support organizations and industries. For this study, relevant definition of ICT systems is given.
3) Virtual Communities: ICT is put in the context of the notion of virtual community that can be used to describe social interaction and exchanges between users online.
4) IT design approaches: The final section describes the importance of both technical and social considerations when designing a virtual community.

2. The Knowledge Cluster and its Characteristics

Entering the information age, the successful management of knowledge has evolved into a strategic focus to grasp and retain a competitive advantage. In the construction of knowledge, managing information and relationships from diverse sources is essential for new business opportunities (Asheim, Cooke, & Martin, 2006). For a given industry, this concerns developing and maintaining both national and international social interactions. To this end, being able to combine technological and human resources is important to create the structures concerning the concept of knowledge management (Raisinghani, 2000). To discuss how a sector of industry can develop, the notion of knowledge clusters is applied.

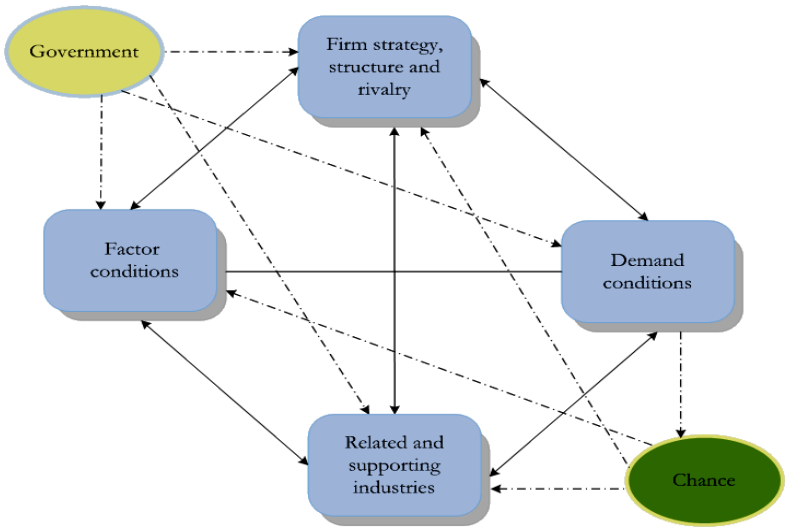

Figure 1. Porter's Diamond for the competitive advantage of Nations

Source: Porter (1998). *The Competitive Advantage of Nations*, Creative Print and Design, Great Britain, 1998

A knowledge cluster can be used to define networks in private, government, and academic sectors that collaborate through, for example, exchanges of information, project planning, and joint research entities. Within a knowledge cluster, one may also discuss how technical innovation may be organized around universities, public research institutions and industry entities within or around a particular region. With the diamond model, Porter (1998) offers an approach to analyze how it is possible to benefit from concentrations of interconnected industries and institutions within a knowledge cluster (see figure 1). The simultaneous existence of competition and cooperation is significant in this model. The basic idea of the framework is to define the scope and organization of a nationally or internationally derived knowledge cluster and to determine its strength and how it may lead to economic opportunity and ultimately to a sustainable competitive advantage.

As is illustrated in the figure, the diamond model consists of four interlinked dimensions: firm strategy, structure and rivalry, factor conditions, related and supporting industries, and demand conditions. In addition, two exogenous variables are defined: "chance" and "government" that affect all other components.

This paper shows ICT's potential role within the knowledge cluster from the perspective of one particular case instance: the possibilities to develop the process around the MET programme through ICT. It is not the intention to put forward an all-encompassing analysis of factors affecting the knowledge cluster, but rather to position how ICT as sub component may support the communication and exchange between different dimensions and actors. MMU and its stakeholders by applying will be analyzed using Porter's diamond model. Challenges as well as opportunities are identified.

2.1 An overview of the conditions underpinning Myanmar maritime industry

Myanmar is considered to be a "developing" country in regard to the current state of its Maritime industry. Although Myanmar, with its many rivers and long costal region, has good natural conditions for an extended national water transportation system it can be recognized that it is still comparably weak.

Considering developments underway, Myanmar does, however, strive for a rapid extension of its maritime related capabilities. In terms of infrastructure, rivers and a new deep-sea port are for example under development. Such initiatives are both intended to benefit domestic maritime transportation and industry and improve Myanmar's position as a global maritime actor. These developments are reflected in statistics from the UNCTAD maritime review 2007.

In addition to infrastructure, human resources may be considered. According to the department of marine administration there are 83,193 (up to 2012) Myanmar seafarers officially registered for ocean going vessels with the Seamen Employment Control Division (SECD) which operates under the auspices of the Department of Marine Administration (DMA). This includes between 40,000 to 45,000 seamen that annually serve on international shipping lines.

2.2 An increased demand for qualified seafarers

Maritime Services are playing an increasingly vital role by transporting merchandize cargo of all kinds, as for example oil and gas. In addition, foreign going ships, luxury liners, and holiday cruises have become popular and thereby further increasing the demand for shipping services (Michaelowa and Krause, 2000). To provide these services, it has become necessary to have a growing number of skilled and highly competent sailors, officers, and engineers. This has opened up possibilities for arguably especially eastern

countries including Myanmar to compete with the rest of the world to produce more professionals in the maritime field.

International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) 1978, as amended, Regulation I/14 hold companies responsible for the assignment of seafarers for service on their ships. To ensure that "at all times on board its ships there shall be effective oral communication." Due to this regulation, the unique communication between MMU and shipping companies can have a chance to success by building trust, skills, engagement and commitment among shipping industry.

In times of an increasing need for seafarers, the shipping industries are also looking to recruit new young seafarers directly from the maritime universities. This provides a cost benefit as well as seafarers with the most recent qualifications. To this end, and to become an all-round maritime actor, a focal point is to not only produce a great number of seafarers – quantity - but also focus on the development of relevant and competitive capabilities and competencies – quality. A step in this direction was achieved by becoming a white-listed country according to the 74th session of the Maritime Safety Committee of the International Maritime Organization (IMO) in 2007.

2.3 The strategy of industry actors included in the maritime knowledge cluster

The water transport sector is an essential service and is also often an important factor in the development of a strong economy on the national level (Michaelowa and Krause, 2000). Therefore, nations, and emerging eastern economies, are especially making efforts to develop competitive Myanmar maritime technology and to nurture and produce highly qualified seafarers, marine officers and marine engineers.

The Myanmar shipping industry is now putting considerable efforts into standing shoulder to shoulder with other international actors. On a national level this is considered of essence to strengthen the national interests and economy as well as earning more foreign currency. Myanmar also has a growing number of workers holding seafarer certificates, and more workers means greater income for the country. In spite of efforts to produce maritime officers and engineers, there is a shortage of Myanmar seafarers due to the yearly demands of the shipping industry.

To complement the services of existing educational institutes and training facilities the Department of Marine Administration (DMA) encourages ship-owners and manning agents both nationally and internationally to assist with qualification development.

2.4 MET institution as a supporting actor

Within the mandate of the MMU is to contribute to the development of the maritime transport sector by developing human resources both for the education sector and for recruitment by public and private organizations in connection to the maritime industry. To this end collaboration with partners is a key component. For educational purposes, although basic training facilities have been established, additional training capabilities are still in need. To develop a comprehensive maritime education system for students and to upgrade teaching and promoting teachers' qualifications, MMU is therefore affiliated with international institutions and societies.

As stated in the prior section, national and international partners within the shipping industry also constitute important collaboration partners. In times of increasing demands seafarers with up to date competencies, the shipping industry is interested in collaborating directly with universities. By being able recruit already young but well-qualified seafarers, the shipping industry is hopping for cost benefits and

thereby better commercial financial outcomes. Such collaboration is also inline with the interests of the government to enable an increasingly prominent position within the international maritime community.

A strong interaction within this cluster of affiliated actors is of essence and may be regarded to constitute a precious opportunity not only for the development of MMU and the training of its students, but also for the other partners involved. Currently, it may, however, be argued that the process surrounding the MET programme can receive further development to ensure a smoother operation.

2.5 The important role of government

The government of Myanmar is playing a vital and active role in shaping the environment of academic matters and has launched several programmes to increase the role of ICT technology. The government is today making efforts to enable the nation to keep pace with others, to bring about harmonious and equitable development across the nation, and to strengthen the national economy. Overall, in striving to enhance the national economic life, systematic measures are being taken to improve the production sector, the transport sector and the trade sector that contribute to economic improvement. This includes efforts taken within the maritime transport sector as it plays a key role in economic development (Sletmo, 2001).

The government of Myanmar is also strongly encouraging the use of ICT in socio-economic development. Five focus areas have been identified: ICT Infrastructure, ICT Legal Infrastructure, ICT Education, ICT Application, and ICT Industry. Examples of practical measures taken include the establishment of e-learning centers, e-resource centers and computer training centers in connection to the education sectors. By leveraging the benefits of ICT, the government of Myanmar wants to increase productivity, market penetration, reducing cost, and improving services in socio-economic organizations.

The government of Myanmar is also taking an active stake in the maritime education sector and MOT has for example a responsibility for students serving within the maritime industry both nationally and internationally. In addition, the Department of Marine Administration (DMA) is the sole organization with the agreement of the shipping companies concerned to control recruitment, welfare, and the rights of all Myanmar seafarers.

2.6 ICT as an opportunity to develop the organizational process

The development of new ICT systems may be recognized as an important component with the potential to shape the interaction between MMU and its stakeholders. The MET programme within the knowledge cluster, it investigates how it is practically possible to develop a usable and useful technical prototype to improve collaboration and smooth operation between the actors involved.

3. Information Communication Technology platforms

ICT platforms are being dramatically developed day by day. This paper focuses on a particular instance of such platforms called Content management systems (CMS). Today there are a wide variety of CMS available in the open source community and in the commercial market; (http://en.wikipedia.org/wiki/List_of_content_management_systems).

To design a technical prototype for the purposes of this paper, a technical platform called DotNetNuke is used which is an open source solution and thereby freely available to everyone. DotNetNuke is a fourth

generation web-based platform written in VB.net for the ASP.net framework. In fourth generation web-based platforms, an existing framework, as well as software modules, can produce a complete technical product through administration and configuration. Traditional programming skills are thus not necessarily required for a successful outcome.

Below some of the fundamental characteristics of the DotNetNuke platform are described. Although particulars may differ, overall, it can be recognized that many fourth generation web-based platforms work in similar way. Practically, the platform acts as a host environment that contains aspects such as menu and security management. It becomes highly adaptable for building custom applications with different pieces of functionality such as document management, announcements, and forums. Often a number of readymade and configurable components are available, which can make it possible to quickly implement a feature in the portal (Walker et al., 2005).

4. Virtual Communities

Within the context of this paper, the CMS DotNetNuke is used to construct a virtual community. A virtual community supports human interaction with communication media for social, professional, educational and other purposes. It enables social interaction and exchange between users online rather than face-to-face and can support information sharing within an organization. Practical examples of pieces of functionality may include chat rooms, newsletters, telephone, email, online social networks or instant messages. A virtual community provides new opportunities for interpersonal relationships; allow networks that provide sociability, support, information, a sense of belonging, and social identity (Wellman, 2001). Using a virtual community, participants can not only exchange information but also contribute to the development of the knowledge. Depending on the mission of the virtual community or work group, face-to-face meetings can bring problem solving, developing new capabilities, leveraging best practices, standardizing practices, time savings, increasing talent, and avoiding mistakes (Rheingold, 2000).

5. IT design approaches

5.1 An overview of the function of the MET programme

As a MET institution, it is within MMU's core interest to give its students great opportunities both during and after their education. Therefore, MMU strives not only to upgrade the students' knowledge base but also to present them with good job opportunities. To put forward as such an opportunity as it in addition to having educational qualities also gives a student a possibility to, for example, seek overseas jobs to a shipping company.

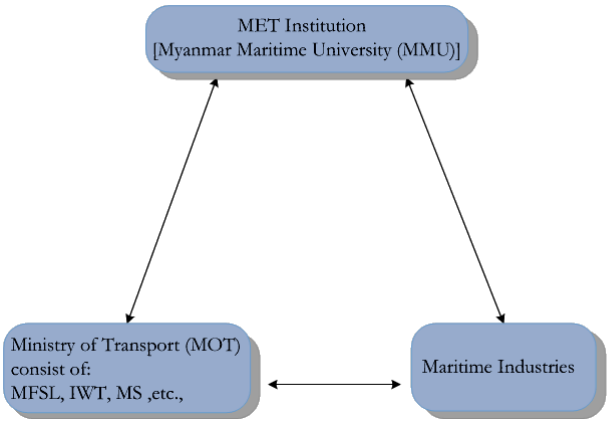

Figure 2. The relationship of the University with its stakeholders

Source: Author

5.2 Designing the MET programme using ICT

This paper focuses on how is it possible to practically work with the design of ICT, both usability of technical tool and its usefulness in an organizational or industry setting.

Andersen, et al. (1990) argues that knowledge from many professions are required for systems development and it can be recognized that many different actors have to cooperate in the design process of ICT, including both work categories with business and technical know-how. To this end, a challenge becomes to evolve "working relations of technology production and use" (Dittrich et al., 2002).

The work within this paper includes systems development that traditionally consists of activities like programming, system description, feasibility paper, conversion, maintenance, and training of users, project planning, estimation, and quality assurance. All these activities aim at changing an organization through the use of computer technology.

The particular system development approach selected to guide this paper is Extreme Programming (XP), which is part of a family of so-called agile methods. Agile methods ought to function, as the name suggests, by providing quick and simple solutions to software development (Abrahamsson, et al., 2002). XP was developed to counter long cycles that characterized traditional software development methods (Abrahamsson, et al., 2002). It is said that one of the major strengths of XP is its involvement of the customer/user in the development process that ensures the user gets the software he/she needs. XP has a number of practices that gives support throughout the development process. These practices are under-lain by fundamental values, fundamental principles and basic activities. In total, 12 practices have been discussed by Abrahamsson, et al. (2002).

The basic goal of the ICT design work undertaken within the scope of this study is to design an explorative prototype that both focuses on the development of technical computer support and the tailoring of technical pieces of functionality as well as capturing the practices, interpretation, and appropriation of the user stakeholders. A substantial part of the study work was to practically design a technical prototype in using the DotNetNuke framework.

To support the design, the XP development framework was chosen because it's featured tools and techniques support technical development as well as the development of work organization processes. In line with the development technique of simple design, the overall mission of the process was to develop a basic prototype that could practically illustrate the feasibility of applying ICT to support the MET programme.

5.3 New technical items of functionality: an overview

The portal prototype will be created as a simple design referring to the organization, the main story cards consistent with the priority will be created as Home, News and Events, Information, International, and Support stating the metaphor. As illustrated in figure 3, all the modules planned have been developed but are at various stages of activation.

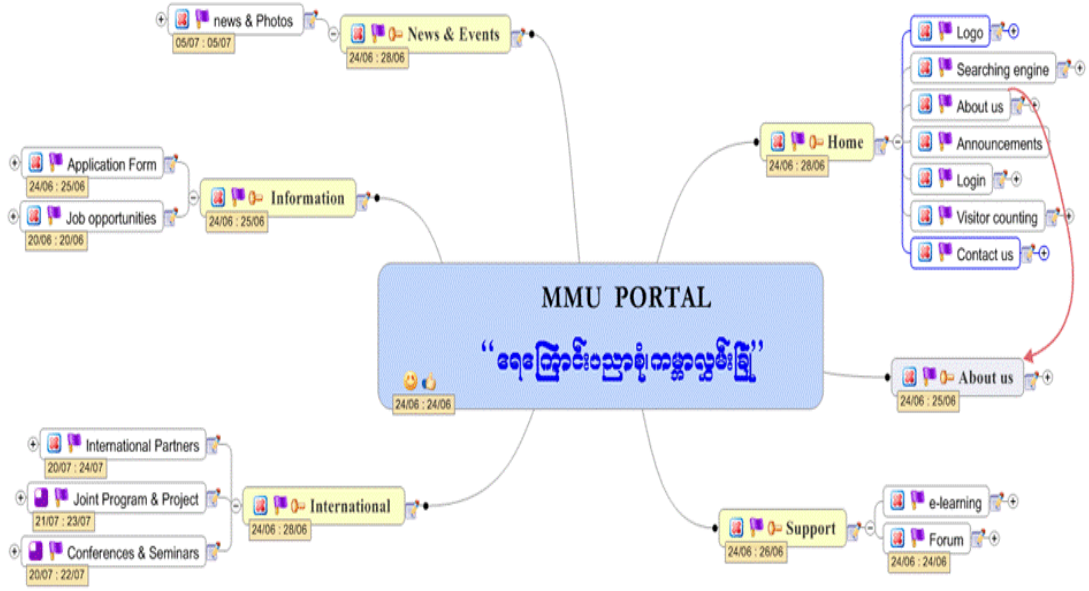

Figure 3. MMU community portal design in detail
Source: Author

5.4 How the new pieces of functionality are used in the work process

The **international** page presents the international partners, joint programs and projects and conferences and seminars. The students can easily get information concerning which professional institutions and universities that are affiliated with the University to develop a comprehensive Maritime Education System, to produce fully qualified undergraduates and to upgrade teaching and promote staff qualifications and to carry out the necessary research work for the development of the University.

Figure 4. The affiliated partners of the University international page
Source: Author

Moreover, they can see which organizations support the University to educate to international standard maritime officers, engineers and architects for ship building to offer related training because the University has provided shore and onboard training such as laboratories, simulators, workshops and shipyards; which shipping industries cooperate with the University to grasp a great chance and career opportunities for the students before and after graduation. The international partners' page consists of link to the website of the affiliated partners and it is shown in figure 4. Joint programs and projects and conferences and seminars page will not be developed at the present time.

In addition, some important project such as MarTEL can be developed because of Myanmar Seafarers new examination system needs English proficiency test. Due to the notification 108/2012 it requires all seafarers sit for O.O.W or O.E.W examination shall complete English proficiency test during their examination. For that reason, the international partners' page consists of link to the website of the affiliated partners and it is shown in figure 4. Joint programs, projects, conferences and seminars will be developed in future.

As a result of this page, the students can directly enter the different shipping industries web site and can check each affiliated partners' information. The **support** page consists of e-learning and a forum. The students can easily share knowledge and exchange information in the forum but e-learning page is not explored in it but it will be presented in the future.

6. Conclusion

In relation to the main dimensions of the knowledge cluster, it is shown how it is possible to position and situate a potential contribution of ICT in relation to the case of the educational process from a strategic point of view. A foundational concern underpinning the discussion is that for Maritime Institutions, both maintaining and developing national and international relationships have a high priority to further. This is, especially, important for a developing country like Myanmar to improve the national maritime competency base and enhance the affiliation with international maritime industries.

Thus, through a flexible design project, ICT can be applied to build a virtual community to strengthen social interaction within the knowledge cluster. To this end, an overall challenge and an opportunity in the design is the technical codification of the relations and know-how that exists today. Within the context of this paper, MET programme framework through ICT can be used to achieve the required cooperation of professional, personal and competency skills development. In MET programme, Maritime English is an example of a concrete educational intervention that can be instituted to address the significant educational gap such as the knowledge gap. By doing so, Maritime English course is able to better understand the ways both trainers and learners in nationally and internationally will be the norm during their careers. As such, the MET programme through ICT should include educational preparation for the dimension of the maritime community and how it may be possible to deploy ICT to improve communication and smooth operations between the targeted actors.

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SHARING EXPERIENCES AND IDEAS IN TEACHING MARITIME ENGLISH TO MYANMAR MARITIME UNIVERSITY STUDENTS

Abstract

Myanmar Maritime University students who are would-be seafarers should be proficient in understanding and using Maritime English, which is essential for the safety of life at sea, ship property, pollution prevention, etc. Nowadays, there are more and more multi-lingual and multicultural nationalities who are working on board. Therefore, in order to be able to communicate successfully on board, mastering Maritime English for MMU students, before they work on board, is one of the important components which ensures the safety at sea.

This paper mainly focuses on the maritime English lecturers' experiences and ideas in teaching Maritime English to MMU students, including some difficulties and problems which encounter during their work. The present paper also intends to offer the information about the background history of MMU, the selection and admission of MMU students and the life of MMU students, who come from different parts of Myanmar.

In teaching and learning process of Maritime English, strengths and weaknesses are presented in the paper to express the significance of Maritime English to mariners, seafarers and MMU students. In addition, MMU English teachers who are dealing with Maritime English play an important role to achieve the goals of teaching, using proper effective pedagogies and methodologies to help the students in maritime related fields perfect their language skills. In this paper, some recommendations are made to reform the ineffective old teaching methods used by some teachers in MMU.

Keywords: Maritime English, experiences, ideas, MMU students, strengths, weaknesses

1. Introduction

Myanmar Maritime University (MMU) which is located in Thanlyin on the outskirts of Yangon, is the premier university of maritime education in Myanmar. MMU, administered by the Ministry of Transport, offers five-year bachelor degree programs and two-year post-graduate diplomas in various marine and naval disciplines. MMU is one of the most selective universities in Myanmar as many of its students find good job opportunities on board or abroad. Myanmar Maritime University is established with the power and function to educate students to become certificated officers of international standard in accordance with the International Maritime Organization Regulations.

In order to be able to communicate effectively and skillfully on board, it is essential for the MMU students who are future seafarers to learn and study Maritime English thoroughly at the university. Nowadays, Maritime English plays an important role in the safety at sea because ineffective and incompetent communication is the major cause of the many accidents at sea. Maritime English has been regarded as the language of the sea, which is used in all situations such as ship-to-ship, ship-to-shore and between

maritime personnel. Furthermore, ship crews are multi-national and multicultural instead of being from a single country.

Taking into account of the fact that Maritime English plays more and more decisive roles to be safer at sea, and based on IMO model course 3.17 and SMCP, MMU teachers has recently designed the new course book (Text book) for the 1st year to the 3rd year students, who will become officers and captains on board.

In order to meet the requirements and recommendations of STCW 1995 convention, the contents of the text books of MMU students are clearly set out, along with the levels of language knowledge and language communication skills of the MMU students. IMO model course 3.17 for Maritime English assists the Maritime English teachers and lecturers in organizing and introducing new training courses or enhancing, updating or supplementing the existing training materials and fulfills the competence regarding Maritime English contained in STCW 1995.

MMU students and all the teachers of the English Department who have never been to English Speaking countries, are non-native speakers. That is why in teaching learning process of Maritime English, all the teaching staff of MMU have to make an attempt to meet the needs of STCW convention and IMO model course 3.17. In teaching Maritime English to MMU students, most of them are so clever, intelligent and high in their learning motivation, except for a few students that they can reach the certain level of understanding Maritime English without much difficulty. Maritime English lecturers of MMU, in general, play a vital role in achieving the goals of teaching Maritime English, which is an important component for MMU students, who are would-be seafarers in the future maritime areas.

2. Background History of MMU

Myanmar Maritime University is the first maritime university in our country, internationally standardized by ISO. This University was temporarily opened in the compound of Institute of Marine Technology (IMT), Bayintnaung Road, Sinmalike, Yangon on August 1, 2002. Now it is transferred and opened in Thanlyin, Thilawar.

Ministry of Transport is the authority to manage and administrate the Maritime Transport, Shipbuilding, Port and Shipping Management, Waterways maintaining and revealing, and Safety of life at sea as well as Myanmar seamen to get jobs in foreign going vessels. On March 29, 2004 the Myanmar Maritime University was inaugurated with the modern design in Thanlyin, Thilawa and about 2000 students are studying theoretically and practically at the university.

Our university which is situated in Thanlyin, Thilawa within a large and spacious compound, has one main building having three stories and painted green. Moreover, the buildings in which the students are being taught are very grand and look amazing. Each building has its own colour, one blue, one green, one pink, one white and one yellow. The total of five teaching buildings has about twenty classrooms and have many supplement teaching appliances in order that the students can study their specializations with perfect teaching supplies and the rooms are well equipped with ventilators so as to study their subjects comfortably.

The main function of Myanmar Maritime University inaugurated by Ministry of Transport is to develop human resources by producing qualified Naval Architects, Ocean Engineers, Marine Engineers, Marine

Electrical Systems and Electronic Engineers, Port and Habour Engineers, River and Coastal Engineers and Navigation Officers.

3. Selection and Admission Standards

Not only male students but also female students who have got at least 400 out of 600 marks in University Entrance Examination are allowed to apply for a seat. All the students have to pass medical examination and eye sight test. Only those students who are colour-blind are not allowed to pass the entrance of the university. A student must be at least five feet and have a weight of greater than one hundred pound to get passed the physical examination.

MMU is one of the most selective and well-known universities in Myanmar. As many of the graduates receive job offers from foreign shipping firms, admission to the university is highly competitive. All the students who joined to MMU are top ten students from different places of Myanmar and they are also bright and intelligent students who obtain highest marks in the whole country.

4. The life of MMU Students

MMU students, who passed the university entrance exam with highest marks in the whole country, come and join the MMU from different cities and different rural areas of Myanmar. Some parents can afford the expenditure of the university, but other can't because the cost of accommodation, food, clothes, tution fees, and travel charges are very high. Some students who live in Yangon come to the MMU by ferry, by bus or by car. They are very tired when they reach MMU because the journey is too long. It takes nearly 1 or 2 hours, depending on the places they live, to get to the university from Yangon, taking the very crowded bus.

The only hostel (Kantkaw Hostel) for MMU students situated near MMU only holds about 400 students, so other students who come from rural areas have to rent a house or a flat in Thanlyin or in Yangon.

5. Experiences and Ideas

MMU teachers of English Department, who teach Maritime English designed by themselves to the MMU students, have encountered some experiences including difficulties, strengths and weaknesses in the process of teaching and learning Maritime English.

One of the greatest problems for MMU students at the MMU is that some of the students are not aware how important it is to use Maritime English in their future either because they are not sure if they will pursue careers in this field, or because they rely on their knowledge of general English, underestimating the importance of maritime terminology. Although they have obtained highest marks in the Matriculation Exam, those who come from rural areas which is far away from the big cities (eg.Yangon) are usually weak in English. They lack enough courage to speak English publicly, especially with foreigners, so they rarely participate in the competition of debate or impromptu in the language laboratory. They are worried about any mistakes they can make during the conversation. As a result, in the speaking period they are silent and have barriers in speaking English psychologically. Hence, this blocks their way to be competent and skillful seafarers on board. Some students, experiencing the university life for the first time, have no desire to attend classes including English classes and don't wish to learn and study Maritime English, thinking they

can easily memorize it without exactly knowing the meaning only when the examination draws near. Thus, they cannot learn Maritime English thoroughly in the classroom, not listening to the teachers' explanation carefully.

Some students have difficulties in expressing themselves clearly, whether in maritime or everyday English, forming long and complicated sentences. Another difficulty for students is memorizing of maritime vocabulary and SMCP phrases when they do not know the meaning of the words in their native language. They can understand the meaning wrongly if they do not have enough knowledge of vessel structure and equipment.

The next point is that coming from rural areas, not big cities, never having studied general English at private school since their childhood, some students lack good command of English and can't catch and understand the listening materials. It is more difficult to understand the linking sounds, weak forms, stress, intonations and different accents of different speakers. From my point of view, they are too weak in listening skill to understand the sounds of the foreigners because they rarely touch the listening materials, thinking of not being important for them.

To view the writing skills of MMU students, being highly intelligent persons, and having and knowing the elements of English words very well, they can write long and complicated sentences using adjective clauses and adverb clauses a lot, except for a few students who are not basically skilful in English.

Having highly intelligent quotient, they can invent and create good sensible sentences expressing their thoughts and ideas. However, a few students, maybe 10% or 15% of students have problems to write correct sentences due to lack of some knowledge of English.

The reading comprehension passages, which were extracted from IMLP and other books related to Maritime studies, are properly selected to meet the requirements of IMO model course 3.17 and STCW 95. One of the problems we encountered in teaching Maritime English reading passages is that MMU students have no courage to read aloud individually, being frightened of making any mistakes in pronunciation. So, the teacher reads the passage aloud first to make them know the correct pronunciation, stress, and intonation and explain it in English, but sometimes in bilingual. Although textbooks and Maritime English teaching materials are properly chosen, updated and authentic teaching materials in teaching Maritime English to MMU students are required every year to keep up with new development in shipping industry.

In teaching English grammar to MMU students, most of the students are very interested in learning grammar, knowing that they need to know grammar to pass the exam. Not having enough materials related to Maritime English grammar, those from general English grammar books are mostly used.

6. Strengths and Weaknesses

After sharing the experiences and ideas in teaching Maritime English to MMU students, we want to give the strengths and weaknesses in the process of teaching and learning Maritime English.

The findings show that in the process of teaching and learning Maritime English, strengths are:

- high qualification of faculty members
- high qualification of visiting lecturers
- high intelligent quotient of the students

- high motivation of the students
- Maritime English is compulsory, required by STCW and SOLAS conventions
- teachers of English are eager to gather maritime knowledge and experience
- teachers are often highly motivated and inspire the learners
- new course books based on IMO Model Course 3.17 and STCW 95
- In the process of teaching and learning Maritime English, weaknesses are found as follows:
- intelligent but disobedient students
- de-motivated teachers because of very low salaries
- wrong methodology of teacher-centered approach instead of student-centered one
- lack of efficient teachers
- lack of efficient facilities and amenities
- lack of exposure of English _ big difference between cities and rural areas
- too large classes
- de-motivating classroom environment and facilities
- one-way communication in classes from teacher to students
- students only learn to pass exams
- insufficient number of qualified teachers
- Maritime English not perceived as a real subject
- Maritime English teachers are not professionally qualified
- modern technology often frightens staff
- teachers have no real onboard experience
- teaching Maritime English is not regarded as a positive career step

7. Recommendations

Having in mind these experiences, we, as Maritime English teachers, would like to give the following recommendations.

To become competent seafarers, students should be helped to communicate in English confidently and fluently and develop their four macro skills.

To meet the requirements of IMO conventions, updated and authentic materials related to the maritime areas should be carefully selected and taught to the MMU students

- To improve students' writing skills, assignments, business letters, notices and marine note of sea protest, etc. from shipping companies need giving the students. Gradually, the students will know how to write the correct ones, without taking the help of the teachers.
- To promote the students' communicative skill, instructors must give top priority to the listening for the input of good listening materials will contribute to the language acquisition. It is good if the listening materials are of different English varieties, closely related to their future job.
- To help students improve their speaking skills, lecturers should choose the concise and understandable SMCP phrases in students' training to operate the ship. To do role playing, teachers should use some authentic situation first. While making conversations, lecturers should not pay too much attention to their pronunciation and structures not to undermine students' confidence. If lecturers want to build students' confidence in speaking, they should not correct mistakes until the end of the task. Thus, students can use the language to communicate freely.

- To check the reading ability of students, the authentic reading materials related to maritime field should be used, thus students can become more interested in reading. Gradually, comprehensive reading will broaden the students' horizon and enlarge the students' vocabulary.

Another important suggestion, often neglected, is that the experience of Maritime English teachers of MMU should be updated. It is essential for the Maritime English teachers to have on board training to provide the students good knowledge of maritime education. It is also essential to have enough teaching periods for Maritime English to obtain more competence in Maritime English in the long term.

The last important point to be recommended is that it is necessary to exchange Maritime English teachers between countries to share their ideas and experiences of teaching Maritime English to each other.

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List of Abbreviation

- IMO = International Maritime Organization
- IMLA = International Maritime Lecturers' Association
- MMU = Myanmar Maritime University
- STCW = Standards of Training Certification and Watchkeeping for Seafarers

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To Encourage Accent Neutralization in Maritime English

Abstract

Accent is defined in some dictionary as the characteristic of pronunciation especially determined by the regional and social background of the speaker or phonetic habits of the speaker's native language carried over to his or her use of another language. Because these habits influence the use of the new language, they would bring understanding difficulty to an untrained ear. In marine communication, if there result negative responses from listeners i.e. misunderstanding, the outcome would be the threat to safety and security of the ship and environment.

Almost 90% of the world's fleet is operated with multi-lingual crews and English has widely accepted as lingua franca of maritime industry. Smooth and effective communication in English could contribute the safer, secure and prosper working condition to the maritime industry.

In this paper, nature of accent and effective communication for maritime industry are discussed and the advantages of neutral accent are pointed out and also some ways to neutralize accent are proposed. The awareness that should be kept on the breakdown of communication because of several native accents is also highlighted. Any breakdown in communication is a threat to safety, security and at least can result in insufficient working efficiency in maritime industry. Finally why learning and teaching Maritime English in neutral accent should be encouraged is proposed.

Keywords: Accent, multi-lingual, neutral accent, lingua franca, effective communication

1. Introduction

Maritime English learning and teaching can be regarded as the English for special purpose and its content is specifically different from general English. For this issue of specific content of maritime English, IMO's Standard Marine Communication Phrases (SMCP) has been fulfilled with the simplified version of maritime English. It includes not only phrases for use in routine but also standard phrases and responses for use in emergency situations. Grammar and vocabulary are, of course, necessary parts of effective communication. But the maritime industry is linguistically greatly diverse and pronunciation seriously influences the effective marine communication. It is not too hard to understand written communication. But for speaking, it involves sounds and these sounds depend on several factors such as biology, physiology, psychology, vocal chords, air, tongue, dental roof, teeth, lips, jaw, nose, throat, genes, DNA, ethnicity, culture, regions, races, climate, temperatures, continents, countries, mother/native tongue and so on. Every single word is produced with the effect of these several factors and result in different tones, stress and accents.

For different nationalities even speaking in the same language, let's say English, there still left mother tongue influence that makes the listener difficult to understand what exactly the speaker is meaning. In marine communication, any misunderstanding or negative response of the listener could lead to serious breakdowns to safety. But fortunately, there still exists an accent understood by one and all in the world called neutral accent. If this kind of English accent can be properly applied in maritime communication to some extent, it would be great contribution to safety and security measures of the maritime industry.

For these reasons, this paper discusses about the nature of accent and effective communication for maritime industry. The advantages of speaking in neutral accent are pointed out and some ways to neutralize accent are proposed. The awareness that should be kept on the breakdown of communication because of several native accents is also highlighted. Any breakdown in communication is a threat to safety, security and at least can result in insufficient working efficiency in maritime industry. Therefore in this paper why learning and teaching Maritime English in neutral accent should be encouraged is finally proposed.

2. Accent in brief

Actually Accent and dialect are two words with similar meanings. In the context of language, each describes an aspect of the way language is produced. Accent refers purely to the way a speaker sounds, essentially the vowel sounds. It is most usually a question of where the speaker comes from. An accent may identify the locality in which its speakers reside i.e. a geographical or regional accent that we concerned most here. Accents typically differ in quality of voice, pronunciation of vowels and consonants, stress, and prosody. It would differ with the characteristic mode of pronunciation of a person or group. The degree of prominence of a syllable within a word and sometimes of a word within a phrase determines the accent of the person who speaks these word or phrase.

Within the country itself the dialect or pronunciation for the same word may vary from city to city. According to John Francis Thachil (freelance voice and accent trainer), even Britain has 32 dialects which they do not recognize among themselves. Among British and American accents also, some of the same words are stressed on different syllables. Word tone, which is also called pitch, can also influence the meaning of a word. And because English is a strongly stressed language, with four degrees of stress (primary, secondary, tertiary and weak),a change in stress can change the meaning of a sentence or a phrase. The other thing is sentence tone called intonation and is especially important at the end of a sentence. According to intonation, listener can realize whether the sentence is the statement or yes/no question and so on. These ways of speaking words, phrase or sentences may differ even within the people speaking English as mother tongue. For the people from different origins who speak English as their second language, their accent and dialect may be greatly differ even more.

Having an accent can be OK, just as long as everyone else around you has the same one. But accents really can be a problem if your job depends on the multi-cultural or multi-linguistic communication as a crew on international voyage.

3. Accent and effective communication for maritime industry

Considering the multi-national and multi-cultural character of the ship crew onboard, effective and efficient communication in a common language is required for safe and effective working environment. As

English is accepted as the lingua franca of the maritime industry, it may need excellent command of English of course and there also need to have sound understanding on sociocultural issues. When talking about sociocultural issues, characteristics of the crew onboard speaking English in different accents according to their specific nationality is one of the facts that should be aware of and cannot be avoidable. But the problem is that you wouldn't know the nationality of all the crew onboard in advance or even you know their nationalities, you wouldn't know how they speak English or in which accent for each individual.

When each one spoke the language, the language evolved and adapted to specific countries. The various pronunciation patterns would be derived into the language they spoke according to the convenience of the local population that spoke the language. Tone, pronunciation, word stress and intonation etc. characteristics of the different nationalities would not be the same. For a person who had learnt English in his own country, he may get influence of his native country accent if his English instructor is the same nationality as him and is not so care about accent. This kind of individual may think that he has a good command of English and he can communicate well in English when they lived in their country region and communicated with the same people. This is because they spoke English in their same regional accent and they regard that kind of pronunciations as the right patterns. The problem would start as he join the ship and face with other nationalities who speak English in different accents that he cannot recognize and his own accent cannot be recognized by other parties also. As for a crew, this problem not only affects the communication efficiency of that individual crew but also the overall effective communication for the safe and efficient working environment onboard ship.

The need for clear verbal communications between parties in the commercial marine environment is multi-faceted as the ship is the working environment, learning environment and social environment for its personnel. Communication on an intra-ship level takes place daily between personnel during operation of the vessel – when giving and carrying out orders under "normal" or "emergency" situations – and when the multinational crew must interact to maintain "social harmony' in and off duty context and in their everyday "teamwork' to ensure effective day to day operation (Pyne and Koester, 2005).The clear verbal communications could not be definitely brought about between the parties of speaking English in different accents. Because speech or pronunciation can be regarded as the vehicle for transmitting the speaker's meaning. If the listener does not understand the message, there is no communication takes place. Although there may be several of factors involved, one of the most important things is the intelligibility of the speaker's pronunciation. Both parties may speak English very well in their accents but whether they can recognize clearly each other or not is not so sure because of their different pronunciation patterns, i.e. accents. For safe and efficient working environment, effective communication onboard is a need and effect of mother tongue influence on effective communication should also be regarded as an important issue.

4. Neutral accent for efficient marine communication

Problems in communication occur mostly because of fake accent, heavy accent and imitating an accent. Some people may say that there is no such thing as neutral accent but many people prefer to speak the language in a globally acceptable standard accent. The problem is which one is the standard accent in English, is it British accent or American accent or whichever? Moreover according to multi-national and multi-cultural characteristics of the maritime industry, it's not logical at all to talk with all these people with a pure American or British accent for example. So the solution is a neutral accent that can be easily understood by all people around the world. It can be said that no one can be able to communicate

without a hint of accent but if you speak with heavily accented English, no one can get what you are trying to say. So speaking in neutral English is the best for effective communication.

A neutral accent can be regarded as a way of speaking the language especially in its word stress, tone, intonation etc. so that people from any geographical location is able to understand you. English in neutral accent is one that is grammatically correct, but has no regional characteristics and is globally understandable and comprehensible English. It implies pronouncing words as they should be, without any variations brought upon by regional and geographical influences. It also gets universal once you avoid slang terms and peculiar phrases that specifically stem from a single place. Neutral accent is aptly justified not just because it has to exist but because it exists universally.

Because accent can be defined as a set of characteristics of a language in a particular region, neutral accent can be attained simply by neutralizing these differences and shares the language on a common platform from where anybody can gain access to it. If this kind of common language platform can be implied to Maritime English, it would be a contribution to effective communication in maritime industry. Although IMO has already emphasized on SMCP for safe and effective working environment, but another thing we must keep in mind is crew onboard are human being and they are social creatures, they need to communicate each other for their onboard social life also. If they have a good command of general English other than Maritime English, the life onboard would be more pleasurable and the working efficiency of the crews will also increase along with their enjoyment on their work. Moreover most of the crew onboard had already got English training before they join the ship; therefore, such kind of working environment can get by paying only a little attention on their accent. By promoting neutral accent in Maritime English, the better and safer working environment is quite sure to get.

Softening or neutralizing an accent may require a lot of commitment and hard work, as it involves going against natural instincts and responses. But, with a bit of effort on the part of the learner, it is certainly achievable. Experts say that anyone can improve spoken English by regular practice.

To promote neutral accent in maritime industry, Maritime English instructor should also share some of his effort on trying to remove the mother tongue influence of his students and bring them to a level where they speak in a neutral accent. He should encourage his students to try to speak in neutral accent and point out some steps such as;

- To listen how native speakers speak the language
- To watch some good movies that can improve their overall communicative skills
- Not to speak too fast (i.e.to keep their rate of speech under control)
- To read dictionary to learn the meaning of the word, spelling and pronunciation
- To listen to audio clips and videos to boost their confidence while speaking
- To record their speech to realize each problems and difficulties and to correct them
- To increase their reading ability by going through newspapers and magazines
- To learn sounds of English (i.e.to familiarize with vowel and consonant sounds)
- To follow newsreaders and listen them daily to enhance their clarity of speech
- To do some jaw exercises to modulate their voice and accent to our requirements etc.

There is, though, another important factor that some of English instructors may either don't, can't or won't teach in neutral accent. But Tuong Nguyen (a principal analyst Gartner, the research firm for CNN) said “over time, computers are getting better at recognizing voices, especially when an accent is fairly common”. He said that is one of the major achievements of voice technology since the '70s. To be

understood by computers, it's more important to speak clearly and consistently than to have a perfectly neutral accent.

5. Conclusion

It is the truth that a large percentage of the accidents in shipping industry are caused by poor communication especially poor English communication skill. Therefore promoting English communication skill is a need and it is also need to review root causes of the communication deficiency. Over all command of English of any onboard crew may not be so poor because they might have English training prior to their seaman life. They would able to understand written English at their ease but for communicative English, the other parties they have to communicate may not be the same as them. Every nationality may have their ways of English speaking style and there may have their mother tongue influence. When considering about communication deficiency, the different in English pronunciation and speaking style between the different nationalities should not be overlooked. We have already been discussing about cultural awareness in our maritime industry because of multi-cultural nature but for accent issue, it is not like other cultural issues and it has a common platform. Whether we should prefer trying to understand every individual accent of several of nationalities or trying to communicate in neutral accent which is a common language platform is our own choice.

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Engineering Maritime English: a symbiosis between language, communication and an alligator spanner wrench?

Abstract

Ever since 1981, when the first international Workshop on Maritime English was held in Hamburg, Germany, the importance and improvement of communication at sea have been the major concerns of Maritime English scholars and the challenge at all international Maritime English conferences. Improving the teaching of "language to marine engineers is undoubtedly a matter of adapting context to purpose and utility"[1] and at Chalmers University of Technology (Gothenburg, Sweden), teachers understand the significance and consequence of integrated cross-curricular learning activities.

This paper aims to give an account for progression and contextualization in learning and teaching aspects of integrated[2], cross-curricular Maritime English courses at the Marine Engineering Programme at Chalmers, particularly with regard to the assessment of STCW requirements. In order to teach Maritime English successfully, teachers need to develop integrated courses, align aims and objectives of MET institutions, and allow the language to enter its natural environment: the engine room.

Key words: Maritime English, marine engineers, integrated learning, mobility, constructive alignment, life-long learning, cross-curricular competence.

1. Introduction

Concepts like globalization and mobility in education and professional settings (Cole et al, 2007; Gustafsson 2011) alongside quality assurance and mutually compatible and constructively aligned educational programmes (Biggs, 2007; Bologna process, Dublin Descriptors, 2004; Pritchard, 2011) are often discussed in the context of Maritime English teaching pedagogies as key tools in the development of a professionally successful maritime training. At sea, for indisputable reasons, most important of which being safety, we need "to mind our language" (P. Trenkner, 2010) but as the STCW include the use of Standard Marine Communication Phrases and the IMO elaborates on model courses for Maritime English (2000, updated 2009), ME instructors keep raising significant questions with regard to ME teaching in a globally operative context.

Sandra Tomniac (2011) addresses the "gap between international language requirements and the actual situation at sea", due to a currently fairly theoretical teaching approach to ME and proposes that re-defined standards of the English language competence at sea are needed to improve language proficiency among deck officers. This initiative derives according to Tomniac, partly from observations and interviews, but the differences between theory and practice in maritime settings has been addressed earlier, albeit in

[1] Eliasson J. Gabrielli A. 2011 *Language Taught as Language Used*. IMEC 23, proceedings
[2] See Constructive Alignment, Biggs, 2007; CDIO Syllabus v2.0, 2011

a somewhat altered view, by Peter Van Kluijven (Nautilus International, 2009). Van Kluijven suggests that the breach between theory and exercise might be due to "discrepancies between classroom-theory and shipboard-practice" as experienced seafarers jeopardize safety at sea pointing out that ME practice only exists on "idealized vessels imagined by academics" (p 31). From this perspective MET institutions must agree that a Language for Specific Purposes like ME must be taught contextually, i. e. to integrate theory and practice. This means working not only with the subject of Maritime English, on a theoretical basis, but more largely with "student understanding of the communities they are active in" stressing the importance of "flexibility in [the] application" of teaching and learning activities (Gustafsson, 2011; Wenger, 1998) and focusing on the generic aspects of the marine engineering profession.

In this regard Cole, Pritchard & Trenkner (IBÈRICA, 2007) lay down a different perspective on the matter, veering in their investigation toward pedagogical methods and learning characteristics of ME, suggesting ME instructors' professional competence as a triggering aspect of motivation to learn among future deck officers, and the bridge to unite theory and practice in this context. Student motivation to learn is critical for any education and the professional competence of any instructor will be assessed at the end of the day through student results, also highly relying on student motivation (Illeris, 2007). To be motivated, students need to learn in the community they are active in, and content-based learning and instruction, i. e. integrated learning, where there is a symbiosis between student professional interests and learning activities, will trigger a successful communicative approach to ME, from which the professionally competent maritime discourse can evolve. The ME instructor's professional competence must therefore include a both theoretical and practical perspectives, which can be facilitated by cross-curricular collaboration between instructors (Cole et al, 2007; Pritchard, 2011).

According to Cole et al (2007), Cole & Trenkner (2009) and Pritchard (2011), more effective pedagogies are also needed to encourage an internationally aligned content-based instruction in MET institutions, which can aid the self-evident mobility implied by maritime professions. As stated above, alignment, progression and indirectly student motivation, can be generated by theoretical and practical cross-curricular course integration based on collaboration between language and technical content instructors. If learning is cross-curricular, generated in and by contexts, ME course aims, objectives and learning outcomes (Biggs, 2007; Dublin Descriptors, 2004) for globally compatible marine educational programmes (Pritchard, 2011), can easily be matched with applicable IMO requirements, fulfilled student expectations and society/domain specific constantly changing demands.

This paper describes the cross-curricular integration of language and content in different courses at Chalmers University of Technology, with regard to teaching and learning domain specific aspects of ME, according to relevant IMO documentation. The paper also gives an account for the consequences of such integration from a pedagogical point of view, considering relevant IMO documentation.

2. Theoretical background

Integrated learning or contextual learning is by definition pedagogically multidimensional and presupposes cross-curricular understanding; a rather abstract skill. Therefore, creating comprehensible input, which the students can relate to relevant contexts, requires raised cross-curricular awareness between instructors. In the perspective of graduate attributes, in this case particularly with reference to engineering education (Crawley, Malmqvist, Östlund & Brodeur, 2007) and the CDIO approach, contextual learning assumes that students are trained to acknowledge learning processes progressively in a cross-curricular approach to learning, i.e. develop ability to self-assess their need of learning and professional

progression in the community they are active in (Wenger, 1998). Looking at generic aspects of learning and teaching (Kreber, 2002; Rust, 2002; Bolhuis 2003; Illeris, 2007) a shift toward process-oriented teaching and self-directed (Bolhuis, 2003) or even self-assessed lifelong learning, involves by definition a conceptual change where both instructors and students must understand the value of contextual learning (Cole et al, 2007; Pritchard, 2011) before theory and practice can be converged into the creation of new knowledge or new ways to deal with knowledge.

This change currently permeates most educational approaches, including ME teaching pedagogies and we need to learn how to deal with the tensions between institutionalized traditional learning and society/domain specific values and truths before we can develop a multidimensional approach to learning (Bolhuis, 2003), bridge the gaps between theory and practice and create internationally compatible MET programmes.

As stated above, there is obviously a conflict between theory and practice in the teaching of Maritime English. Three different perspectives on this conflict have been presented here. Peter Van Kluijven (2009) discusses a common conflict between theory and practice and its consequences, suggesting that the solution lies in an increased collaboration between experienced seafarers and instructors. Sandra Tomniac (2011) aims at triggering a process of re-evaluation of Maritime English standards, stating that currently, both STCW (Table A-III/1, STCW Code) standards and common Maritime English syllabi are primarily procedural when it comes to the elaboration of extensive Maritime English course aims and objectives, teaching materials, examination and assessment (see learning aspects; Illeris, 2007). Cole, Pritchard & Trenkner (2007) followed up by Cole & Trenkner (2009) and Pritchard (2011) propose that improved ME pedagogies are needed in order to join theory and practice both on board and in the classrooms, thus developing internationally compatible standards for MET institutions. Cross-curricular collaboration between ME and technical content instructors can generate the skill and competence needed for the delivery of such improved pedagogies.

Improving pedagogies implies working with learning processes specific for a given profession, and when scrutinizing teaching and learning processes in tertiary education, a common idea is that professional abstract graduate attributes like critical thinking and ethical practice skills, reasoning, creativity and team-working, are complex and rather formative, “not only produced through social interaction but they are in a constant state of revision” (Bryman, 2004, pg 17). This indicates the student’s need to not only learn the subject but also to develop an approach to learning actually extending beyond educational participation (Bolhuis, 2003). These attributes also need to be addressed by MET institutions, continuously and contextually through progressively aligned international aims and objectives (Biggs, 2009) at programme and course level.

3. Course descriptions and discussion

The process of integrating and improving ME (as a subset of English for Special Purposes, ESP) teaching pedagogies being an issue continuously addressed in various IMO, IMLA and IMEC circumstances (Short, 2006; Cole, Pritchard & Trenkner, 2007; Esin & Boryana, 2009; Cole & Trenkner, 2010; Demirel & Ziarati, 2010; Eliasson & Gabrielli, 2011) implies that integrated instruction, alongside joint enforcement of STCW (Table A-III/1, STCW Code) demands and standards should prompt an adequate professional background for lifelong learning in a marine engineering context. This approach also helps raise an extensive, relevant awareness of generic maritime discourse promoting mobility and globalization, seizing and imposing the maritime reality, not a utopia of “idealized vessels”. Firstly, the teaching of integrated contexts can

improve teachers' cross-curricular competence (Cole et al, 2007) and enforces authority for low risk communication in a context easily recognizable and therefore highly motivating for the students. Secondly, it creates room for oriented reflection and multilateral revision of various pedagogies and consequently improved ME instruction.

According to PROFS (Profiling the Maritime English Instructor, as laid down by Cole et al (2007), Maritime English is to be taught as a contextual "subset of realizations of the English language" (pg 136, IBÉRICA 14 [2007]: 123-148) which is:

1. appropriate to a specific maritime setting (i.e. numerous marine engineering contexts)
2. used in a determined context of situation (the marine engineer's various professional circumstances)
3. involving the participants from a specific shipboard or port speech community often marked by specific jargon (here, the marine engineer's)
4. operating and shaped under specific sociolinguistic circumstances (STCW standards for operational and management levels for marine engineers)

According to the model course 7.04 Officer in Charge of an Engineering Watch 1.5.1, in conformity with STCW 1995 table A-III/1 and Code Section B-IV/1 paragraph 7, and model course 3.17 Maritime English the "English language both written and spoken is necessary for the exchange of communications relevant to the safety of life at sea." The Maritime English model course includes learning objectives which specify required trainee performance or what the trainee must be able to do at the completion of the course. Clear descriptors for the graduate attributes are laid down in the Yardstick of Maritime English Competency for Ship Officers (Cole & Trenkner, 2009).

Elaborating from the above and from the three prompts of the Swedish National Agency for Higher Education, 1 – Knowledge and Understanding; 2 – Skills and Abilities; 3 – Professional Ethics and Attitudes (see even the Bologna Process Dublin Descriptors, 2004) the aims and objectives of the four year Marine Engineering programme at Chalmers include communication aspects at sea in various ways, focusing, according to the above PROFS prompts, on cross cultural communication, giving orders, socio-linguistic aspects, following standard watch-keeping and safety procedures, critical, ethical and sustainable thinking and an ability to evaluate and develop personal competence in a lifelong learning perspective. Two central programme objectives to be interpreted according to the Yardstick of Maritime English Competency for Ship Officers (Cole & Trenkner, 2009) are shared below:

After completion of the programme the students shall be able to:

- conduct teamwork and cooperate in groups of different backgrounds, with focus on maritime safety
- demonstrate an ability to both nationally and internationally, orally and in writing explain and discuss information, problems and solutions in dialogue with different groups

and contextually completed by prompts referring to technical understanding, skills and abilities, to put ME competency into perspective:

After completion of the programme the student shall be able to:

- show broad maritime technical skills required for a senior deck officer responsible for operation, maintenance and fire protection of ship machinery and electrical equipment.

Focusing on cross course contextualization of maritime communicative settings in ME courses or course modules given at the Marine Engineering Programme at Chalmers University of Technology, namely

Marine English, Steam and Refrigeration Techniques and Ship maintenance, each of 7,5 ECTS, teachers have worked to generate joint learning activities and outcomes with the intention to contextualize cross-curricular learning processes and assessment. Teaching and assessment methods of ME are presented below with the intention to highlight the evident connection between content, setting and language in the specific context of communication at sea (Cole et al, 2007), and the importance of cross curricular teaching strategies to raise student awareness of this connection thus bridging the gaps between theory and practice, following up on the central concepts dealt with here, contextual learning, lifelong learning and flexibility/compatibility in operation.

At Chalmers, ME communication in speech and writing, is taught as part of marine technology and marine propulsion course modules, or as independent courses clutched into maritime technical content subjects. Eliasson & Gabrielli (2011) describe such integration in the course Marine Engineering I, given during the 1st year of studies. Marine English is another ME course given in English, in year two, in parallel and partly integrated with Steam and Refrigeration Techniques which is given in Swedish. Here, joint course literature in English gives opportunity to co-operate, contextualize and integrate learning outcomes and activities alongside assessment. Apart from this, with an eye for context and progression within the programme, in the examination process for Marine English the students also listen to project presentations given by year four students engaged in the course Marine engineering project, and convey in a short reflective text the summarized technical content of these. This setting lends itself well to the matching and mapping of progressively aligned programme aims, objectives and learning outcomes as delineated at programme and course level (Biggs, 2007), following up on ME model course 2000 edition (see the tables enclosed below). Integrated, situational learning (Illeris, 2007) under these circumstances also enable peer work reflection and analysis at programme level allowing for transformative learning (Illeris, 2007) and transferable knowledge, with focus on interdisciplinary critical thinking skills and progression (Byram et al, 2001; Carlsson, 2010) and higher order thinking skills (Bloom, 1956).

The 2nd year Marine English is a two modules course, designed to develop the students' written and oral proficiency, and knowledge of terminology specific to the marine technology context (SMCP, ME model course 2000 edition). The course consists of lectures, laboratories, group work, tutorials and seminars (see “flexibility in application” of teaching activities, Gustafsson, 2011) in which theory and practical writing and presentation skills are trained. After completion of the course the students will have consolidated intermediate speaker grammar skills and developed general written language skills. In addition, the students will have acquired increased comprehension of marine technical texts and be able to use their communication skills to structure and deliver technical content in writing and orally.

The learning activities are designed around course literature shared with the parallel course Steam and Refrigeration Techniques with the intention to integrate learning and assessment. Steam and Refrigeration Techniques aims at providing knowledge about the construction, function and operation of steam generation plants and refrigeration/ventilation plants, as well as the ability of performing calculations of these plants. The course includes lectures, assignments in a machine room simulator, and a laboratory session on a refrigeration plant. Both courses are assessed through obligatory hand-ins and in-class activities alongside written exams, and the learning activities are carried out as follows:

Text 1. “Feed Systems” (meaning feed systems to steam generation plants)

- The students read the text individually and discuss a number of reading comprehension questions in groups with feed-back from content and language teacher.

- A group report based on the class discussion is handed in for language proficiency feedback from the language teacher
- The content of the text is part of the *Steam and Refrigeration techniques* written exam

Text 2. "Refrigeration, air conditioning and ventilation"

- The students receive study questions (in English) relevant for parts of the written exam in *Steam and Refrigeration Techniques*.
- The written exam in *Marine English* includes exam questions on language proficiency based on this text.

Text 3. The journal article "Retrofitting a goliath of the sea"

- In pairs the students write a summary and give each other peer response with regard to reading comprehension and language proficiency during a CHOCS (Chalmers Open Communication Studio) supervised workshop
- A final version of the summary is part of the examination in the *Marine English* course
- The text content is part of the written exam in *Steam and Refrigeration Techniques*

The courses are interconnected with regard to learning outcomes and examination, as follows:

Shared course material.	*Marine English* Learning outcome and examination	*Steam and Refrigeration techniques* Learning outcome and examination
Text 1 "Feed Systems"	Reading comprehension Critical group discussions Writing skills Technical vocabulary Examination: group report	Knowledge about the construction, function and operation of steam generation plants, their components and auxiliary equipments. Examination: written exam, simulator assignments
Text 2 "Refrigeration, air conditioning and ventilation"	Reading comprehension Writing skills Technical vocabulary Examination: language proficiency on the written exam	Knowledge about the construction, function and operation of refrigeration plants and their components Examination: written exam, laboratory session
Text 3 "Retrofitting a goliath of the sea"	Reading comprehension Writing skills Critical thinking / peer-response Language proficiency Technical vocabulary Examination: summary	Knowledge about refrigerants and the conversion of refrigeration plants Examination: written exam, laboratory session

The main course literature for Steam and Refrigeration Techniques is in Swedish, and also contextually shared with some other marine technology courses. However, the texts in English are handpicked by the teachers to serve the learning outcomes and assessment of both courses, and to converge contexts for the students.

Marine English is designed to help students achieve the levels of language proficiency laid down in relevant IMO documentation (see below). Steam and Refrigeration Technique is designed to pick up on the language proficiency and give the students opportunity to show if they can relate to the knowledge acquired from the course literature, in a constructive, reflective way. The exercises constitute parts of the demands on knowledge and understanding, according to the following STCW requirements for both English and technical skills:

Table AIII/1. Function: Marine Engineering at the operational level
Competence: Operate main auxiliary machinery and associated control systems
Knowledge, understanding and proficiency:

- *Basic construction and operation principles of machinery systems including (but not limited to) marine boiler, marine steam turbine, refrigeration, air conditioning and ventilation systems*
- *Preparation, operation, fault detection and necessary measures to prevent damage for steam boiler and associated systems, refrigeration, air-conditioning and ventilation systems*

Table AIII/2. Function: Marine engineering at the management level
Competence: Operation, surveillance, performance assessment and maintaining safety of auxiliary equipment
Knowledge, understanding and proficiency:

- *Heat balance of marine steam boiler*
- *Refrigerators and refrigeration cycles*
- *Functions and mechanism of automatic control for auxiliary machinery including steam boilers, refrigeration system*

Table AIII/1 Function: Marine Engineering at the operational level
Competence: Use English in written an oral form
Knowledge, understanding and proficiency:

- *Adequate knowledge of the English language to enable the officer to use engineering publications and to perform engineering duties*
- *Criteria for evaluating competence*
- *English language publications relevant to engineering duties are correctly interpreted*
- *Communications are clear and understood*

In their third year, students encounter ME instruction as a language and communication course module (1,5, etcs.,), in the context of *Ship Maintenance* (7,5, etcs.,) which aims at providing knowledge about different maintenance concepts, the handling of fuel and lubricant oils, how the engine maintenance is carried out onboard, and the underlying reasons for planning and performing maintenance onboard a ship. Through joint project based and problem based learning activities the technical subject and ME instructors again assess and evaluate STCW competencies. The course, given in Swedish, includes lectures, exercises in the computer-based maintenance program AMOS and laboratory sessions regarding test analyses on fuel, lubricant oils, cooling and boiler water which clutch into the ME module as prerequisites for a project based overhaul report and a presentation carried out in English. *Ship Maintenance* is assessed through four course elements: a written exam (3ects), assignments in AMOS (1.5ects), laboratory sessions (1.5ects), and project report/presentation in English (1.5ects). Both technical and language

instructors assess the English module and the learning outcomes to be interpreted according to the ME model course requirements for intermediate levels are laid down in the table below:

Teaching/Learning Activities	ME model course 2000 edition Learning outcomes	Ship Maintenance (English module) Integrated learning outcomes
Overhaul Report	Part B, Core section 2 1. Demonstrate an understanding of STCW95 English Requirements to all seafarers; indicate awareness of and preference for language learning techniques; assess own language learning needs. 4. Discuss aspects of safety and risk in the workplace; give warnings and advice concerning safe working practice on board; give reasons for the selection of materials, equipment and tools for maintenance and repair work 8. Comprehend and respond to written and oral communication; analyze problems onboard and suggest solutions in speech and writing; describe mechanical breakdowns and repairs; notify appropriate parties of repairs.	• describe and explain engine maintenance processes • compare/evaluate maintenance strategies • show ability to convey technical content in writing
Report presentation	According to Part B, Core section 2: 1.4 and 4.4 Communication skills: listening, speaking, reading, writing. Review 1 6. Explain stages in processes; describe how machinery operates; correctly interpret operating manuals; describe onboard procedure.	• show knowledge about different maintenance processes and strategies • show ability to convey technical content orally

This integrated ME language and communication course module is designed to develop the students' written and oral proficiency and knowledge and understanding in managing safe and effective maintenance and repair procedures on-board according to STCW AIII/2 – Maintenance and repair at the management level. The students choose their topics for the overhaul report from many different overhaul subjects given by the technical teacher. One example is “Piston dismantling and clearance checking between piston crown and skirt at MAN B&W 40/45”. The information needed to write the overhaul reports, is found in computer based maintenance programs and in technical manuals/instruction books in English (following up on ME model course requirements in the table above) and the template for the report is generated by the teachers in accordance with relevant IMO standards. The marine setting is very clear in this context and language learning activities are generated to also follow up on the marine engineer’s professional competence as laid down in the Yardstick of Maritime English Competency for Ship Officers (Cole & Trenkner, 2009) levels 7 and 8.

Oral language proficiency and fluency are assessed through the oral presentation when the students describe their overhaul subject, i.e. not the overhaul procedure on a specific engine but a general procedure. The presentation of the example above should hence describe the “piston dismantling and the checking of piston crown and skirt”. Listening to each other’s presentations, the students receive basic knowledge of many different overhaul procedures, and also encounter a wide and commonly used maritime technical vocabulary in English. As both technical subject and ME instructors assess the

presentations, follow-up questions are asked and answered to trigger creative discussions in class. The teaching activities and assessment are integrated as follows:

1. Joint course introduction alongside a number of language and communication lectures on language proficiency, report writing and oral presentation technique alongside critical reading instruction. The lectures are assisted by the technical subject instructor.
2. Interactive peer response session when the students cross-read each other's drafts of the overhaul reports and give feedback to their peers. ME and technical subject instructors supervise, give feedback on the report drafts and jointly assess both drafts and peer response session. Students are asked to reflect upon their learning outcomes post to the session and hand in a short written commentary.
3. Oral presentation session, supervised, assisted and assessed by both ME and technical subject instructors as part of course examination procedures. The instructors engage the students in interactive discussions during the session, as these are asked to prepare critical questions prior to the session.
4. Written overhaul report jointly assessed by ME and technical subject instructors, from both language and technical content perspective as part of examination procedures.
5. Joint or separate tutorials at the students' request.

The technical content evaluation is made according to the following STCW-criteria for evaluating the competence *"Managing safe and effective maintenance and repair procedures" (STCW AIII/2):*

- *Maintenance activities are correctly planned and carried out in accordance with technical, legislative, safety and procedural specifications*
- *Appropriate plans, specifications, materials and equipment are available for maintenance and repair*
- *Actions taken lead to the restoration of plant by the most suitable method.*

And the STCW standards addressed accordingly are:

AIII/2 Function: Maintenance and repair at the management level
Competence: Manage safe and effective maintenance and repair procedures
Knowledge, understanding and proficiency:

- *Marine engineering practice*
- *Manage safe and effective maintenance and repair procedures*
- *Planning maintenance*
- *Planning overhaul procedures*

As outlined by Cole et al (2007), specific maritime settings and contexts pertaining to specific technical or/and linguistic circumstances are detailed in the graduate attributes (after completion of the course the student shall be able to:) of these three ME integrated courses, Marine English, Steam and Refrigeration Techniques and Ship Maintenance, (see table below) alongside specific graduate attributes of respectively aligned IMO model courses. This serves as an example how cross-curricular integration can be achieved, following up on STCW standards.

Aligned graduate attributes, Marine Engineering Programme. Joint attributes in italics.

Graduate attributes	**Marine English** – Year 2 (in accordance with The Yardstick of ME Competency for Ship Officers, 2009 – levels 7 and 8)	**Steam and Refrigeration Techniques** Year 2 - Integrated	**Ship Maintenance** Year 3 - Progressively aligned with regard to programme objectives	**Model Course 2000 Edition Part B, Core Section 2 Maritime English**	**Model Course Steam and Refrigeration Techniques**	**Model Course Ship Maintenance**
Knowledge and Understanding	- Show and practically apply knowledge of basic English language skills, such as vocabulary and grammar, orally and in writing in various technical contexts. - assess own language learning needs	- *Describe the construction and operation principles of steam, refrigeration and air conditioning plants, and of their components* - *Explain the function of safety details and auxiliary equipment in steam and refrigeration plants*	- *Explain different engine maintenance concepts* - *Describe different factors affecting the reliability engineering* - *Recognize the roles of Maritime Authorities and Classification Societies* - *Explain the basics of tribology, friction, lubrication and wear* - *Describe the functions of different purifier techniques*	1. Demonstrate an understanding of the relevance of STCW95 English requirements to all seafarers; *indicate awareness of and preference for language learning techniques; assess own language learning needs.*	Generic learning objectives in the following areas: [1)]*refrigerants, shipboard refrigeration plant, system performance and operational problems of refrigeration plants* [3)]*types of boilers, principles of their operation, safety valves, boiler defects, boiler water treatment* [7)]*auxiliary boiler; construction and operation* [7)]*refrigerating system: components and operation*	Generic learning objectives in the following areas: [4)]*Plan maintenance and repair procedures* [5)]Physical and chemical properties of oil, oil purification, lubricating oils, problems and testing [6)]Cooling water treatment [3)]Boiler water treatment and testing
Skills and Abilities	- Demonstrate an understanding of marine technical texts by explaining the reasoning, analysis and reflection on technical marine content - Provide technical content in writing and orally by writing a domain specific report and present its content.	- Apply thermodynamic diagrams and equations to calculate system performance of steam and refrigeration plants. - Show how different operation parameters influence the system performance of steam and refrigeration plants. - Analyze operational problems on steam and refrigeration plants and recommend measures to rectify them.	- Assess and analyze the quality of boiler and cooling water, as well as fuels and lubricants. - Apply different reliability engineering measures - Prepare and plan the use of computer based maintenance systems - Compile an engine overhaul report in English based on specific maintenance requirements and present it orally	4. *Give reasons for the selection of materials, equipment and tools for maintenance and repair work.* 6. *Explain stages in processes; describe how machinery works* *8. Comprehend and respond to written and oral communications; describe mechanical breakdowns and repairs*	Generic learning objectives in the following areas: [1)]use of refrigerant diagrams, and psychrometric charts [2)]calculations of efficiencies for boilers, steam plants, and refrigeration plants	Generic learning objectives in the following areas: [4)]*Preparation for maintenance procedures*
Professional Ethics and Attitudes	- Show communicative skills and adaptable knowledge in English with regard to the varied communication situations at sea.	- *Consider advantages and drawbacks with different refrigerants, when, for example, converting to a new refrigerant*	- *Compare and evaluate different maintenance strategies*	*6. Correctly interpret operating manuals; describe an onboard procedure.* *8. Notify appropriate parties of repairs.*		

1) Model Course 7.02: 1.1.3 Operating principles of ship power installations and refrigeration
2) Model Course 7.02: 1.1.1 Thermodynamics and heat transmission
3) Model Course 7.02: 1.2.2 Operation and maintenance of auxiliary machinery, including auxiliary boiler plant
4) Model Course 7.02: 3.1.1 Organize safe maintenance and repair procedures
5) Model Course 7.02: 1.1.4 Physical and chemical properties of fuels and lubricants
6) Model Course 7.02: 1.2.1 Operation and maintenance of marine diesel engines
7) Model Course 7.04:1.6 Operate main and auxiliary machinery and associated control systems

4. Conclusions

An internationally successful maritime training requires improved ME pedagogies applying to, as we can see, three main conditions all of which not entirely surprising, clutching into the concept of contextualization:

1. The currently theoretical teaching approach to Maritime English must take a more practical, multidimensional, context-based orientation specific for the profession, based on relevant maritime contexts and professional communities and easily recognizable for the students.
2. Language and technical content instructors and professionals need to collaborate not only nationally but also internationally, in order to join competencies in the design of relevant teaching and learning environments, which contextualize STCW requirements and motivate students.
3. MET institutions need to contextualize Maritime English teaching and learning activities to promote a lifelong transformative approach to learning processes and transferable knowledge applicable in multidimensional maritime environments.

Globally compatible MET programmes can be developed if we can match graduate attributes laid down in internationally aligned programme aims and objectives. For this, language and content instructors must align their teaching (Biggs, 2009), not only within the programme, not only across curricula, but across borders, when constructing contextual learning, creatively transferring and transforming pedagogical, technical and cultural conceptions for the benefit of a strong professional identity specific for the maritime setting. The currently engaging academic discourse with regard to these aspects encourages such collaboration and the Chalmers example shows that cross-curricular integration at programme level is not only possible, but also appreciated filling the conditions of a contextual teaching and learning perspective. This does not, however, fill the gap between theory and practice and the accountability of globally compatible ME training lies, unfortunately, not solely in the progressively aligned aims and objectives of one MET institution. Instructors must therefore find means to balance variation and facilitate collaboration and support cross borders, so that ME pedagogies can grow in the international environment that will engage our students in their professional life.

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ENSURING SAFETY OF NAVIGATION AT SEA THROUGH MARITIME COMMUNICATIONS: A LINGUISTIC DISCOURSE ANALYSIS

Abstract

Maritime communications often exist under adverse conditions. This is so because background noise and other interfering signals in port approaches and waterways and even at the open sea occur normally. Several research studies in the field for many years now have shown the alarming contributions of the communicatively relevant factors to the so called human elements in shipping accidents. So, these human elements involved in many catastrophic maritime accidents have been the singular reason for the ***IMO STCW Convention of 1978*** *as amended to choose English as the standardized language of communication for safety purposes through the promotion of its* ***Standard Navigational Phrases*** *now* ***Standard Maritime Communication Phrases (SMCPs)****. Since SMCPs' registers are highly specialized and the manner of their use in communication exchange is so uniquely predictable, it is then worth analyzing the reasons of their nuances, making up the linguistic features of maritime English as well as their application in communication to serve their very purpose of preserving the culture of safety onboard ship under adverse conditions. The selected data for analysis will be taken from the British Council's maritime teaching resources and the Leonardo da Vinci MarEng Learning Tool. It is in this view that this paper tries to provide a* ***discourse analysis*** *of how the linguistic structures of maritime communication are constructed to represent the choices seafarers shall use in communicative settings to ensure* ***safety of navigation****. The linguistic discourse analysis model, speech act theory of language and the theory of standard information serve as the backbone of the study.*

Key Words: Linguistic Discourse Analysis, Speech Acts, Standard Information Theory, Adverse Conditions

1. Introduction

Maritime communications often exist under adverse conditions. This is so because background noise and other interfering signals in port approaches and waterways and even at the open sea occur normally. The presence of high density of ships coming in and out of the fairways and traffic lanes needing safe passage triggers the said conditions to take place. For Assmann and Quentin (2003), the said conditions bring in reverberations and imperfections of the frequency or temporal response of the communication channel, making the process of maritime communication sharing too demanding.

These situations without any doubts strongly challenge the STCW Manila Amendments on the aspect of maritime English communication. Trenkner and Cole (2010) clearly show in their paper which was presented at the IMEC 22 the identification and discussion of the necessity to ensure **effective communication** in its diverse manifestations in various nautical and technical spheres as explicitly expressed in the extracts of the amendments from the revised STCW. For them, apart from the non-specified requirement of effective communication, they note down as discussed in the Manila

Amendments four important issues, but the present study would explore on the issue of VTS as well as ship to shore communication as a demanding form of conversation where listening as a skill need not be ignored even in arduous situations.

Viewed from the foregoing, the Amendments have given the enhancement of oral communication the highest priority just as Trenkner and Cole (2010) have also emphasized the need to require Maritime English lecturers to familiarize themselves with Ship Reporting Systems. Understandably, teachers have to equip themselves with the necessary relevant skills in order to teach maritime English effectively. This has become an urgent call because topping the list of maritime accidents involves the so-called human elements that make up 40% of reported accidents (communicatively relevant factors) in which 80% of (the 40%) are attributed by the external communication problems (Trenkner, 2005). With these realities, maritime English teachers with diverse educational preparations all over the world carry the extraordinary weight of responsibilities on their shoulders in the hope of ensuring the enhancement of the functional English communication skills among their students (future seafarers). This is imperative because every new provision with emphasis on oral communication that has to be satisfied in the amendments as stipulated in the SOLAS and STCW in general has come from the blood of the past disasters as reported in the CNN's "Cruise to Disaster".

This study, given the foregoing scenario, aimed at providing maritime English teachers the knowledge about the linguistic structures of maritime communication. Knowledge to these linguistics structures would definitely strengthen their teaching direction in the application of appropriate methods that as articulated by Trenkner and Cole (2010) be applied in the IMO's Model Course 3.17 using the communicative approach.

The study then sought to answer the following questions?

1. How do the following linguistic characteristics of maritime discourse relate meanings to the choices seafarers shall use in communicative settings to ensure safety of navigation at sea?
    1.1 Simplicity of structures,
    1.2 Repetitiveness, and
    1.3 Discourse and tenor?
2. In what manner does redundancy support the information flow in order to counteract the deleterious effects of noise and other interfering signals for the smooth transfer of information communication at sea?
3. In maritime sea conversation, what is its prevailing interaction system of sequence organizations?

Given the aforesaid ideas, this paper therefore takes the position of attempting to analyze and describe the degree of specifying the distinctions of the linguistic structures of maritime communications. It is hoped that a well grounded knowledge on the linguistic structures that this analysis could provide fuels classroom practitioners' principled approaches in the teaching of Maritime English in as far as pieces of onboard and external communication are concerned.

2. An Overview of the Theoretical Underpinnings of the Study

The theories on Linguistic Discourse Analysis, Speech Acts, and Standard Information serve as the foundation of the study.

As a start, getting an understanding of what discourse analysis begins with knowing what a discourse is and what an analysis is, provides a useful idea of specifying the difference of discourse analysis from other approaches to language study. To discourse analysts, **discourse** means actual instances of communication (What is Discourse Analysis, 2005). Sharma & Sharma (2010) articulating that discourse is the creation and organization of the segments of a language above as well as below the sentence put forward the idea that discourse applies to both spoken and written language, in fact to any sample of language used for any purpose. **Linguistics analysis** in this vein is a process of taking apart. So discourse analysts often find it useful to divide longer stretches of discourse into parts according to who is talking. Questions like "Are grammatical patterns different when social superiors are talking than when their subordinates are? Does new information tend to come in the first sentence of a paragraph? Are topic changes signalled by special markers? can be asked in this manner.

In the application of discourse analysis in both written and spoken language, it can be said that as Sharma and Sharma (2010) advance, traditional linguistics has concentrated on sentence-centered analysis. Now, linguists are much more concerned with the way language is "used" than what its components are. It is in this notion that the present study gives much emphasis on how the linguistic structures that are over and beyond sentence segments occur relative to each other in the analysis of maritime communications. Stubbs (1983 in Sharma & Sharma 2010) says that any study which is not dealing with (a) single sentences, (b) contrived by the linguist, (c) out of context, may be called discourse analysis. In other words for Sharma & Sharma (2010) there is now a shift of focus from sentences in isolation to utterances in context: to study language in use is to study it as discourse. This shows that knowledge of a language is more than knowledge of individual sentences (Leech 2008 in Sharma & Sharma 2010).For them the true meaning of a sentence for them cannot be assigned by its only linguistic construction but it largely depends on reference (meaning in relation to exterior world), sense (meaning in relation to linguistic system) and force (meaning in relation to situation context). McCarthy (1991 in Madrunio 2004) states that discourse analysis encompasses both the written and spoken discourse therefore both take on varied functions such as giving information, establishing social relationships, and eliciting an action from the listener. Further he claims that with such functions as request, instruction or exemplification, the focus is on what the language does and how the listener should react. For these reasons, they are called speech acts.

Meanwhile, Chapelle (1998) punctuates that language is a systemic resource for expressing meaning in context and linguistics, and Halliday (1985) likewise points out is the study of how people exchange meanings through the use of language. This view of language as a system for meaning potential, for Chapelle (1998), implies that language is not just a "the set of all grammatical sentences", and therefore must be studied in contexts such as professional settings, classrooms, and language tests. Since language is viewed as semiotic potential, Chapelle points out further that the description of language is a description of choice, hence, systemic linguists chart their analyses by diagramming the choices language users can make in a given setting to realize a particular linguistic product. In similar vein, Verschueren (1999) surmises that language involves the continuous making of linguistic choices, consciously or unconsciously for language-internal (i.e. structural) and/or language-external reasons. These choices, he says, can be situated at any level of linguistic form: phonetic/phonological, morphological, syntactic, lexical, semantics. Likewise, Chapelle emphasizes that the unit of analysis is the text because the functional meaning potential of language is realized in units no smaller than text, and for her the study of texts is typically performed by examining the elements of the lexicogrammar and phonology, however these smaller units must be viewed from the perspective of their contribution to the meanings expressed by the total text in context.

The aforesaid, therefore, confirm the fact that discourse analysis as Demo (2001) asserts does not look outside of the text for meaning, but on the relationship between texts and with all discourse that exists simultaneously and has come before. For him, this is an examination of language used by members of a speech community (as such the international maritime community in the present study), where it involves looking at both language form and language function which deals with the study of both spoken interaction (the focus of the study) and written texts. In such a manner, discourse analysis identifies linguistic features that characterize different genres as well as social and cultural factors that aid in the interpretation and understanding of different texts and types of talks. Since identifying the linguistic features as well as the social and cultural factors are so central in the analysis of maritime communications in ensuring safety of navigation at sea, the linguistic discourse analysis approach specifically is adopted as a model of analysis.

It has been advanced that linguistic discourse analysis does not solely focus on sentences in isolation as practiced by traditional linguists but now the practice is how these sentences make meaning in connection with the other sentences in the surrounding text. So the analysis of this sort (the linguistic discourse analysis approach) as employed in the study explores the linguistic characteristics of the spoken discourse as bases for analyzing the linguistic choices seafarers shall use in maritime communications. These linguistic characteristics (as discussed by Sharma & Sharma 2010) in focus are:

1. **Simplicity of structure**. Simplicity and complexity of structures are marked by the subordination of clauses and nouns and adjectival phrases. Heavily pre-modified noun phrases that are quite common in written discourse are rare in spoken discourse. Thus, spoken discourse is less complex than written because of the short time available to produce and process it.
2. **Repetitiveness**. Since spoken discourse is less permanent, it requires more repetition than written discourse. In spoken discourse, the addressee cannot easily refer back to what has gone before, so important information has to be repeated.
3. **Discourse and tenor**. Discourse varies, as has been viewed, according to whether it is spoken or written. Now discussions will be about how it varies according to factors such as who it is for, in what situation, and what kind of activity the language is being used for. On the other hand, tenor refers to the relationship between a speaker and the addressee in a given situation, and is often characterized by greater or lesser formality (in Leech, Deuchar & Hoogenraad 1993 as cited in Sharma & Sharma 2010). Tenor can be formal or informal, polite or familiar and impersonal or personal. If the relationship between the speaker and addressee is official and distant, for example in legal document, the tenor will be formal, and if it is close and intimate, for example a conversation between friends, the tenor will be informal. Likewise, the tenor of discourse will be polite if the speaker and addressee are not well known to one another, whereas it will be familiar if the speaker and the addressee are well known and intimate to one another.

Showing how language is used in social context as viewed from the preceding statements, Halliday (in Murcia 2008) illustrates that accordingly, field refers to the social activity in which the language is being used and what is being talked about, and it is reflected in choices of content words. Tenor is concerned with the roles and relationships of interlocutors. For example, one's choice of sentence type to express a request – declarative, interrogative, imperative – would be conditioned by the nature of the relationship between the person making the request and the person being asked to fulfil it, while the mode refers to the channel of communication, whether the language is written or spoken and, with regard to the latter, whether it is face to face or more remote. This is to say then that understanding informal and formal form of English language is a necessary requirement for a language user to be successful in any communicative

situations. As such, Halliday (in Murcia 2008) notes that while people are communicating, they make predictions by using the values of field, tenor, and mode to understand register and that their assessment facilitates their own participation.

In view of discourse analysis as an approach to the creation and organization of the segments of a language, Chaudron (1988 as cited in Seedhouse 2004) posits that DA uses principles and methodology typical of linguistics to analyze classroom discourse in structural-functional linguistics terms. For example, "Could I borrow your pencil?" could be mapped as a *request*. In this, Seedhouse (2004) explains that once sequences of speech acts or moves have been plotted, a set of rules can be written which show how the units fit together to form coherent discourse. So for him hierarchical systems which depict the overall organization of classroom discourse can then be developed. Taking this DA approach paves way for the Sinclair and Coulthard outstanding study of classroom interaction to prosper. Seedhouse (2004) reveals that Sinclair and Coulthard's most significant finding in as far as the teaching profession is concerned is their identification of the three-part sequence typical of classroom interaction. For him, this sequence is generally known as teacher initiation, learner response, and teacher follow-up or feedback (IRF) in the British school; initiation, response and evaluation (IRE) in the American school. Since the DA system of analyzing classroom interaction uses a linguistic approach, Seedhouse (2004) admits that majority of the studies conducted on classroom interactions have been based more or less explicitly on it which includes the many coding schemes that have been developed specifically for the L2 classroom. Edward & Westgate (1994 in Seedhouse 2004) indicate that all coding schemes for L2 classroom interaction are implicitly based on a DA paradigm and embody "the assumption that those features of the interaction of teacher and thought are evident 'beneath' or 'within' the word exchanged." The preceding statements then assure that the basis of the DA approach and of classroom coding schemes is that an interactant makes one move on one level at a time. The move the teacher makes can be specified and coded as a pedagogic move, for example, initiates or replies.

In the same vein, the identification of the three-part sequence typical of a classroom interaction in a DA approach as espoused by Sinclair and Coulthard is the same minimal segment of language that is in consonance with the interaction exchanges at sea, i.e. a ship-to-shore or shore-to-ship exchange. In maritime communications, Pritchard (2001) identifies this system of sequence and organization of sea conversation as **making contact-exchange of messages-end of procedure**. As explained by him, these exchange procedures are most common in spoken maritime interactive communications. In many ways he says that they resemble normal phone conversation between two speakers. However, in maritime VHF exchanges each speaker must wait for his turn. This in DA approach in classroom interaction analysis points to an interactant making one move on one level at a time. Pritchard (2001) continues to explain that an exchange, turn, move, and act form the principal elements or units of a maritime conversation. The **exchange** he says is the smallest interactive unit in maritime conversation and in it by VHF or any other voice radio-communication, two stations briefly discuss a topic, ask for information and respond to it, agree to a suggestion, etc. Basically, for Pritchard (2001), an exchange is a conversation between two stations on a single topic. This single topic consists of two turns, one held by the controlling station and the other by the responding station. A **turn** is the time one station uses to speak in order to say: (1) what it intends to do or what it expects the other station to do, (2) ask for information, (3) request or seek advice, etc. Moreover, the most important part of a turn in the exchange is the **move or act**. Pritchard explicates that it is the speaker's contribution to the exchange and success of a conversation which may consist of a word, a phrase, or a sentence that the speaker uses in his turn to express his intention or purpose of communication.

Given the above notions, it can be deduced that the **discourse analysis model** of Sinclair and Coulthard (1975 as cited in Stubb 1983) has been understood to fit into the linguistic analysis of maritime communication in which the conversational exchange is characterized to be an exchange being defined by Stubb as the minimal interactive unit, comprising only of at least an **initiation (I)** from one speaker and a **response (R**) from another. He adds that the most obvious example of such an exchange is probably a question-answer pair, with the structure QA. Though this simplest structure for an exchange appears to be a consensus model, in which there is an agreement about the norms and convention, Stubbs (1983) argues that this type, whether it ignores crucial features of the language, gives a residue of meaning due to the particular context of situation. On shipboard routine, conversations are characterized by simplicity of structures and repetitions as observed in giving information, warning, instructions, etc. These still establish meaningful communication relationships as well as elicit an action (execution of commands when understood) from the listener. This is therefore a demonstration that meaning works in a situation that shows the use of language (in minimal unit) with the goal of getting the response of the hearer. In the study of the linguistic discourse analysis of maritime communication (onboard and external), the foregoing discussions provide for the framework of the target interaction.

Corroborating the need to strengthen the groundwork of the present study is an understanding that communication between a speaker and a sender in every maritime routine operation should leave no room for error. Allowing even a small error to get through the system would be disastrous to the lives, properties as well as to the marine lives and environment as shown in the many reported accidents. Baker & Cassell (2008) say that people's everyday conversations represent a carefully negotiated balance between the perceived needs of the speaker and the listener. Lindblom & Horn (1990, 1993 as cited in Baker & Cassell 2008) explain that a careful balance between these two forces allows speakers to produce language that is both efficient and effective at communicating a message. The fact remains that speech intelligibility has always been challenged under adverse conditions (more can it be in the maritime settings). Assmann & Summerfield (2003) affirm that speech communication nearly always takes place under conditions where some form of background noise is present, such as making traffic noise, competing voices, or even the noise of fans in air conditioners and computers thereby comprising the common forms of interference. They explain further that when speech is presented in a noisy background, it undergoes a reduction in intelligibility, in part because the noise reduces the modulations in the temporal envelope. It goes to show then that it is imperative for maritime communications to be transmitted efficiently leaving no room for error as Lombard, Lane & Terrel (1971 in Assmann and Summerfield 2003) suggest that adjustment in articulation is needed to offset the deleterious effects of noise and interference.

The foregoing statements then make it possible to uphold the significant contribution of standard information theory in showing how clarity of information could be achieved when different forms of noise are factors for the transmissions of messages to fail. Stubbs (1983) makes reference to the theory of standard information viewing that if a piece of language is totally predictable, then it is redundant, has no surprise value and communicates nothing. However, he rules out the preceding statements by saying that if one looks at language in use, this view has to be modified, for even repetition has various discourse functions: for example, to emphasize, check, query, express irony, and so on. On the notion of redundancy, Chiari (2007) believes that it can facilitate listening, understanding and speakers' synchronization, through a progressive check of what has been produced and received. She also says that it can act as a security system for hypoarticulated speech, through the predictability it confers to the elements of the message and as an error-correcting device.

Technically speaking, Krechmer (2001) emphasizes that for a reliable communication to occur as described in a standard information theory, not only redundancy must exist in the information transferred, but also commonality in the implementations and in the applications. Likewise, he punctuates that the said theory describes how redundancy is necessary to counteract the effects of noise and proposes that redundancy is part of the broader concept termed commonality that is required for the transfer of information communications.

Shannon (in Krechmer 2001) explains that redundancy now termed commonality is needed to extract the unique information in the presence of noise and that the redundancy represents the maximum compression possible, using symbol coding, without removing unique information. He further says that redundancy includes all the constraints transferred over the channel, for which compression may be employed to remove redundancy. However, he mentions that compression is the result of a prior agreement, possibly a technical standard, applied to the transmitter and the receiver of a communications system. In similar vein, Trenkner (2005) discusses that communication and disturbances that comprise the human element of shipping accidents presents the communication scheme that illustrates the flow of verbal communication in which he recognizes the channels as the fields playing the most important part. In his scheme, he simplifies it by saying that language or speech rarely passes the channel smoothly because it is exposed to various disturbances like in the technical element, poor propagation conditions, external noise, disturbance within the system and malfunction of equipment occur. Also, the human elements that may create these disturbances to the communication channel especially in external communication are incompatible ME competence between sender and recipient or vice versa, accents/dialects, neglecting radio regulations, error in operating the equipment, and emotive-psychic stress.

Therefore, the theory of standard information for Krechmer (2001) treats the transmitter, channel (link between the transmitter, receiver, and noise source), and receiver as system of constraint that needs to have increased commonality in order to identify a common relationship within the information or the implementations and procedures used to support the information flow, such that, if achieved, any transfer of information between humans and systems may greatly be understood and as such cultivate the culture of safety onboard ship through leaving no room for errors to occur. It is for these reasons that the theory of standard information is found relevant in the present study.

In this vein, Stubbs (1983) is in order when he rectifies the idea that in language use, even repetition has various discourse functions. In maritime communication, some of these discourse functions if repeated for clarity over efficiency as Baker & Cassell (2008) state result in more explicit communication which is needed in shipboard operations. Also, Assmann & Assmann enunciate that these provide a basis for error correction and resistance to noise. These discourse functions are described to be acts of communication in general. Hence, the speech acts theory of language.

Albornoz, Batista, Bitela, Fuller & Shuck (2007) discuss that speech act theory is built upon the argument that human existence is defined by the ability to coordinate efforts through the use of language. Through the use of language they claim that people create images from others and construct reality through words. Therefore, human beings cannot listen without interpreting what is being said by others. In an organization like the organization of crews onboard ship, speech acts of requesting and promising are common speech acts used in maritime routine operations. Superiors like the Master and the Chief Officer usually request things or even give order to their subordinates that a particular subordinate promises or complies to accomplish. So requesting and ordering are directive speech act that speakers use to get someone else to do something, expressing what the speaker's want.

Mey (1993) advances the notion that the basic flaw of theoreticians' conceptualization that the human language is nothing but a combination of "sound and meaning" is their disregard of language as action, an action which produces "speech acts". Austin (1962 in Cutting 2002) defines speech acts as the actions performed in saying something. These speech acts in the orthodox speech act theory suggest that all speech acts, in any language anywhere in the world, fall into five categories, namely; (a) assertives, (b) directives, (c) commissives, (d) expressives, and (e) declarations (Verschueren 1999). Cutting (2002) opines that these categories of speech act theory elaborate that the action performed when an utterance is produced can be analyzed on three different levels. The first level of analysis is the locutionary act. This refers to what is said by the speaker. The second level is the illocutionary which takes into account what the speaker does by making such utterance; and the third level is the perlocutionary act which takes into consideration the intended effect on the receiver of the message.

Indeed, the aforesaid clearly demonstrate the theory interlacing fuelling interactions even if maritime sea conversations find their presence under adverse conditions using a highly technical and specialized language that of maritime English.

3. Methodology

The discourse analysis of language use, the maritime communication structures that are constructed to represent the choices seafarers shall use in communicative settings to ensure safety of navigation is examined in this study using the linguistic discourse analysis. This linguistic discourse analysis is qualitative in nature for it only describes and analyzes the language of the seafarers being used at sea, in port approaches, and in waterways. These select communicative encounters of seafarers classified as both onboard and external form the speech data for analysis.

These select pieces of data used for analysis were collected from (1) The British Council's Maritime English Teaching Materials for these provide a good number of spoken data about onboard communication in which the British Council has always been active in maritime English Teacher Training and (2) The Leonardo da Vinci MarEng Project as published and made available on the Internet called the Web-based Maritime English Learning Tool. The written speech data used for analysis in these written documents focused on the lessons found under the "**Advance Level**" category of the learning tool. Specifically, the sub-lessons on **Vessel Traffic Services Practice Dialogs** in this category were chosen because of the presence of rich samples of maritime communicative encounters, in this case the external communications. Another reason is the fact that it has been stipulated in the IMO STCW Manila Amendments as Trenkner & Cole (2010) report the need to require Maritime English lecturers to familiarize themselves with Ship Reporting Systems as VTS centers are one of the most frequently performed exchanges of information on the radio for ships officers. So the analysis in focus would strengthen teachers' linguistic knowledge in this kind of maritime communication as this familiarization of the ship reporting system is given much emphasis. The framework for analyzing the data basically centered on explaining the linguistic characteristics of the spoken discourse in these two types of communication exchanges onboard ship.

More so, the choice of taking the data for analysis in this Web-based Maritime English Learning Tool was prompted by the fact that as explained in the project description this MarEng project of international circulation brought together group partnership consisting of a wide variety of maritime institutions, in which those involved in the making of the said project were education and maritime experts such as English teachers, researchers, training managers, seafaring professionals and representatives of the

maritime industries in six European maritime countries (Finland, Poland, Spain, the United Kingdom, Belgium and Latvia). In addition, Prof. Dr. Boris Pritchard in a paper he presented at the International Association of Maritime University (IAMU) entitled "A Survey of Maritime English Teaching Materials" reported that the third objective of developing a standard, or more or less widely accepted textbook or other type of material for the learning/teaching of Maritime English (cf. Cole 1999, Logie 1999) has been difficult to achieve for a number of reasons he outlined. To this date, the MarEng Learning Tool as a transnational project addresses partly this difficulty of satisfying the international maritime community when it comes to the use of a comprehensive and a one setting standard of innovative maritime English teaching materials. This is so because the creation of the project work went into five work packages such as (1) administration, (2) material making, (3) piloting, testing, evaluation, (4) dissemination, and (5) technological solution. Its regular presentation for evaluation at various IMEC conferences by Barbara Katarynzka has always received scholarly suggestions and recommendations to strengthen its content. Hence, the strong basis of the choice of the data for analysis using a linguistic discourse analysis.

4. Analysis of the Linguistic Discourse Characteristics of Maritime Communications

Onboard and External pieces of communication are central to Maritime communication. Structurally, only a thin line of difference separates one from the other. The obvious difference between the two is the idea that onboard communication is executed within a particular vessel by the officers on duty, whereas external communication is executed between ship to shore and ship to ship of the officers on duty. It is in this view that the study would attempt to find out how they are done with the singular goal of safeguarding safety at sea thereby giving maritime practitioners a well grounded understanding on these two major components of the Standard Maritime Communication Phrases (SMCPs).

4.1 Onboard Communication

4.1.1 Pilotage

Context: The ship is at sea, running up to the Pilot Station. The entire action with the exception of the third Officer's reply, takes place inside the wheelhouse. Present are the Master, the Watchkeeping Officer (2/O), a helmsman and the Pilot.

Pilot (to 2/O)	"Half Ahead"	**1**
2/O (Rings Telegraph)	"Half Ahead, Pilot"	**2**
Pilot	"Starboard Ten"	**3**
Helmsman	"Starboard ten, Sir	**4**
Pilot	"Midships" "Steer zero zero three"	**5** **6**
Helmsman	"Midships" "Steady on zero zero three"	**7** **8**
Pilot	"Dead slow ahead"	**9**
2/O (rings telegraph)	"Dead slow ahead, Pilot"	**10**
Pilot (to helmsman)	"What is your course?"	**11**
Helmsman	"My course is zero zero three, Sir".	**12**

Referring to how the linguistic characteristics relate meanings to the communication choices of the seafarers, the given table (4.1.1 on Pilotage as a sample extract) reveals that the orders given are short, brief, and direct to the point. As shown, giving and repeating orders as well as asking and answering questions in this onboard routine operation describe this encounter as the working of the function aspect of language. Intelligibly, there is only one literal meaning that can be deduced from the said situation and that of the Pilot who simply gives orders for the 2/O and the helmsman to execute them if fully understood. This is complying the STCW stipulation that only one meaning prevails for maritime vocabulary use to avoid misunderstanding. Linguistically, it clearly shows that when the orders focus on the use of SMCPs standard engine orders (docking manoeuvres) such as "(1) **Half Ahead, Dead Slow Ahead** (lines 1 & 9) and standard helms orders like (2) **Starboard Ten** and **Midships** (lines 3 & 5) as ordered by the Pilot, obviously depicts **S-V**. A closer look at these sentence structures shows that they are even made shorter to the point that L2 learners would find them not sentences, but they are. Berk (1999) calls this as the application of linguistic ellipsis that refers to any omission of a word or words. She adds that this is the only case in English in which a subject is not required in the main clause of a sentence. This for her explains the other grammatical features of an imperative as a very distinctive kind of directive.

Clearly this gives a telling indication that the use of imperatives in giving orders onboard ship marks the very nature of maritime communication as it is stipulated in the IMO SMCPs because understanding orders exposed to noise interference needs **simplicity of structure**. This for Lindblom (1990; Horton & Keysar 1996 as cited in Baker & Cassell 2008) is a decision for the speaker to choose a more reduced, efficient communication style when the speaker perceives the listener to have difficulty understanding. For Bard (et al., 2000; Branigan et al., 2003 in Baker & Cassell 2008) this explains why a number of scholars have pointed out that speakers seem to use the information available to themselves rather than that available to the listener to guide certain linguistic decisions, such as clarity of pronunciation and choice of syntactic structures. Baker and Cassell (2008) add that in every utterance, a speaker either reduces the likelihood of listener misunderstanding by being more explicit, or reduces their own effort by providing minimal amount of information. It is noticeable that heavily pre-modified noun phrases as Sharma & Sharma (2010) point out are rare in spoken discourse because of the shortness of the time available to produce and process information. Simplicity of structure in maritime communications is believed to be efficient and effective at communicating a message because it would disambiguate communicative encounters. Hence if they are not made clear, the lives, properties, and the marine environment will be in danger as orders/commands could not be understood because of the length of discourse. Such can create a problem of understanding in communicative encounters that are highly exposed to different forms of interference and noise.

Since safety onboard ship depends on the understanding and correct execution of orders, it is observed that in the sample extract, the structures as Berk (1999) explains that the imperatives in discourse are especially common in situations in which a speaker is giving explicit orders or directions. These choices of language structure in giving order, which dominates onboard communication, are of performative directive speech act type. For Verschueren (1999) this speech act type counts as an attempt to get the hearer to do

something. In similar vein, Cutting (2002) says that this covers acts in which the words are aimed at making the hearer do something, but for directive the rule is that the speaker must believe that it is possible to carry out actions. In highly structured situations such as onboard communication, this poses no problems at all just like doctor-patient talk. Tayao et al. (1997) punctuate that it is relatively easy to predict who will speak, when, who will answer, who will open and close the talk, etc. For them speech act theory underlies conversations and interactions in structured situations.

With regard to factors that vary spoken discourse, the communication exchange order from the Pilot "Starboard ten." and the helmsman's response "Starboard ten, **Sir**." in lines 3 & 4 describe the tenor that has to do with the relationship between a speaker and the addressee in a given situation, and is often characterized by greater or lesser formality (in Leech, Deuchar & Hoogenraad 1993 as cited in Sharma & Sharma 2010). The maritime communication exchange in this case is distinctly of greater formality because in the said maritime routine operation it is the pilot as an officer talking to the helmsman as a subordinate. Nor & Aziz (2010) explain this formality of language as a demonstration of managers/leaders having inevitably significant and influential role in the workplace since in any organization effective workplace communication is vey essential for the smooth and efficient functioning of an organization. Foley (2010 in Nor & Aziz 2010) implies that language use is very much related to social position, role, identity and relationship between participants in a discourse. Indeed, it could be said that the further apart the speakers are socially, the higher the required level of formality.

4.1.2 Anchoring

Context: The Master and the Chief Officer (C/O) are in the wheelhouse. The ship is proceeding (at slow ahead) towards the anchorage. The forecastle party consists of the Chief Officer (C/O) and the bosun.

Master	"Good Morning Mate."	**1**
C/O	"Good Morning, Captain."	**2**
Master	"Mate, we are approaching the anchorage. Go forward with the bosun and prepare the port anchor for letting go. We will use five shackles in the water."	**3** **4** **5** **6**
C/O	[Repeats Orders]	**7**
Master	"Yes. Walk the anchor back to just above the water and hold it on the brake."	**10** **11**
C/O	"Walk the anchor back to just above the water and hold it on the brake. Yes, Sir."	**12** **13**
Master	"Dead Slow Ahead."	**14**
2/O (to Master)	"Dead Slow Ahead, Sir."	**15**
Master (to 2/O)	"Stop Engine."	**16**
2/O	"Stop Engine." "Engine stopped, Sir."	**17** **18**
Master (to 2/O)	"Half Astern."	**19**
2/O (to Master)	"Half Astern."	**20**

To ensure clarity of information when different forms of noise as factors for the transmissions of messages to fail, the given shipboard routine operation on anchoring establishes that every maritime exchange is always repeated (lines 3-4-5-6 & 7, 10-11 & 12-13, 14 &15, 16 & 17, 19 & 20). Linguistically, this speaks of the importance of repetitiveness. Sharma & Sharma (2010) indicate that spoken discourse is less permanent, so for them it requires more repetition as compared to written discourse. In spoken discourse they continue asserting that the addressee cannot easily refer back to what has gone before, so important information has to be repeated. So in maritime communication the preceding linguistic thought is much more significant. Repetition thus ensures the sender an assurance whether or not his orders are well received and understood by the receiver. If in case the repeated response runs counter, then a quick communication adjustment is done. Onboard ship, the repetitions of orders are standard communication operating procedures as stipulated in the IMO SMCPs.

This nature of communication that is described to be highly predictable is for Stubb (1983) possible because language is structured. He further argues that if a piece of language is totally predictable, then it is redundant, has no surprise value. However, in language use, repetition has various discourse functions and some of them are to check and to emphasize. This view of Stubb (1983) is in consonance with that of Krechmer (2001) who claims that for reliable communications to occur, redundancy must exist in the transfer of information. And looking at the situations onboard ship, Trenkner (2005) specifies that the use of radio as a medium of communication, language or speech rarely passes the channel smoothly, and is exposed to many various disturbances. Supporting the preceding idea, Shannon (in Krechmer 2001) reveals that redundancy is needed to extract the unique information in the presence of noise. These facts therefore prove that imperatives and repetitions dominating onboard communication are registers in actual speech that Halliday describes as a variety according to use, in the sense that each speaker chooses between them at different times. In the context of maritime communication, the definition of Firth (in Zequan 2002) finds its relevance calling it a restricted language serving a circumscribed field of experience or action with its own grammar and dictionary making it highly specialized.

In both given extracts (Pilotage & Anchoring), it can be observed that the discourse pattern of exchange being followed is obviously the minimal pattern of Initiate (I) and response (R). The given extract on Pilotage shows how the initiation or opening move functions as always directly giving explicit order due to its highly specialized nature of onboard ship exchanges. Expectedly, the response or answering move functions as an acknowledgment of the order comes in the form of repeating it as heard from the opening move. It can be noted that when an initiation or opening move is given, the response or answering move is limited to a single person. This goes to show that involvement of specific crew in a particular shipboard operation is a standard operating procedure because each of them has his own task that he is duty bound to fulfill for the safe navigation of the ship. In other words, this is mandatory to an agreement that has to be followed satisfying the standard norm and convention in the said context of situation. Sinclair and Coulthard (1975 in Tayao et al.) mention that the pattern of exchanges varies from culture to culture, and language learners have to adjust to the difference. However, the preceding notion cannot be applied onboard ship because the

language of exchanges has been standardized that a mere deviation from it would destroy the preservation of lives and properties onboard ship.

Aside from making the orders short and concise as well as they should be repeated, the extract found below provides another way of cultivating safety onboard ship.

4.1.3 Pilotage

Master (on radio)	"**Captain to Third Mate**: Rig the pilot ladder on starboard side, one meter above the water. Have a lifebuoy and heaving line ready, then report to the bridge."	**18** **19** **20** **21**
3/O (on deck, on radio)	"Third Mate to Captain. Rig pilot ladder on starboard side, one meter above the water. Have a lifebuoy and heaving line ready. I will come up to the bridge when all ready, Sir."	**22** **23** **24** **25** **26**

Extract 3 above states where the message comes from and where it is going. The introduction "**Captain to Third Mate**" and **Third Mate to Captain**" (lines 18 & 22) renders the significance of a singular one sender, one receiver communication relation. It is understood that the medium of communication here is a radio because the 3/O is outside the bridge. It shows clearly then that only a person being acknowledged to receive the order should also be the one to execute it, but before executing the order it is a must for him to repeat the order he receives.

This as said beforehand is the standard norm and convention in maritime communication particularly observed when physical distance defines the location of the sender and receiver of the message. This proves that each crew is duty bound to fulfil only his work responsibilities onboard ship as stipulated before his coming onboard ship. This communication exchange for Pritchard (2003) in many ways resembles normal phone conversation between two speakers. But, in maritime VHF exchanges each speaker must wait for his turn. Overlapping as a feature of language must be avoided in this type of exchange. Exchange, turn, move, and act for him from the principal elements or units of a maritime conversation. The **exchange** as shown from the table is described to be the smallest interactive unit in maritime conversation that in VHF or any other voice radio-communication reveals two stations briefly discuss a topic, ask for information and respond to it, agree to a suggestion, etc.

Each beginning exchange stating where the message comes from and where it is going (Captain to Third Mate and Third Mate to Captain) clearly exposes the workings of ellipsis. Instead of saying "This is the Captain speaking to the Third Mate and This is the Third Mate speaking to the Captain" these opening sentences meet religiously the norm and convention as stipulated in the SMCPs to be of short, concise, and direct to the point as possible to avoid ambiguity, in which if not followed may result to misunderstanding given the fact that a vessel is composed of multilingual crew.

4.2 External Communication
Ship to Shore Communication

4.2.1 Example 1: Entering Report

Marina	Kotka VTS. This is Marina.	**1**
Kotka VTS	Marina. Kotka VTS.	**2**
Marina	We are passing the reporting point number 10. My ETA at pilot station, is 1300 hours local time.	**3** **4**
Kotka VTS	Marina. Kotka VTS. You are in the Kotka VTS area. Proceed to Orrengrund Pilot Station. **Information**: Rig the pilot ladder on starboard side, one meter above the water. Make a boarding speed of six knots.	**5** **6** **7** **8**
Marina	Pilot ladder on starboard side, one meter above the water. Boarding speed six knots. Is pilot ready for me?	**9** **10**
Kotka VTS	Yes, pilot on arrival. Traffic **Information**: One outbound vessel, named Annegrecht, now passing Tainio Light.	**11** **12**
Marine	Okay. Traffic information received.	**13**
Kotka VTS	**Information**: There are cable operations in position 277 degrees from the southern point of Kaunissaari island, distance 4 miles. Wide berth requested.	**14** **15** **16**
Marina	Cable operations in vicinity of Kaunissaari, wide berth requested. Well received.	**17** **18**

Structurally the only difference between the two major components of maritime communication is the additional use of message markers when communication is classified as external. Viewed from the sample external communication excerpt, the utterance “Kotka VTS. This is Marina.” and “Marina. Kotka VTS.” (lines 1 & 2 in Entering Port) employs linguistic ellipsis just like Pilotage and Anchoring under onboard communication in the sense that instead of saying “I am calling Kotka VTS” the words “I am calling” are omitted in this construction, but this does not destroy the thought of the sentence because the omitted words are understood to be part of the construction. It is the linguistic ellipsis (as shown also in onboard communication) characterizing imperative construction that creates minimal interaction for the exchange of maritime communication. This again highlights the importance of making maritime communications short, concise, and direct to the point. As Lindblom & Horn (1990, 1993 as cited in Baker & Cassell 2008) explain that this is producing language that is both efficient and effective at communicating a message. This is so because little time is given to process meaningful information in situation such as maritime routine operations often under noise disturbances. Also, when speed is a factor for Lindblom, (1990; Horton and Keysar 1996 in Baker and Cassell 2008) this tells that the speaker may choose a more reduced, efficient, communication style. Baker and Cassell (2008) assert that in every utterance, a speaker either reduces the likelihood of listener misunderstanding by being more explicit, or reduces their own effort by providing minimal amount of information. Under linguistic characteristics, this is simplicity of structures showing spoken discourse to be less complex than written because of the short time available to produce and process it.

Kotka VTS's information "Rig the pilot ladder on starboard side, one meter above the water. Make a boarding speed of six knots." (lines 6,7&8)and Marina's response "Pilot ladder on starboard side, one meter above the water. Boarding speed six knots." (lines 9&10) display the maritime communication culture of repetition onboard ship. Chiari (2007) believes that this repetition facilitates listening, understanding and speakers' synchronization, through a progressive check of what has been produced and received. She says also that it can act as a security system for hypoarticulated speech, through the predictability it confers to the elements of the message and as an error-correcting device. In other words, repetition functions as a fixing agent in sea conversations when noise as well as interfering signals are too difficult to contain; thus, in this situation, extracting the unique information even in the presence of the said communication disturbances is still possible (Shannon in Krechmer 2001). Assmann & Summerfield (2003) emphasize that this is providing a basis for error correction and resistance to noise.

The message marker/procedure "Information" used only in external communication (lines 6,11&14) is just one of those eight (Question, Answer, Request, Intention, Warning, Advice) that have been used in the sample maritime communication excerpt. As seen in the sample excerpt, the message marker is placed before the message to signal and introduce the purpose and content of the message to be communicated. This is following one of the inclusions in the IMO SMCPs which stipulates that if used, the message markers are to be spoken preceding the message or corresponding part of the message. Each of these message markers has its own meaning like when using the message marker "Information", the sender aims only to let the receiver restrict to only observe facts. The fact that the 4S in external communication happen outside the ship, it is expected that the proximity of distance in communicating faces a challenge for both parties because of the usual communication disturbances such as frequency limitations. This is the very reason why the message markers make additional significant contributions of emphasizing every message being sent to be treated under the eight procedures so that the receiver would understand each of these messages clearly. The use of message markers in external communication is said to be a linguistic coding symbols that are added because as Trenkner (2005) puts it the disturbances to the communication channel in external communication are so high. Studies have shown that 88% of the 40% accidents at sea due to the human element are attributed to the failure of external communication. These message markers are definitely considered to be the product of prior agreement as stipulated in the IMO SMCPs. This coding system is expected to increase the communication rate of channel by reducing possible distortion or noise in order to convert information to clear communication thereby avoiding the possible occurrences of accidents.

To show understanding of the whole exchanges of information, ending an exchange is also observed to be structurally very simple but efficient and effective. "Well received." in line 18 of the extract discloses the use of ellipsis. Rather than saying possibly at the end "Your navigational information and request are well received." two words stand in this linguistic context, but these do not alter the meaning of a longer stretch of discourse typical of communication outside of the maritime field. Thus, simplicity of structure in maritime context helps disambiguate possible sea conversations that may be exposed in difficult situations such as in a maritime environment where noise and interfering signals often exist.

4.2.2 Example 2: Navigational Assistance

Hightower VTS	Hightower VTS. This is MSC Marianna.	**1**
MSC Marianna	MSC Marianna. Hightower VTS.	**2**
MSC Marianna	Information: We have problems with electricity on the bridge. Only one radar is working. I require navigational assistance.	**3** **4** **5**
Hightower VTS	Understood. You have problems with electricity. Question: What is your position?	**6** **7**
MSC Marianna	Answer: My position is bearing 035 degrees, distance 5.5 miles from landfall Lighthouse.	**8** **9**
Hightower VTS	Bearing 035 degrees, distance 5.5 miles from landfall Lighthouse. I have located you on my radar screen. All information is based on VTS equipment. Stand by on channel 10. If you do not hear from me in one minute time, navigational assistance is ended. In that case, go back to channel 71 and call Hightower VTS. Navigational assistance starts at 0920 local time.	**10** **11** **12** **13** **14** **15**
MSC Marianna	Okay. Navigational assistance is starting and is provided on Channel 10. If I do not hear from you at one minute intervals, navigational assistance is ended and I will call Hightower VTS on Channel 71.	**16** **17** **18** **19**
	...	**20**
Hightower VTS	You are on the center of the fairway, tendency to north. Bearing to the next buoy is 120 degrees, distance 2.2 miles	**21** **22**
MSC Marianna	Thank you. Information: My next way point is in position 240 degrees and 0.2 miles from buoy number six. After that I will commence the turn to the next course which is 090.	**23** **24** **25**
Hightower VTS	Next waypoint in position 240 degrees and 0.2 miles from buoy number six. Understood. ... You are on the northern buoy line of the fairway, tendency to north. Bearing to the next waypoint is 140 degrees, distance 1.8 miles.	**26** **27** **28** **29**
MSC Marianna	Understood. I am on the northern buoy-line. Bearing to the next waypoint 140 degrees. I will alter my course to the south. ... I am passing buoy number two and my navigational equipment is working now. I no longer require navigational assistance. Thank you.	**30** **31** **32** **33** **34**
Hightower VTS	MSC Marianna. Hightower VTS. Information received. Navigational assistance ends at 0945 local time.	**35** **36**

Table 4.2.2 on Navigational Assistance divulges the linguistic structure of marine radiotelephone which Pritchard (2003) divides it into three stages: making contact-exchange of messages-end procedure. Lines 1 & 2 tell the making of the contact, lines 3 to 35 are for the exchanging of messages and lines 35 & 36 depict the end procedure. This sequence organization of sea conversation is very similar to that of what has been revealed in Sinclair and Coulthard's most significant finding in as far as the teaching profession is concerned, identifying the three-part sequence typical of classroom interaction teacher such as initiation, learner response, and teacher follow-up or feedback (IRF) in the British school and initiation, response and evaluation (IRE) in the American school (Seedhouse 2004). However, on sea conversation, the exchange procedure is commonly done in spoken maritime interactive communications, resembling normal phone conversation between two speakers (Pritchard 2003). Seedhouse (2004) distinguishes this telephone conversation of being accomplished with more precise timing than face-to-face conversation.

Taking a closer at Pritchard's stages of radiotelephone conversation with reference to the sample extract, it can be told that lines 3-4-5 & 6-7 belong to an **exchange** because MSC Marianna and Hightower VTS are two stations briefly discuss a topic about problem with electricity which the succeeding inquiry information and responses deal with how navigational assistance be effectively executed. Pritchard (2003) substantiate that an exchange is a conversation between two stations on a single topic such that a single topic consists of two turns, one held by the controlling station and the other by the responding station. Specifically, he explains that a **turn** is the time one station uses to speak in order to say: (1) what it intends to do or what it expects the other station to do, (2) ask for information, (3) request or seek advice, etc. Further, the most important part of a turn in the exchange is the **move or act**. Pritchard explicates that it is the speaker's contribution to the exchange and success of a conversation which may consist of a word, a phrase, or a sentence that the speaker uses in his turn to express his intention or purpose of communication. Lines 4 "I require navigational assistance.", 7 What is your position?", 14-15 "Go back to channel 71 and call Hightower VTS.", 18-19 "I will call Hightower VTS on Channel 71." etc., show imperatives in discourse (requesting, asking question, instructing, expressing intention) that are especially common in maritime situations/operations. Superiors like the Master and the Chief Officer usually request things or even give order to their subordinates that a particular subordinate promises or complies to accomplish. Though speech acts dominate in highly structured situations such as maritime routine operations, Albornoz, Batista, Bitela, Fuller & Shuck (2007) claim that with the use of this form of language people create images from others and construct reality through words that to simply say, human beings cannot listen without interpreting what is being said by others. These therefore establish social relationships and elicit an action from the listener thereby creating meaningful interaction.

5. Conclusion

The result of the study provides significant insights on why simplicity of structure, repetition and minimal discourse system of sequence organization in shipboard routine operation conversations characterize the nature of onboard and external communications taking into account the preservation of safety onboard

ship. Further, the study has shown that these linguistic characteristics of maritime communications help create an efficient flow of maritime communications that are often exposed under adverse conditions. In conclusion, these analysis and description of the linguistic characteristics of maritime communications hope to add to a growing body of knowledge focusing on learning maritime communication structures in which full understanding to these would strengthen the preparations of maritime English classroom practitioners making informed changes in their instructional practices in the teaching of maritime English.

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Contest and Proficiency- a Pilot Study of the Feasibility of the International Maritime English Contest among Maritime University Students (IMECMU)

Abstract

The present paper is intended to propose a contest of international maritime English among Maritime University (MU) students so as to motivate their learning of ME and give basics a prominent place in ME teaching and training as well. There is no much controversy that marine perils are more or less the result of inadequate ME proficiency of seafarers. Although the importance of ME has never failed to be underscored in every IMLA, IMEC and IAMU and the topics related to communication skills and competency, cross-culture aspects, language skills development and teaching methodology are exclusively, fully and thoroughly addressed, still ME problems never end in the multi-crewed vessels, between ship to ship and ship to shore communications. Moreover, it should be noted that the 2010 Manila Amendments of the STCW have imposed much more stringent demands on ME. The requirements for English proficiency are not only spoken, but also written, not only on the bridge and in the deckhouse, but also in the engine room. Confronted with these higher demands on ME and seldom discussed or seeming to be left neglected in ME-related international conferences is one such topic, that is contest, which is what the present paper intends to deal with. It falls into three parts: Part one deals with the feasibility of ME Contest among MU students. Part Two suggests a testing format, testing rules and a sample test and so on and so forth. Part Three is concluded with the feasibility and necessity of the ME contest among MU students and a suggestion that a contest steering committee shall be set up and the testing handbook or instructions detailed.

Keyword: contest, proficiency, ME, communication

1. Introduction

There is no denying the fact that almost every Maritime English instructor is working tirelessly towards the improvement of seafarers' language competency. It is also an incontrovertible truth that the IMO has given ME an unparalleled position which is borne out by the fact that the IMO SMCP has regulated by law that English is the only language to be used if seafarers working on board come from more than one country. Furthermore, in 2010 Manila STCW Amendments, demands on ME were higher than before, not only spoken skills are stressed, but all the other language skills such as listening, reading and writing abilities are underscored, too. Besides, seen from the past IMEC conferences, the frequently discussed topics about ME are communication and culture awareness as well as sharing some specific teaching skills such as listening, speaking, reading and writing and in some few cases translation being focused on, too. Most of the papers were focused on how to improve communicative competence among seafarers working on board the multi-linguistically crewed vessels. Some dealt with the ways and means to ameliorate speaking ability by means of designing workable textbooks, feasible curricula, collecting authentic materials and compiling practical handbooks of ME. Some touched on the importance of

cultural diversity awareness and the ways to promote cross-culture communication strategy. It is worth mentioning, too, that IMO has never ceased in their endeavor to give ME a push forward which can be evidenced by the SMCP and the MODEL Course 3.17: Maritime English. There is no denying the truth that all these have borne fruits as today's seafarers can speak better English. But still many shipping companies and captains complain about the inadequacy of seafarers' English. What's worse, sea perils still occur because of misunderstanding and failure in communicating effectively in English. Therefore, it is necessary to look at the ways of tackling ME problems from another angel. It should be pointed that no matter how magic teaching methodology is and how legendary a teacher is, if the student has no great motivation to learn a subject, say, Maritime English, then no great miracle may be worked. And the great motivation to incite and entice a person to do is contest and the reward that comes with the winning of the contest. But as far as I know, topics about the International Maritime English Contest among maritime university students (IMECUS)have seemed not to be read or heard in the past IMECs or IMLAs and there has never been an international maritime English contest although English contests of different types on an international footing are not few and far between in today's world. As we know, maritime English when not communicated successfully and effectively is responsible for 80% of sea perils and international shipping is the most global type compared with other trades and industries, the importance of maritime English competency has never been doubted as mentioned previously, there is more necessity to look at the feasibility of holding the international maritime English contest so as to encourage maritime university students of different countries to pay more attention to maritime English studies. That is what this paper is intended for. The paper falls into three parts: Part one deals with the feasibility of ME Contest among MU students. Part Two suggests a testing format, testing rules and a sample test and so on and so forth. Part Three is concluded with the feasibility and necessity of the ME contest among MU students and a suggestion that a contest steering committee shall be set up and testing handbook or instructions detailed. In Part A, these five Ws question and one H question will be discussed, namely, 1. Why do we need to have an IMECUS. Is there such a feasibility to assemble such an international ME contest? 2. What shall be covered in an IMECUS? What is the percentage of the different skills of the Maritime English? Shall general English be included in IMECUS? What position is the IMO SMCP in the IMECUS? 3. How shall we organize such an international maritime English contest？How many stages are there in the IMECUS? Shall we conduct it in the preliminary stage on a continental or national basis and on an international one in the final grand contest? 4. Who is supposed to organize and sponsor it? 5. When shall the IMECUS take place? 6. Where shall the grand final of the IMECUS be conducted? 7. Are there any other items to be taken care of in organizing the IMECUS? In Part B, a brief format of the IMECUS will be presented. In Part C, there will be a conclusion as to the feasibility of the IMECUS.

2. The Feasibility of the IMECUS

2.1 Why

It is well known that English is the only internationally recognized common working language on board a multi-ethnically manned vessel. It is very rare for a vessel on an international voyage to be manned with only one country's crew. Crew members of different countries have to use this common language not only to communicate in their daily work on board and ashore, but also in their daily life. It is almost impossible to survive a single day if one cannot use English on a multi-linguistically crewed vessel. Perhaps there is such a possibility that the vessel is crewed with only the same countrymen, but when the vessel calls at a foreign port or when she encounters some danger or when she finds another vessel in distress and she intends to offer rescuing assistance as required by the IMO SOLAS

and IAMSAR, she has no option but to use English. Moreover, it has been reported that more than 80%（IMO, 2005）maritime accidents arise from the failure of effective communication in English. The importance of English has never failed to be treated with sufficient attention in international maritime conferences, such as IMECs and IMLAs. Topics such as communication competency and cross-culture awareness have always been given top priority. It is true the MarTEL, (Maritime Test of English Language), a EU-funded mega ME Project, the standardised test of Maritime English for safer seas and MarEng (maritime English), a web-based Maritime English learning tool, both heavily financed by the EU programme as well as a commercial-operated Marlins, the leading provider of English Language Testing and Training solutions to the maritime industry play a great role in testing and upgrading seafarers' maritime English proficiency. But all these efforts seem to be not enough. There is one way we should draw on, that is, contest. What is the role language contests play in language competency? Is there any necessity and possibility of holding such a contest among Maritime Universities on an international scale? Will this be echoed if the IMEC proposes holding such a contest at the next IMEC 25 in Turkey? Will there be a good percentage of participants? Will some shipping institutions sponsor such an event? The answer, in all likelihood, is a YES. Let us look at the Olympics Games. What is the purpose or spirit of the Olympics? Almost everyone knows it is to strive for better, higher and stronger goals. Let's regard this from another perspective. Were there no Olympics Games, what would happen? Perhaps nobody could finish the 100 meter sprint under 10 seconds, because without contests there will be no good performance that is the result of tapping a person's utmost potential. Of course, everyone is quite aware that there is only one champion, one gold for each event, then why so many athletes are still actively involved in it? It is a spirit of participation. In the making of a champion, many and many runners-up, bronze winners as well as all contestants all push their performance higher and higher. And that is the advantages and impact of contests, a result that the overall performance has been bettered. If there is an IMECMU, especially preferential policies related to their future career development are laid down for the winners, more and more candidates will try their luck in it. By preparing for the IMECMU, not only the candidates participating in the contest have improved their maritime English skills, but the students around them or watching the contest show on line or live if the contest shows are delivered on youtube or websites will be encouraged or make up their mind to take the next contest. As shipping is the most international of all trades, English is the most important tool which an international seafarer must be equipped with, the IMECMU will play a role in upgrading ME languages skills. There is no reason that the IMECMU will not find popularity and ready sponsors considering our IMEC, a veteran organization in ME's MET, which has ushered in its 21st birthday this year. So, hopefully, when IMEC is 22 years old, IMECMU will come into being.

2.2 What

As the IMECMU is an international maritime English contest, its purpose is specific, that is, to motivate students from the maritime universities to focus on ME so as to improve ME competency. So what shall be covered in the IMECMU shall be studied carefully. It should be workable, practicable and objective and impartial. Besides, it should be attractive enough for the contestant: that is, whoever wins the IMECMU will be promised something beyond his expectation. The following is a suggested list of testing items for the maritime English contest.

- The IMO SMCP, every word and every term shall be required. As SMCP is mainly for listening and speaking purposes, it should be tested in the form of listening.
- COLREGs is an IMO steering guideline, all the rules are required of every officer. The key of

testing COLREGs is to correctly understand terms and definitions. It is recommended to focus on the vocabulary part of the COLREGs.

- STCW is the most important IMO conventions. Generally speaking, compared with SOLAS, MARPOL, it is fairly possible to require the contestants to read through it. The test shall focus on Vocabulary and some regulatory-type long sentences.
- SOLAS and MARPOL are a bit difficult for undergraduates of the Maritime Universities. It is recommended some required sections, such as Chapter Five of the SOLAS about navigation are listed in the contest synopsis.
- At least 3000 maritime –related terms and vocabulary shall be required. All these shall be selected from the IMO Conventions and maritime magazines.
- As for listening section, apart from the SMCP, the ability to understand sea radio news, TV news shall be required. Authentic listening materials shall be offered to contestants beforehand
- As for writing, practical writing ability shall be required of the contestant. Writing notices, filling records, deck logs, accident reports, describing sea events, etc are required in the final round test.
- Last but not least, accents shall be taken into consideration in listening test items.

Like the IMO model courses, if the IMECMU is to take place, on the agenda are as follows:

- The IMECMU Steering Committee shall be set up in no time with the existent IMEC Steering Committee as its core members and recruit a few more testing experts from the world. The Steering Committee is solely responsible for setting the timeframe for the first IMECMU and promoting it around the global maritime universities and seeking assistance from the IMO and shipping industries.
- The syllabus shall be designed and developed. Syllabus is the guideline both for the teachers and students. Teachers can develop the textbooks of their own based on the syllabus and students can prepare for the contest based on the framework of the syllabus.
- The syllabus-based vocabulary. The words can be selected from the required SMCP, MARPOL, STCW, SOLAS, Colregs, sections of the other IMO-adopted conventions and the required textbooks.
- The sample contest papers for IMECMU. The sample paper is intended to show the candidates what the contest is, what may be covered and how to prepare for it.
- Sampling tests shall be conducted in some typical navigation institutions so that analysis of the difficulty level may be made to adjust the level difficulty before the official contest takes place.

2.3 Who

The ideal organizer of the IMECMU is the IMEC as it is a dedicated ME NGO with a contingent of highly qualified ME experts. In addition, preferably, there may be some sponsors who may not only supply prizes and trophies but also give attractive job opportunities to all those who have entered the final round of the IMECMU.

2.4 When

There will be two stages at least, namely, preliminary and final. The preliminary stage may occur on a

national basis or if possible, on the continental basis if there are enough countries involved in the maritime English contest. And the best time to hold the contest is before July as the IMEC usually takes place after October. The final stage will be conducted during the IMEC. It may be subdivided into two stages, the first for the written section aiming at selecting the top 10 or 5 contestants for the final grand show that focuses on oral part of the contest. Questions may be asked by the Steering Test Committee and all the participants are the audience. This will be a highlight of the IMEC.

2.5 Where

The grand final IMECMU depends on the venue of the IMEC. So it may take place in a different country every year.

3. The Format of the IMECUS

What follows is a tentative synopsis for a future IMECUS paper. The author has to declare that this paper is one that has not undergone any group or panel discussion. It is based on his own teaching experience of more than 28 years as a general English and maritime English instructor. The sample paper format is merely a pilot one which requires lots of revision and perfection by the testing committee experts if there is such an organization when the actual contest takes place. The following points are those that come to the mind of the author when he sets the paper:

3.1 Workable: That means the paper contains not too many items as some other international English contests do. The result can be determined before the close of the IMEC. So only three big sections are included, that is, Listening, Reading and Writing.

3.2 Practicable: As it is a Maritime English Contest, every question item shall be in the context of maritime English. It can be authentic as recorded or videotaped on board a real vessel with conversations going on between a pilot and a captain or a passing vessel or the VTS officer with a foreign vessel over the VHF or academic by selecting some difficult extracts from the IMO conventions such as the SOLAS, MARPOL or speeches by the General Secretary of the IMO as well as sea literature readings.

3.3 Communicative-oriented. Listening Section shall account for at least 50% of the whole paper, as it may involve some difficulty to test the speaking ability of the contestants owing to the restriction of time and qualified examiners if there are a large body of examinees, especially so in the preliminary stage. On the other hand, listening ability may roughly reflect a person's actual speaking ability, that is, if one can aurally understand what the other person says, he may orally make some response, especially for a non-native speaker. In any case, speaking is easier than listening. You can speak at your own pace and only use the word you are familiar with but in the case of listening, you cannot control the other person's speaking speed or range of vocabulary and in some instances you may be confused with his accent.

3.4 Subjective. It is well known that the multiple choice question(MCQ) finds wide application in maritime English test as it is standardized and time-saving in scoring. The MarTel takes the MCQ except for the speaking and writing sections. But in the IMECUS, as is shown in the sample paper, Subjective items are given a large percentage.

3.5 Accents shall be taken into consideration as seafarers come from different countries. Based on the seafarer export percentage, the accents of following countries' seafarers are prioritized: Filipino, Russians, Greeks, Chinese, Koreans and Germans.

4. Conclusion

The IMECMU is feasible in that the ME has an irreplaceable position in the MET and more importantly, our IMEC is uniquely prominent as it is one of the only three international maritime organizations under IMLA. As we know, there have been successful 21st IMECs, drawing ME professionals, teachers, instructors almost from every corner of the world. If the IMEC intends to hold the IMECMU, when the bugle blows, there will be no likelihood of no echoes. Of course, as has been discussed, contests if properly handled, are the most influential way to stimulate the enthusiasm and passion of the participants. In China， there is a nationwide English Star Talent Show, the grand Final Round is televised live on China's Central Station. It started in the year of 2000 with a total number of about less than 10,000 contestants from major cities of China. Guess how many in 2012? About six million contestants from most cities of China participated in English Talent Show. The highlight is the grand final show to be held in Beijing with a total number of 50 contestants ranging from 6 year old kid group to teachers groups, in 6 different groups in all. Imagine, 6,000,000 vs 50.

This is the impact of contests.

Appendix

A Sample Paper for the IMECUS (abridged)

Owing to space limitation, the following paper for IMCEUS is not a full one, the whole paper will be demonstrated at IMEC 24 if there is enough presentation time.

The paper comprises three Sections: Section One Listening (50%), Section Two Reading (30 %) and Section Three Writing (20%). An Extra Part entitled Oral Test which may take the form of question and answer or interview is set for the top 10 contestants striving Championship. Testing time lasts 120 minutes. What follows is only a written test sample recommended for the final round to be held at the IMEC Venue. （Suppose each participating country selects two contestants, and there are 25 countries participate next IMEC, then there may be 50 contestants, and the hosting countries should be entitled to have another three candidates, then altogether, 53 candidate will participate in the IMECMU. The test is scheduled to be held on the second day after IMEC opens its session as all contestants are supposed to attend the opening ceremony or the first day's plenary. On the IMEC closing ceremony, the final round grand show is to take place.）

Section One Listening (50%)

一. **Listen to the following SMCP-based sentences and fill in the missing blank with only one exact word. The sentence will be read only once. 10%**

Notes: 10 items in all, each accounting for 1 point. Answer is blackened in the bracket for reference.

Requirements for voice recording, at least three different accents are recorded.

1. ------ is variable between 5 and 10 nautical miles. **(Visibility)**
2. What are the maximum --------- ahead? (**revolutions**)
3. How many ------- are left?**(shackles)**
4. What is your underkeel -------? **(clearance)**

二. **Listen to the following two workplace conversations and then choose the best answer from the A,B,C or D. The conversation will be read only once 20%**

Notes: in this part, a conversation between a pilot and the captain or a vessel entering a new harbor and the Local VTS will be recorded

Sample One
Tapescript: (accents: Japanese and Filipino)

Ramos: A ship is approaching our head on an opposite course. I can't make out her exact heading because I'm alternately seeing her starboard and port lights.

3/off: That's probably because of the waves. Let's pass each other port to port. I'll confirm it by VHF. (Calling on the VHF radio) To southwest-bound vessel, course 215. This is the northeast-bound ore carrier *Otaka Maru,* eight miles at your head. Do you read me?

I.H.: To ship at our head, course 035, this is *Indian Highway,* course 214. Do you read me?

3/off: *Indian Highway, Indian Highway, Indian Highway!* This is *Otaka Maru.* I read you loud and clear. Over.

I.H.: *Otaka Maru,* This is *Indian Highway.* Please change channel to 06. over.
3/off: Channel 06, roger. (Changing to Channel 06) *Indian Highway,* this is *Otaka Maru.* Do you read me?

I.H.: *Otaka Maru,* I read you loud and clear. Over.

3/off: I will change my course to starboard. Let's pass each other port to port.

I.H.: Port to port., roger. I will change my course to starboard, too.

3/off: Thank you for your cooperation. Bon voyage. Back to channel 16.

I.H.: Thank you. Bon voyage. Back to channel 16.

Question 1. Why does the first speaker sees the port lights and starboard lights alternately?

A. Because it is very dark.
B. Because he is short-sighted.
C. Because there is something wrong with the lighting system.
D. Because the waves are very rough.

(D is the correct answer)

三. **Listening to the following speech and answer the question in your own words.**
20% The speech will be read twice and there will be a 30 second pause between the two reading time.

Notes: There are two passages which will be followed by five questions each. Each question accounts for two points.

Sample 1

The global shortage of seafarers, especially officers, has already reached significant proportions and is now a source of genuine concern to all involved in the industry.

The demand for raw materials, finished products, foodstuff, energy and luxuries has grown, year-on-year, in line with the requirements of global trade ---- and I do not expect the current financial crisis to have a very serious impact on the volume of, at least, the basic commodities transported by sea. That demand has been, from time immemorial, satisfied by the international shipping industry, which, today, transports over 90 per cent of the world's commerce safely, securely, efficiently and at a fraction of the environmental impact and cost of any other form of bulk transportation.

Without ships and, in the context of this initiative, without the seafarers to man them - one half of the world would freeze for lack of the fuel to heat it, and the other half would starve for lack of the grain that gives it its daily bread.

An industry that is itself in a state of continuous growth, shipping has, since the beginning of the decade, been characterized by record numbers of new ships on order to meet the needs of an ever-expanding international trade and for existing and new ships to operate in accordance with the high standards adopted by IMO, shipping will require additional numbers of high calibre, highly-qualified and experienced seafarers.

A stark indication of just how serious the manpower shortage is becoming came in a recent report, issued by Drewry Shipping Consultants. It assessed the current shortfall of officers in the global fleet to be some 34,000, against a requirement of 498,000. Moreover, assuming officer supply continues to increase at current levels, the report predicts that, by 2012, the officer shortfall will have risen to 83,900.

To put this in perspective, as recently as 2005, the BIMCO/ISF Manpower Update had assessed the officer shortage to be 10,000 with the shortfall rising to 27,000 by the year 2015. The general message is clear: we are fast approaching a crisis situation.

Over the last few years, shipping has enjoyed a period of considerable expansion so much so that, at the beginning of 2007, the world fleet reached 1.04 billion deadweight tons. New players have entered the business, drawn in by the prospect of high returns in what has been a buoyant and rewarding market Notwithstanding the present downturn, reflecting the global economic situation, there are still serious concerns over the supply of manpower for the huge number of new buildings scheduled to come on stream in this and the subsequent years. One estimate has assessed that about 400,000 seafarers and 45,000 new officers would be needed to crew the 10,000 vessels forecast to join the global merchant fleet in the next three years.

Answer the following five questions in your own words.

1. What is shipping industries' attitude towards global shortage of seafarers?

(Key: Genuine concern)

Section Two Reading (30%)

Notes: This section comprises three parts, that is, vocabulary choice, cloze and passage reading comprehension.

一. Choose from the block One best word to fill in the blank, there being five words superfluous. 10%

board inboard onboard furthermost switchboard outboard parameter aboard freeboard shipboard starboard gastight uppermost watertight diameter

1. Certain harmful substances may, for sound scientific and technical reasons, need to be prohibited for carriage or be limited as to the quantity which may be carried ____any one ship.
2. Where a long forward superstructure is fitted the collision bulkhead shall be extended weather tight to the deck next above the ____deck.
3. The current certificates that are on ____a particular ship on 3 February 2000 will remain valid until they expire.
4. A vessel proceeding along the course of a narrow channel or fairway shall keep as near to the outer limit of the channel or fairway which lies on her ____side as is safe and practicable.
5. For discharge ashore a special small diameter line shall be provided and shall be connected ____of the ship's manifold valves.
6. The sidelights of vessels of 20 metres or more in length shall be fitted with _____screens painted matt black, and meeting the requirements of Section 9 of this Annex.
7. Training in the use of the emergency escape breathing devices shall be considered as part of _____training.
8. The ship is provided with a _____oil pollution emergency plan in compliance with the prescribed regulation.
9. The emergency ____shall be installed as near as is practicable to the emergency source of electrical power.
10. Bulkhead deck is the ____deck up to which the transverse watertight bulkheads are carried.

二. Cloze 10%

Fatigue continues to be a significant risk factor in ship---1**-** and two port states, Australia and the United Kingdom, have moved to ---2**-** on shipping companies that fail to adhere to the ---3**-**

At a hearing in Newcastle Magistrates Court on 25 October, the UK's Maritime and Coastguard Agency (MCA) successfully---4- AP Møller-Mærsk in respect of the failure of the container ship *Maersk Patras* to---5**-** an improvement notice relating to working hours. This notice was ---6**-** when the vessel continued to breach hours of work regulations after an MCA ----**7** in Bremerhaven, in September 2009. The company was ---8**-** £18,500 and had to pay costs of £4,439.27. Commenting on the prosecution, Neil Atkinson, an MCA marine surveyor, stated that, in recognising the significance of---9**-**, "the MCA are focusing on seafarers' hours of rest during ---10**-** inspection". He added: "This conviction should send out a strong---11**-** to the industry that failing to provide ---12 hours of rest for the crew is not acceptable."

Terry Cornick, MD of shipping, the Maersk Company, gave a ---13**-** to *SASI* on the matter that ---14**-** how Maersk Line considered crew and vessel safety to be paramount. He ---15**-** that action taken –-- distribution of a fleet circular to all vessels –-- after being ---16**-** of the original nonconformity, "did not prove effective in stopping the ---17**-** on *Maersk Patras* at the time".

Cornick ---18- that "since the judgment, a fleet safety superintendent has been on board *Maersk Patras* to raise further ---19**-** on the rest hours issue". The company had not found evidence pointing to a general problem beyond the vessel in question, he explained, and pointed out that "the violations – although serious in nature – appear to be isolated and infrequent ---20**-** for certain individuals.

1.	A. repairs	B. casualties	C. improvements	D. innovations
2.	A. run down	B. put down	C. haul down	D. crack down
3.	A. regulations	B. principles	C. reports	D. expressions
4.	A. executed	B. prosecuted	C. propelled	D. expelled
5.	A. comply with	B. reply to	C. rely on	D. apply for
6.	A. ensued	B. assured	C. issued	D. ensured
7.	A. renewal	B. inspection	C. construction	D. instruction
8.	A. confined	B. refined	C. fined	D. defined
9.	A. worry	B. distress	C. alarm	D. fatigue
10.	A. rough	B. rude	C. raw	D. routine
11.	A. information	B. message	C. news	D. particulars
12.	A. critical	B. decisive	C. adequate	D. hazardous
13.	A. statement	B. apology	C. criticism	D. alert
14.	A. exploded	B. leaked	C. spilled	D. emphasised
15.	A. acknowledged	B. sounded	C. estimated	D. measured
16.	A. instructed	B. treated	C. advised	D. revised
17.	A. promotions	B. violations	C. introductions	D. consultations
18.	A. conformed	B. cancelled	C. confirmed	D. reformed
19.	A. knowledge	B. happiness	C. readiness	D. awareness
20.	A. exceptions	B. conception	C. appearance	D. wreckage

三. Reading Comprehension 10%

Read the following passage and answer questions

Notes There are five questions given to this passage, each accounting for 2 points.

Ever since the sun rose I had been looking ahead. The ship glided gently in smooth water. After a sixty days' passage I was anxious to make my landfall, a fertile and beautiful island of the tropics. The more enthusiastic of its inhabitants delight in describing it as the "Pearl of the Ocean." Well, let us call it the "Pearl." It's a good name. A pearl distilling much sweetness upon the world.

This is only a way of telling you that first-rate sugar-cane is grown there. All the population of the Pearl lives for it and by it. Sugar is their daily bread, as it were. And I was coming to them for a cargo of sugar in the hope of the crop having been good and of the freights being high.

Mr. Burns, my chief mate, made out the land first; and very soon I became entranced by this blue, pinnacled apparition, almost transparent against the light of the sky, a mere emanation, the astral body of an island risen to greet me from afar. It is a rare phenomenon, such a sight of the Pearl at sixty miles off. And I wondered half seriously whether it was a good omen, whether what would meet me in that island would be as luckily exceptional as this beautiful, dreamlike vision so very few seamen have been privileged to behold.

But horrid thoughts of business interfered with my enjoyment of an accomplished passage. I was anxious for success and I wished, too, to do justice to the flattering latitude of my owners' instructions contained in one noble phrase: "We leave it to you to do the best you can with the ship." . . . All the world being thus given me for a stage, my abilities appeared to me no bigger than a pinhead.

Meantime the wind dropped, and Mr. Burns began to make disagreeable remarks about my usual bad luck. I believe it was his devotion for me which made him critically outspoken on every occasion. All the same, I would not have put up with his humours if it had not been my lot at one time to nurse him through a desperate illness at sea. After snatching him out of the jaws of death, so to speak, it would have been absurd to throw away such an efficient officer. But sometimes I wished he would dismiss himself.

We were late in closing in with the land, and had to anchor outside the harbour till next day. An unpleasant and unrestful night followed. In this roadstead, strange to us both, Burns and I remained on deck almost all the time. Clouds swirled down the porphyry **crags** under which we lay. The rising wind made a great bullying noise amongst the naked spars, with interludes of sad moaning. I remarked that we had been in luck to fetch the anchorage before dark. It would have been a nasty, anxious night to hang off a harbour under canvas. But my chief mate was uncompromising in his attitude.

"Luck, you call it, sir! Ay--our usual luck. The sort of luck to thank God it's no worse!"

And so he fretted through the dark hours, while I drew on my fund of philosophy. Ah, but it was an exasperating, weary, endless night, to be lying at anchor close under that black coast! The agitated water made snarling sounds all round the ship. At times a wild gust of wind out of a gully high up on the cliffs struck on our rigging a harsh and plaintive note like the wail of a forsaken soul.

Questions:

1. Compare the first and the last paragraphs. What's the author's purpose?
2. Try to design a dialogue between the captain and the Chief Mate.
3. The ship's owners had give the captain total discretion to do what he could with the ship, especially in regard to maximising profits.
4. The Chief Mate was not happy with the dangerous anchorage that the ship had, and was worrying all night.

Section Three Writing (20%)

1. Write a notice about holding a lifesaving drill. 5%
2. An essay: How will an oceangoing seafarer working aboard communicate with his parents at home in 10 years' time? 15%

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Issues on board, with cross-cultural communication

Abstract

Work place communication issues do manifest themselves where ever we have teams of people working together. Now put that work place at sea where we have language barriers; cultural barriers; social barriers, then we expect that issues with communication can cause accidents, incidents or just plain misunderstandings. All members of the team on board therefore have to learn through teaching or experience how to cope with these issues. Sometimes these issues can boil over and they are often caused by some act which can deeply offend another team member on board the vessel. All members of the team have to realise that their culture influences their values which influence their altitude and ultimately their behaviour on board. The individual will need to modify their behaviour to fit in with the team, now in the normal workplace that may not be too difficult to achieve. But at sea that behaviour modification needs to worn like a glove, to make the team work and the ship work successfully. When communicating with a person from another culture, we still instinctively look for a response we would expect from a person of our own culture and when we do not get that result, we are puzzled, has the communication been received and understood. We need to have at our disposal various techniques to ensure the communication has been received and understood.

Keywords:

1. Introduction

Work place communication issues do manifest themselves where ever we have teams of people working together. Now put that work place at sea where we have language barriers; cultural barriers; social barriers, then we expect that issues with communication can cause accidents, incidents or just plain misunderstandings. All members of the team on board therefore have to learn through teaching or experience how to cope with these issues. Sometimes these issues can boil over and they are often caused by some outrageous act which deeply offends a member of another culture on board the vessel. All members of the team have to realise that their culture influences their values which influence their altitude and ultimately their behaviour on board. The individual will need to modify their behaviour to fit in with the team, now in the normal workplace that may not be too difficult to achieve. But at sea that behaviour modification needs to worn like a glove, to make the team work and the ship work successfully. When communicating with a person from another culture, we still instinctively look for a response we would expect from a person of our own culture and when we do not get that result, we are puzzled, has the communication been received and understood. We need to have at our disposal various techniques to ensure the communication has been received and understood.

The transmitter must adjust to the world of the receiver. Academics like to use long and obscure words to highlight their extended vocabulary, rather than consider the world of receiver, who may not have the

vocabulary or the use of a thesaurus to enable them to decode the message. When one is transmitting a message across a language and cultural barrier several versions of the message may need to be transmitted in order for the message to be received and decoded. Do not repeat the message more than once, this infers it is the receiver fault. Retransmit the message but come at the content from a different direction using as many different words as possible. This may trigger a response from the receiver.

The term language barrier is usually used to indicate the difficulties faced when people who have no common language attempt to communicate. In our case the common language will be the language of the ship and this may not be the primary language of the participants. Learning a new language requires a large investment in time and effort and therefore the new language must have value for the individual.

Language really encompasses the development of listening, speaking, reading and writing. Listening is the first skill we all need to achieve for without the ability to listen to our mothers or our teachers, how can we hope to utter words in any language.

Simple pronunciation can cause all sorts of problems, recently I was on the phone and I could just not understand the gentlemen's name, the gentleman was not pronouncing his "R" so I was getting the name laymond. I can still remember my poor French teaches expression as I tried to converse in her beloved language.

The use of the English Maritime Vocabulary is the key to communication at sea and therefore (Setiyaningsih 2009) points to the importance of proficiency in, understanding of English, as a key career tool. The use of dictation in teaching English where the student transcribes a passage of text is interesting, the use of the process of writing is very good for recalling what has been written and yet what about spelling. Spelling or the miss learning and then the need to relearning the spelling would be a major impediment to the effectiveness of this technique.

2. Communication or (kuh-myoo-ni-key-shuhn) or to me (co-moo-ni-K-shun).

I discussed with a colleague what is like to teach English speakers (no Bulgarian jokes) English humour is different. He also said that friendship is defined differently, on the surface the English can appear to be very friendly but in fact we are only acquaintances. Trying to be very helpful is not always appreciated. Attempting to speak in a high style in a perfect manner can be seen as snob behaviour by the English themselves. In an advertisement "Nothing sucks like an Electrolux" the word suck conveys suction but a modern take on the meaning of the word conveys a bad situation or item which may convey to the customer that the vacuum cleaner is of bad quality. Words with double meaning can achieve great effect in humour. Even words that sound vaguely similar can be with skill brought together to amuse, such as four candles and fork handles. From an advertisement in a hotel in Tokyo, "Our staffs are always here waiting for you to patronize them."

Cross Cultural Competence:- How do we rate someone's cross cultural competence? Cross cultural competence is the ability to be able to work and communicate effectively and safely in a multi-cultural environment. Today there is much more of a cultural awareness than there was in the past. Many more seafarers work in an environment where their ability to listen, to respect and to tolerate others is key to enable the ship to function. There is a risk factor here language difficulties plus lack of cultural awareness can contribute to accidents. Taking into consideration; "IAMU 2001 – 3 Cross Cultural Competence for Maritime Professionals through Education and Training." Knowing one, knowing one's own attitudes, knowledge of different practices, and knowing how to interact. Does this person have an ethical

background, this is not just moral values but what are their professional values, as a lecturer do they represent value for money, both to the students and to the employers. Do they consider how self-aware they are, do they understand their own cultural values and beliefs.

The author's beliefs are a modified version of how I recall my father's beliefs to be. One of my biggest failures is my lack of language diversity, although I have attempted to learn German once and French twice I have always reached a wall that I could not climb, I have often thought that just over the wall lay what was desired but I am sure when you learn a language there are many walls that have to be climbed in order to proceed. Any cross cultural knowledge comes from my experiences at sea, travelling and from reading. I read "Manwatching" the first time when I was a teenager this I believe enabled me to look at different cultures in a more open minded manner, understanding that other values and traditions are just as valuable as our own.

Captain Shahrokh Khodayaris, Alphabetical approach to Multicultural Management is a unique and thought provoking. Where ever you go in the world people compare the pay of a galley boy with the pay of a Captain you can highlight the injustice. It is the same ashore; Captains of industry may earn thousands of times more than the ordinary worker in the industry. Of course in our industry we have an added complication, in that people from one nation, may earn more for doing the same job than people from another nation that's discrimination. This injustice can cause resentment, another is the glass ceiling where a person from one nation may only be able to reach a certain rank on board and then can go no further. So as the manager of this multicultural team I have to accept that certain injustices have been built in and they are unlikely to change in the short term.

We had a Filipino third mate join out ship, he had been held in very high esteem by his previous Masters due to his excellent English. After a short while on board he was quite downcast and worried. I explained to him that he would now need to find a new skill in lifeboat or fire fighting equipment management to impress.

Cultural Types: - When in a team meeting with Japanese they rarely express a critical opinion as they wish to save their fellow team members face. Whereas Australians or Finns might feel that by not saying what is on your mind shows a lack of honesty. These are stereo types of different nationalities they may or may not have similarities to the individual concerned. We tend to recognise the link to the stereo type with those who are similar rather than those who are not. The following British or English stereo type, I found the following description on a Yahoo site on the 24th May 2012. Brits have a high degree of self-effacement, they hate confrontation and social conventions are very important. Brits are suspicious of lofty visions and pride themselves on being pragmatic, down to earth. Brits do not like to discuss abstract issues, when you discuss something serious you have to make it clear that you do not take it seriously. Brits care for their social respectability, so the rules and restrictions make it difficult for them to let their feelings out, they tend to do that when intoxicated.

Christopher (2010) includes in his list of seven barriers. Physical Barriers, it is hard for a crew member to talk to the master of the vessel if his door is always closed or he/she is always unavailable. Perceptual Barriers, if you think the person you wish to communicate will not be interested in what you have to say. Emotional Barriers we may fear we are going to look foolish. Cultural Barriers, different cultures have different norms and we have to accept and understand that. Language barriers, this can be a technical difference such as Morse code and semaphore. It may be industry based we have a nautical vocabulary which may not be understood by those ashore. Gender barriers, when a man and a woman communicate they may misinterpret the message of the other. There is a book that brings this to our attention Men are

from Mars and Women are from Venus. However at sea we also have a cultural barrier where there is reluctance on the part of certain males to take orders from women. The last category I have changed to internal barriers, some people seem to be unable to form genuine connections with people. However the axiom is that communication is not a one way street. There are other barriers such as selective listening, where I hear only what I want to hear. Conflicting information where the information I have conflicts with the information you are sending me. Negative reception, this is when I do not actually want to hear your message. You send me so much information that I am swamped or overloaded by the amount of information that I cannot analyse or decode the message. Where there are gaps in the message, where part of the message is lost for some reason. Where the message contains, conflicts or inconstancies, which may make me question its authenticity or the state of mind of the sender.

According to Michael Webb there are eight barriers to listening. The following are barriers to listening: - Interrupting the speaker, if the speaker has been transmitting for a long time or they are repeating themselves there is always the temptation to interrupt them. When giving a speech it is a good idea to tell the audience what you are going to tell them, then tell them and then tell them what you have told them. When one person is transmitting too many, this is a good idea but some people will use this technique in every day one to one conversations, prompting the receiver to interrupt them and possibly cause offence. Another interruption is the thought or idea interruption, as the speaker is transmitting their thought the listener suddenly has their own thought or inspiration and cannot wait for the speaker to finish before revealing their own thought. Not maintaining eye contact with the speaker, this can be highly difficult if they are boring you to tears and concentrating on their lips may help. Rushing the speaker, urging them to complete what they have to say, is one stage down from a full interruption but is still not engaging in listening. Yawning or catching someone else's eye, makes the speaker feel that they are wasting your time. Being distracted by something is almost the same as the previous sentence but it is saying to the transmitter by body language, I am not longer paying attention to your message. Hijacking the speakers story, getting ahead of the speakers story or topping the speakers story with one of your own, is like stealing the speakers idea. When the speaker has finished transmitting his thought, if the speaker then questions too vigorously it may indicate Bernie Rosinski asks "The Latin alphabet and English what sort of marriage is this." By that he means what you pronounce in English and what is written down do not seem to agree. Why is there a difference between right and write or to turn right and I wrote a letter. When it comes to the spelling of words there are different systems depending upon where you are in the world as anyone getting to grips with their spell checker will know. Apparently George Bernard Shaw offered a prize for anyone to come with a system that would equate one English sound with one written symbol. The average English speaking child takes three times longer to learn the basic of reading and writing than other users of alphabetical writing systems according to Seymour (British Journal of Psychology 2003). In 2005 it was reported that nearly half the English speakers in the UK have severe difficulties in writing according to the House of Commons Select Committee for Education. The author heard that there are problems with the understanding of the spoken word in long established languages such as Mandarin, you should not consider English as a fixed language as it evolves all the time.

According to Masha Bell (2009) identical sounds have different spellings:

Two blue shoes flew through to you too {too meaning also}

and identical letters have different sounds

On only once woman women who Learning to read should be simpler as an example, loud and proud engages the mind along one track of pronunciation or spelling and then along comes out and shout,

should I trouble you with any more sounds. English has 83 spelling rules but 72 of rules have some exceptions and some of the exceptions have more use than the rule. Apparently 3596 common English words have some kind of irregularity. My own favourite is key, why is key not keey and who earth would spell it quay.

I would like to compare English with mathematics, if we write something mathematically such as:-

1+1=2 or √9 = 3

most people understand the message. So if mathematics is a worldwide language why can't humans develop another language we can all understand? English has less native speakers than Mandarin but has more total speakers but with the rise of the influence of China this may well change.

3. Internal factors

Hofstede's power distance index measures the extent that less powerful members of the crew accept the hierarchical positions. In high power distance cultures members of the crew are less likely to question the Captains decision even if it's wrong.

Culture (Changing Cultures) Certain students have become more demonstrative, more willing to express themselves which might indicate that their culture at home is changing.

Emotional Barriers this could be a gender issue

A History of previous conversational encounters where one party may have been ignored by another especially if the ignoring party is in a position of power it becomes unlikely that the other party will open a conversation. If the conversation is initiated it will be sometime before that party takes a fill part in the exchange.

The conversational process requires patience when barriers to communication slow the exchange of information. There may be times when you are short of time and this process takes too long but on other occasions it is the individual's readiness to invest the time to ensure the exchange of information is made.

Respect another person's or another cultures point of view.

Whether you agree with Carl G Jung and the sixteen personality types there seem to be some people who are open personality wise. These are people that it is easy to converse with, they are good listeners. When you are conversing with this person you suddenly realise you have been making all the conversation.

In order to converse you should have an interest in what the other persons got to say. Strangely enough that does not seem to be the case on many occasions a person may listen but only to re buff the points or issues in a later expression of their views. Their seems to be a type of person who on reaching a position of power say the Master of a ship, who will no longer listen to their colleagues views. The conversation becomes a one way transmission of information, orders and views with no account being taken of the receiver.

Conversation is activity where two people meet it's a bit like a dance and there are rules.

Rules of conversation:- each person has equal time to speak or transmit; the topic is of interest and acceptable to both parties; if one topic of conversation is exhausted another may be taken up or the conversation ended at this point; a conversation can be steered however if the conversation keeps

returning to a subject unacceptable to one party it may be better to end the conversation; the listener should not interrupt the speaker; the speaker should not interrogate the listener; raising ones voice to drown out the other is not advisable; to scoff or laugh at the others views; to ignore the others questions; to change topic without coming to a lull; A person who routinely violates the rules of conversation in a small community on board a ship can find themselves avoided by the rest of that community. This person may then resort to types of entrapment where the unfortunate listener cannot get away from this conversation.

When conversing with another across a language barrier, being willing and sometimes able to guess the meaning and therefore shorten the process can help the conversation move along.

4. External factors

On board ships with limited people available to converse with, the seafarer may find that they have relatively few conversations during their average day. That the opportunities for conversations are few, so do their conversational abilities get rusty, do they fail to follow the rules of conversation? Well if they do fail to observe the rules there opportunities can dry up. Seafarers run out of things to say to each other, they often have limited input from the outside world. They may have sailed with each other for several months during that time they have swapped their stories and their jokes. Even topics not for discussion may have been discussed they can become friends although they will rarely follow up that friendship once they have left that ship.

On board ship social interaction may need to be encouraged, junior officers may choose to eat with the crew rather than with the senior officers. Some senior officers encourage an event once a week where the junior officers are required to eat with the senior officers, special food may be put on and social interaction is encouraged. Communication from bottom to top is very rare but often very important so some Masters stop and talk to crew members.

Some cultures like to come to the point of the conversation at an early stage, others like to bring in that point later on, some will highlight the point others may hide the point amongst other information. The cross cultural listener will have to allow for all contingencies.

5. Intercultural Learning

Knowledge, skills, attitude and awareness Miller J (2009) what about approach. You have to have a knowledge of your own culture to know where you are coming from a sense of how you will approach the “target “ culture. PRIO (Patience, Respect, Openness and Interest.

Edward de Bono regarded language as being an intense help and hindrance to human development. Whilst it allows one generation to pass its knowledge to the next it also allows it to pass its baggage of myths and prejudices to the next as well.

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The MET teacher versus the use of metaphors

Abstract

Today maritime education and training teachers often encounter a multicultural student complement. The maritime English language teachers in their programmes often also prepare students to meet other cultures and this in the students' efforts in learning a second language. In these two activities, consciously or subconsciously, the teachers sometimes use metaphors to explain something that the students find difficult. If it is believed that metaphors have a cultural connotation this practise perhaps should be carried out with care. Although the metaphoric logic creates a new level of possible understanding it makes sense of the educators' world through language.

This is the reason why I became interested in the eventual consequences that this might have when addressing a multicultural student body. Subsequently in this study I aim to find the conceptual metaphors that the faculty generally use and to find eventual differences in the metaphors used by faculty coming from the East and the West, faculty with a pure academic background versus those with a seafaring background and women and men.

The empirical data stems from data from mainly the faculty of the World Maritime University. Beside this faculty the members of the IMEC were asked to participate because many of them are exposed to a culturally student mixture.

The result of the current study is based on a small sample but I could find that there is a difference between professors from East and West and between the pure academics and the seafarers. It was also found that the faculty's change of metaphors was not that frequent. The conceptual metaphors have been identified only for navigation/seamanship and maritime law.

Keywords:

1. Introduction

The common interest for metaphors has during the years gone to and fro. However, today a renewed interest in metaphor can be noted. The prime focus in current study is to find how a maritime educational faculty conceptualise the use of metaphors when addressing a multicultural student complement.

What has caught my attention, as educational researcher, is the frequent encounters with the concept metaphor in educational settings which "… has moved metaphor from a place on the ornamental fringes of discourse to the core of educational question: the minds' endless attempt to make sense of reality" (Leino & Drakenberg 1993, p. 1).

The metaphors are sometimes considered to be culture-bound (Evers 1998, Kramsch 2002) and this is why it is of interest to study if and how and in which concept metaphors are used by an international maritime

focused faculty addressing international maritime students. It is of interest to see how naturally occurring metaphors are used in an educational activity that gradually is growing more and more international.

Little research has been found regarding this issue in the field of multi-lingual and multi-cultural learning and teaching and very little within the sphere of shipping. Although, the metaphors used onboard an oil tanker has been identified by Karjalainen (2007) in her work *In the shadow of freedom – Life onboard the oil tanker*.

2. Definition of metaphor?

"A conceptual metaphor is a connection between two semantic areas, or domains … The domain that is talked about metaphorically … is known as the target domain, and the domain that provides the metaphors … is known as the source domain. The source domain is typically concrete and the target domain is typically abstract" (Deignan 2005, p. 14). In the sentence *the school is a ghetto,* school is the target domain and ghetto is the source domain. Expressions like *the school is a ghetto* has become described as a dead metaphor because it is conventional and often used similarly as in the expression *Her parents were warm and friendly*. *Nixon bombed Hanoi* is a metaphorical expression but in the sentence *Tatjana is my rose*, rose is a redefinition of Tatjana and therefore not metaphorical.

Particularly the interest in metaphors has been, and still is, focused on how metaphors impact and possibly change peoples' conception of their world. Bearing in mind that about 70% of spoken English language is metaphorical in nature (Lakoff & Johnson 2003) this issue becomes important in communication. However, defined in the past as an embellishment (decoration), nowadays metaphors in education are seen as a primary mechanism of thinking, expressing meaning and have a steering function on our actions which makes the subject even more important.

There are four general levels of metaphors: active (live), inactive (dormant), dead (frozen) and foundational (deep surface or root). An active or live metaphor is perhaps easier to link with a concept because normally the listener understands the salient characteristics of both the topic and the vehicle and this is a major focus in current study.

According to any theory of metaphor, "… the essence of metaphor is change: metaphors make something difficult comprehensible, they give name to something inexpressible" (Zinken 2008, p. 4). The metaphor a person selects to frame a concept "…focuses attention on some aspects while ignoring others or as Deignan (undated) expressed it "Metaphors both hide and highlight aspects of the target domain".

There are many definitions and theories of metaphor and it varies with the scholar that has formulated the definition. A summary of such definitions have been studied by Leino & Drakenberg (1993). The perhaps most famous definition is by Sokrates in a sentence were the teachers are seen as midwifes.

In current study the following definition, borrowed from Soskice (1985, p. 50-51), is applied and covers only live metaphors:

Metaphor is that figure of speech about one thing
in terms of which are seen to be suggestive of another.

This definition fulfils the study requirements, i.e. it emphasizes that the tension between source and target is suggestive and that there is a clash between the target and vehicle concepts. In order for a metaphor expression to be powerful the two domains (source and target) must neither be too similar nor too different.

Many of the persons in the sample of current study found it difficult to fill in the missing words in the two sentences and to give examples of metaphors that they have used and still use in their teaching. Therefore they were given a short explanation of the metaphor concept and also given extensive time to fulfill the two sentences and to give examples.

Current study focuses on conceptual metaphors. Conceptual metaphors, a notion in cognitive linguistics, have resemblances to analogy but "… a conceptual metaphor uses one idea and links it to another to better understand something" (conceptual metaphor 2011). The same definition is expressed by Lakoff & Johnson (2003, p. 56) in their writing that "… most concepts are partially understood in terms of other concepts".

It is assumed that conceptual metaphors in teaching are closely allied (bounded) to conceptual metaphors of learning. The correctness of this assumption was verified from the empirical data in this study. "Bibik concluded that an understanding of one's personal metaphors for teaching would assist in reflection about one's practice. This awareness could then help to increase the effectiveness of teaching" (Jensen 2006, p. 48). The eventual awakening and awareness how the MET teachers come to grasp metaphors is understood to be a sub-aim of this paper.

3. Research questions

This study aims at identifying the conceptual metaphors that the faculty at World Maritime University (WMU) use. The empirical data is based on filling in missing words in two sentences; simply to complete two sentences. This design is a replica of a strategy used by Cortazzi & Jin (1999). The two sentences are: 1) *Teaching is … because* … and 2) *Learning to teach is* …. In addition the faculty was asked to mention examples of metaphors that they use and if they, after some years of teaching at WMU have considered it necessary to change their way of explaining by using other metaphors.

Are there any similarities or differences on how professors with a former seagoing background use metaphors compared to professors[1] with a pure academic background? What identifies the similarities or differences between faculty coming from different parts of the world when it comes to the use of metaphors in class?

The answers to the two questions will also tell the relation between the research questions i.e. how the professors plan to educate (*teaching is* …) and how actually the work on the rostrum take form (*because* …). How is the teacher profession looked upon from a professor's point of view? For instance, are the professors superficial in expressing a meaning (*learning to teach* …)? Do they avoid the use of foundational metaphors?

4. Teachers versus metaphors

Seven reasons why teachers use metaphors have been identified by Cortazzi & Jin (1999 - p. 161):

1. In other words describe something difficult to explain and describe
2. Add a dramatic effect when explaining
3. Emphasise a meaning more concisely
4. To have the students reflect on similarities (culturally affected)
5. Transform abstract images into realistic models
6. Help to organise concepts in a systematic way
7. Helps to organise a teacher's interpretation of learning

The first five reasons are applicable to current study.

An idea exists that an understanding of conceptual metaphors can help learners to remember words when studying a foreign language. Perhaps, an understanding of conceptual metaphors can enlighten the teachers on how the learners learn? The professors' use of metaphors might also give a direction on what the professors do in class and their opinion on why they are doing it the way they do it. Conceptual metaphors are said to shape human perceptions and communication and probably the practice also reveals the professor's development (Drakenberg 2002; Alger 2009). Metaphor not only reveals but also shapes the behaviour of a person that communicates (Liu 2002).

5. The providers of empirical data

In the following a presentation on the informants that have taken part in the interviews/conversations and that have submitted the missing words in the two sentences. The number of people that have contributed to current study amounts 25 persons of which seven are women (28%): ten persons from the autumn 2011 and spring 2012 faculty of WMU, ten former faculty and visiting professors (VP), and five members of the International Maritime English Conference (IMEC). The return rate was not very encouraging; 10/16 (63%) from the WMU faculty, 10/28 (36%) from former WMU faculty and VPs and 5/48 (10%) from the IMEC member list. The nominator indicates the number of returns and the denominator indicates the number of people that I have asked to participate in current study. The absolute return rate becomes 27% [25/92].

19 data providers come from the Western hemisphere (Europe and North America) and six from the Far East. No representations are from Africa and South/Middle America partly because very few experts from these parts of the world currently address WMU students. The former seafarers and the people with a pure academic background are almost even in the sample 12/13 (coast-guard officers, navy officers and school-ship officers are considered to be former seafarers). Eight persons have participated in an earlier and similar study by Horck (2010b). The low female representation is natural because not many women work as faculty at WMU. This is discussed in Horck (2010a).

The IMEC members were contacted because this organisation has a founded interest not only in the maritime language but also in research and in particular studies related to challenges in addressing a multicultural maritime student complement.

6. The WMU students

English is the teaching language at WMU. As already noted few women[2] address the students, notwithstanding the WMU student body include about 25% women.

The students have a significant diversified composition that perhaps is not very common in other educational institutions. The annual student intake is about 100 and they come from different cultures, have different revelations, compiles a mix of students with academic background and maritime or seafaring background (theoretical vs. practical) and have an age span between 23 and 50. The arithmetic average student age is 32 years and logically these students have experienced many didactic methods and embody many cognitive styles. An eligible student normally has a Candidate degree in, for instance: economics, administration, management etc. or hold a Master Mariner or Chief Engineer degree and/or professional license.

Apparently with such a student composition the pedagogy and the choice of words from the rostrum can be factors that have an impact on the learning. From an educational point of view such a diversified MET classroom can be problematic both for the students and the teachers'/professors' Horck (2006, 2010b).

Is the WMU faculty aware of and are they prepared to handle an encounter of these challenges? For a freshly employed professor the first and crucial reflection should be on how to address such a class complement and this bearing in mind that they do not have a teacher education and sometimes no teacher experience in neither a homogeneous nor a multicultural class. Therefore part of the professor's first reflection should be a consideration on how careful he or she should be in using metaphors when explaining something difficult?

7. Analyses

The following gives an account of the findings from the completion of the two sentences 1) *Teaching is ... because* … and 2) *Learning to teach is* … plus 3) examples of metaphors used in class.

The findings from 1) and 2) are based on answers from persons coming from 16 different countries.

7.1 Fulfillment of the sentence *Teaching is … because …*

In their answers the faculty has presented a great variety in the conceptualising of the metaphors used in this sentence. Despite this it has been considered possible to juxtapose the findings to represent the professors' way of addressing students in class. In order to have a justifiable strength in the conclusions it is decided to set a minimum of two tokens to consider a conceptual metaphor.

A few in the faculty have given more than one alternative when fulfilling the sentences. Such additional words have not been considered in the study. In the compilation the former seafarers, although they also have an academic background, are labelled as former seafarers. Supported with a few selected tokens six identified conceptual metaphors have been listed and are presented in table 1. N in brackets represents the total number of tokens identified for each conceptual metaphor.

Table 1. Conceptual metaphors for *Teaching is* …

Teaching is … / Sample expressions	
WORK (N=8) 1) a responsible task 2) a demanding business 3) the least rewarded profession 4) the most rewarded profession 5) an important job, a superior profession	SURVIVAL (N=3) 1) necessary 2) challenging
TRANSPORT (N=5) 1) imparting knowledge 2) learning twice 3) conveying knowledge 4) a discovery	GUIDING (N=3) 1) showing 2) help shaping
ART (N=4) 1) similar to painting 2) to perform	FEELING (N=2) 1) satisfying 2) a pain in the butt

The importance of SHARING was also mentioned.

The *because*, the reason, for teaching has been identified with the conceptual metaphors listed in table 2 and is identified with five conceptions supported with a few selected tokens.

Table 2. Conceptual metaphors for *because* …

… because … / Sample expressions	
COMMUNICATION (N=6) 1) it helps to develop, connect, compare and correct ideas 2) knowledge must be shared and found 3) it reflects to be able to understand 4) it means passing of knowledge	WORK (N=3) 1) it is a skill 2) it enhances
CONSTRUCTION (N=6) 1) it improve students' skills 2) it is a way to greatly impact and develop 3) it forms the individual	AWARENESS (N=3) 1) it is a method to know 2) it makes yourself eventually redundant
LEARNING (N=5) 1) it contributes to question oneself 2) it is learning	

The importance of TRUST was also mentioned. A perhaps amusing explanation for the reason (the *because*) of teaching is that the STUDENTS ARE DUM (N=2). This is probably why teaching is a PAIN IN THE BUTT.

How do the above conceptions distribute between faculty from the East and the West and between former seafarers and those with a pure academic background? See tables 3a and 3b.

Table 3a. Distribution of conceptual metaphors for *Teaching is …*

Teaching is …																							
Conceptual metaphor																							
work				transport				art				survival				guiding				feeling			
w	e	s	a	w	e	s	a	w	e	s	a	w	e	s	a	w	e	s	a	w	e	s	a
7	1	3	5	3	2	3	2	1	2	2	1	2	1	2	1	2	0	0	2	2	0	1	1
w = West, e = East, s = former seafarers, a = pure academics																							

The faculty from West significantly conceptualise *teaching* with WORK and those from East with TRANSPORT and ART. The faculty from East have conceptualised with less significant metaphors. The seafarers conceptualise teaching with WORK and TRANSPORT and the academics significantly with WORK.

Table 3b. Distribution of conceptual metaphors for *because …*

… because …																			
Conceptual metaphor																			
communication				construction				learning				work				awareness			
w	e	s	a	w	e	s	a	w	e	s	a	w	e	s	a	w	e	s	a
5	1	2	4	5	1	2	4	4	1	2	3	1	2	3	0	3	0	0	3
w = West, e = East, s = former seafarers, a = pure academics																			

The faculty from West conceptualise the *because* with COMMUNICATION and CONSTRUCTION and regarding those from East there is no strong significance; possibly it could be WORK. The former seafarers has not given a significant conceptualisation, possibly it could also be WORK and the academics with COMMUNICATION and CONSTRUCTION.

A summary of the conceptions from the *Teaching is … because …* sentence is outlined in table 4. In this table also the conceptions from men, women and former seafarers from East and West and pure academics from East and West are presented.

Table 4. Summary of the conceptions for *Teaching is … because …*

Sample category	Teaching is …	because …
West	Work	Communication & Construction
East	Transport & Art	Work
Former seafarers	Work & Transport	Work
Pure academics	Work	Communication & Construction
Men	Work	Communication
Women	Art & Work	Learning
Former seafarers from West	Work	Communication
Former seafarers from East	Transport	Work
Pure academics from West	Work	Communication
Pure academics from East	No significance	

The empirical data was not sufficient from people with a pure academic background coming from the East.

7.2 Fulfilment of the sentence *Learning to teach is …*

In table 5 four identified conceptual metaphors from this sentence and each supported with three selected tokens to the right in the table.

Table 5. Conceptual metaphors for *Learning to teach is …*

Learning to teach is … / Sample expressions	
TO BECOME SKILLED (N=11)	
To be a worker	to get hands-on practice
To be professional	to gain ability
To be capable	to be able
TO BE A STUDENT (N=7)	
To be a receiver of knowledge	acquiring the art and science of imparting and communicating knowledge
To be a communicator	to enhance ability to transmit
To grow	an essential part of becoming a successful teacher
A VOYAGE (N=4)	
To be a trainer	to develop yourself and open a new door
To be an explorer	a journey in exploring and to expand one's mind
To navigate	finding the way to express and see the relationships
AN OPPORTUNITY (N=3)	
Something for the selected	essential; very few people can do it (well) naturally
To take a chance	trial and error
To be an opportunist	the most important of all educational programs

A summary of the conceptions from the *Learning to teach …* sentence is outlined in table 6. This table also includes the conceptions from men and women.

Table 6. Summary of conceptions for *Learning to teach is …*

Learning to teach is ….	Pure academics	Former seafarers
Faculty from West	To become skilled at work (N=8)	A voyage (N=3)
Faculty from East	Not significance	To be a student (N=3)
Women	To become skilled at work (N=5)	
Men	To become skilled at work (N=6)	

The empirical data was not sufficient from people with a pure academic background coming from the East.

7.3 Examples of metaphors used in class

To conduct a conversation with the faculty to find out what metaphors they use and if they have changed metaphors after some time on the rostrum was part of this study. Among the faculty that have been longer time at WMU 50% confess that they have not changed their use of metaphors. One faculty member said: *When teaching my subject probably I changed more in the beginning of my time at WMU, after a number of years you find the best way to explain*.

Another faculty member made the remark that metaphors are more connected to the subject than to culture. This remark contradicts the general concept that metaphors have a cultural connotation but should be of interest to analyse further.

Most faculties came to realise that they use metaphors spontaneously and without reflecting on any constraints in using them. Perhaps what they use are dead metaphors as have been concluded by Leino & Drakenberg (1993) as a common practice for teachers in general.

With the low empirical data it has not been possible to identify all the conceptual metaphors related to the different specialisation subjects that the sample represent. Although, it has been possible to identify a significant conceptual metaphor on the subjects: maritime law and education, see table 7.

Table 7. Summary of the conceptions for the subjects maritime law and education.

Maritime law	
To get information from an unwilling subject is similar to extract teeth A body of rules … General rule of thumb …	ANATOMY
Education	
You can sail easily through this book You are on the right course with your explanation Show someone the ropes	NAVIGATION/SEAMANSHIP

The professors with a pure academic background tend to use expressions in maritime law subjects related to ANATHOMY. Another indicated conceptual metaphor in maritime law was MARRIAGE.

The faculties from West, both former seafarers and pure academics tend to use expressions in education subjects related to NAVIGATION/SEAMANSHIP. Other indicated conceptions on education are: CARGOHANDLING, FLORA, FAUNA and GEOGRAPHY.

From other faculty constellations it has not been possible to identify the subject conception.

A *rule of thumb* is not really a metaphor to some experts because it has become an expression too commonly used, i.e. it is a dead metaphor.

From a few of the faculty it appears that they interpret the metaphor concept with analogies. An analogy is often understood to be the umbrella definition of metaphors, exemplifications, similes, parables and comparisons. Though, in cognitive linguistics the notion of metaphor may be equivalent to analogy.

8. Discussion

In the following the findings in current study are discussed with an insight of a deeper reflection.

8.1 *Teaching is … because …*

In the summary of the conceptualisations from the sentence *Teaching is … because …* it is found that the pure academics and the former seafarers from the West consider it to be a WORK because it is a COMMUNICATION (and CONSTRUCTION). This is found to be a bit awkward when people with an academic background do not realise that their skills on the rostrum is not somewhat more than pure WORK. To consider teaching to be no matter than simply a WORK could indicate that the faculty is less focused and feel less dedicated to professionalise own teaching process. The reason could be that a

number of other activities and worries take priority in the life of the professors, for example, family, salary, children's schooling, lack of servants, diversity, food, dress code, UN status etc. Horck (2010b). A profession that by its nature has a crucial impact on human beings should be denoted with a word of reason that emphasizes its importance. Only one person identified teaching as a responsible task. To realise teaching to be demanding, helping and a challenge and at the same time being a rewarding activity signals a good state of affairs. Normally, to have teaching responsibilities requires a skill to perform and when it concerns human beings the possession of teaching skills become even more important. If a person has been given high responsibility without obtaining the proper skills, according to *The Peter Principle*, it contributes to a teacher reaching his or her incompetence level (Peter et al 1970). If a professor is seriously concerned regarding his or her educational endeavours but the teaching skill is substandard then the performance might not be up to the expected 100% and the work on the rostrum in reality becomes a work lacking in depth responsibility and devotion. A faculty member at IMO's apex and prestigious university should of course muster superior professionals, both in technical knowledge and pedagogy. With such assertion might follow a deep responsibility and devotion and be an activity more than pure work.

That teaching is TRANSPORT (rated second and understood to be transport of knowledge and experience) is not really that surprising because the WMU is in its programmes focusing on management in transportation at sea; shipping. To describe teaching to be a work because you communicate, you talk and it is what teachers normally do for a living, perhaps is a bit ego-synchronised because in a modern class room the communication should be reciprocal i.e. shared – a give and take experience.

It is the former seafarers from the East that realise teaching to be TRANSPORT (or ART) and this because it is WORK. As a group, the WMU former seafaring professors also have an academic degree, BSc, MSc or PhD. With this conceptualisation it is cumbersome to identify these professors of having a serious attitude in addressing students but more see their appearance on the rostrum as a possibility to have a salary. From my experiences this could be a strong conclusion but at the same time a possibility. Because I realise that not many workers in today's society see their work as a vocation in its genuine meaning. Today the semantic meaning of vocation appears to become a development of skills and knowledge to enjoy a career.

A skilful TRANSPORT of knowledge is indeed relevant but in modern and Western pedagogy it should not be a one way voyage (not tramp shipping but rather liner shipping with an assurance of having cargo in return). Through communication the teacher is transporting the information and the knowledge to its destination, the students' brains.

In teaching the communication should engage trust between the teacher and the students. Shipping has never made itself known for being trustworthy, you never hear, for instance, a tanker owner say *trust me*. Lawyers and medicine doctors say *trust me* and we believe them. In teaching trust is imperative and an important part of a successful outcome from the rostrum. Trust was mentioned by only one person as the *because* for teaching.

The COMMUNICATION conception comes as the major reason, (the *because*), for teaching and this is a buoyant conception for any teaching. One person expressed the reason as a mission of sharing and it could well be the result of a TRANSPORT of knowledge and skills. But not from any of the mentioned tokens it is understood or clear that the communication is reciprocal. It is therefore implicit that the communication is carried out according to traditional teaching i.e. a dialogue from the rostrum. This is

not at all surprising. For instance, when teaching the WMU students law, realising that the majority of them have never seen a law-book, it is cumbersome to have a worthy discussion to be expected at a level of a masters degree. The same is relevant in the subject of finance when many students have minor knowledge of the subject terminology and its meaning. Most students do not have neither practical experience nor knowledge of ships and cargo handling. To gain knowledge in such subjects the students first have to be given basic knowledge. These subjects have a minor status at WMU, although cargo handling is the fundamental activity for earning money in shipping, and therefore and subsequently have been given insignificant time allocation in the curricula. In such circumstances the student/teacher class contact naturally and often becomes a one way lecture; almost a pep talk. It is not what should be expected in a master degree course. Despite the above intricate challenges a genuine care for learning is maintained among most students and they make the best out of the situation because of commitment, an excellent library and usually strong willingness to learn. This is courageous, especially when the standard programme lasts for only 14 months.

Interestingly, the female faculty mainly understand teaching to be an ART (and WORK) and that this activity is a LEARNING process apparently both for the students and the professors. Perhaps the ART aspect inflicts that when you are on the rostrum you are an actor performing at the same time realising that this performer can learn from the audience. The women have appropriated the old proverb that a professor also is a learner. That the conception ART has a *because* conception in LEARNING could have a reason in the broad opinion of female humbleness. The few women that address the WMU students are not seafarers and that situation make them realise themselves as learners in the shipping environment that is traditionally mail dominated.

Second to COMMUNICATION follows CONSTRUCTION and then LEARNING as conceptualisations of the *because* of teaching. With both these conceptions it implies a method of forming and developing and describes the original objectives of the WMU and likewise the IMO. To teach systems of management and best practise by a faculty that have long time experience especially when the subjects are linked to safety, security and care for the marine environment it righteously is in line with both the IMO member States' and the shipping industry's expectations on the outcome of WMU's endeavours.

The male faculty, as a group and almost like the women, understand teaching to be a WORK. Differently to the women this work has it's *because* in COMMUNICATION. This is the same *because* conceptualisation as found for the former seafarers from the West and the pure academics from the West. The entire faculty from the West conceptualise the *because* with COMMUNICATION (and CONSTRUCTION). In particular in some countries in the East still many professors communicate one way when on the rostrum – they are the guru in class and what they say may not be questioned– so it appears strange that the men from West in this sample justify communication as the reason for being in class. In this sample the men from the East constitute 21% of the mail sample.

8.2 *Learning to teach …*

The conceptualisation found from the words in the sentence *Learning to teach …* by both gender became TO BECOME SKILLED. It is a standard reflection and indicates that the faculty finds it important to have the possibility to acquire the skills of professional teaching and become competent; to obtain an authorization to be on the rostrum. From many of the answers it is alluded that to perform on the rostrum requires pre-information on how to do.

From the conversations it is apparent that the faculty wishes to pass on to the students from their own work experiences. It is understandable because the average WMU student already has academic

experience but lack knowledge on how to professionally work-perform and therefore wishes to learn how to do this in the best recommendable way. With such an approach of transmitting knowledge and practical attitude to teaching the IMO motto and general mission will be adhered to.

The former seafarers from the East mention as a second conceptualisation for learning to teach TO BE A STUDENT. This could be interpreted as this faculty group realise the need for obtaining teacher training and therefore is willing to enter the role of a student without unconvinced feelings.

The IMO apex university must be manned by a teacher-competent and teacher authorized faculty. As of today none of the faculty has passed a fully justifiable teacher education. In the IMO International Convention on *Standards of Training, Certification and Watchkeeping for Seafarers* (STCW 95) regulation I/6 it is required "… that those responsible for training (including education) and assessment … are appropriately qualified" (STCW 1995, p. 27, my parenthesis). The convention text denotes that the MET faculty in States that have ratified the convention must attended and pass a course in pedagogy.

A conceptualisation of the learning to teach as a VOYAGE perhaps includes to explore self in the role as a teacher and becomes a natural realisation of mainly the former seafarers from the West. A seafarer's skill very much depends on voyage planning and performance in order to arrive destination (reach objectives) on time and with cargo intact.

The entire faculty, both men and women, realise that to obtain the skill of teaching undertakes a process that could be cumbersome. The pure academics from West appear to realise this more than the faculty with former seafaring background also from West. The former seafarers from West realise the learning to be more than a VOYAGE. A sea-voyage can likewise be cumbersome. The former seafarers from East understand that learning to teach means TO BE A STUDENT; an obvious reflection. People from the East, by tradition, very much respect the teacher and in this study the former seafarers realise that in this situation they have to give up the command and become a student.

8.3 Examples of metaphors in maritime teaching

It was difficult for the sample to exemplify their use of metaphors in class. This could indicate that any previous reflection on the phenomenon of using metaphors has not been on the individual's respective agenda. From the interviews it was found that metaphors are used spontaneously i.e. the faculty is not considering the use of metaphors as a well thought-out and delicate possibility to clarify something difficult. A true observation also by Lakoff and Johnson (2003, p. 3) saying "… our conceptual system is not something we are normally aware of … we simply think and act more or less automatically ….". Perhaps this observation could be followed by a conclusion that could include that the faculty is aware of the danger of using metaphors because they are linked to culture and therefore should be used with care in a multicultural classroom.

The majority of the interviewed faculty do not change their use of metaphors. It would mean no development of the subject and from it would follow no development of the students. If the use of metaphors is not subject to change it could give an indication that the person neither has bothered to develop own thinking and meanings in life nor to adjust the verbal communication with the students to be context related and context relevant (Drakenberg 2002). Though, we should bear in mind as stated by Lakoff and Johnson (2003, p. 145) "… it is by no means an easy matter to change the metaphors we live by".

9. Prologue

In current study the sample is small which would make generalisations unattainable; if ever should be done. The faculty was asked to respond in English and perhaps this disturbed the metaphor impact from faculty coming from non-English speaking cultures. The conceptions were found to be wide spread so there is no straight significance in the repertoire. Therefore, it was considered of no use to find any significance; i.e. to investigate with logistic regression and chi-square tests.

In the study done by Alger (2009) she found that the teachers *desire* teaching to be: a providing of tools, a guiding and an engaging in community. The engaging indicates that the teacher wishes to be an integrating part in the learners' efforts to obtain knowledge. "We collectively decided that we need a house and then we design and build it together" (Alger 2009, p. 746). These thoughts were weak in current sample.

Apparently in the teacher education the importance of using metaphor should be emphasised. The reason for this is to make the teachers aware of metaphor complexities and the risks for introducing misunderstandings instead of clarifications. Sequentially the use of metaphors could lead to an intimation of a hidden curriculum.

If the faculty correctly appears not to be inclined to change their metaphors it could be an indication of not taking enough care if the message is received correctly. It would mean that they pursue their way on the rostrum unconcerned. Therefore in the case of the WMU faculty it is recommended that they be given the opportunity to attend a course in pedagogy. The course might also make the faculty aware of the metaphors link to culture and thus should be used with outmost care. One person in the sample made the remark that the use of metaphors depends on what it alludes at more than having a cultural impact. It would be worth further analysing to compare the use of metaphors in relation to culture and subject taught. It would of course also be interesting to repeat this study with a larger sample and then also the cultural aspect might be visible. It did not become conspicuous in current study.

Notes

1) Professor and teacher is used interchangeable. At WMU the title of professor do not follow the Anglo-Saxon definition.
2) The WMU faculty is on its way to increase its complement of women.

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As a faculty member at the Malmö MET he taught becoming captains and mates. He conducted and was responsible for IMO/SIDA courses on MARPOL Annex I and II. He educated Swedish Coast Guard employees in handling oil and chemical cargoes in ports and onboard ships.

As a faculty member of WMU his major duties have been to address the students in cargo-handling on different ship-types, quality assurance (ISO 9000 and ISO 14000), port performance indicators, port reception facilities, behavior and handling of ships, cultural awareness, responsibility for a number of seminars and field studies and inviting guest speakers. He has also participated in various projects where WMU has been a partner.

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The Novelty of CAPTAINS: the Communicative Learning Approach of Maritime English and its Facilitation by Technology

Abstract

This paper presents one of the many novel aspects of the CAPTAINS project: developing rich media interactive educational software in which learners are able to record and self-assess their performance in communicative English, in addition to 3D virtual interactive learning environments, in which they are able to interact and "talk" to virtual maritime characters about handling situations at sea, in standalone mode but further published in an e-learning 2.0 platform, Kwebo, developed by AIT. Kwebo provides all the necessary tools to facilitate the development of an online Maritime English learning community, allows synchronous and asynchronous online communication and collaboration, in an integrated manner with single sign-on access. Communicative Language Teaching (CLT) is an appropriate approach in teaching English to Merchant navy officer cadets, as Listening and Speaking skills are essential to effectively undertake onboard duties, as a lack of such skills has proven to have led to accidents on sea. The CAPTAINS project will use Communicative English Language Teaching with 2D/3D simulations in its scenario-based learning approach. The scenario based learning approach will show how to communicate effectively and take the appropriate actions, as well as demonstrate how poor communication skills can lead to being in critical situations. The maritime industry can significantly benefit from the existence of a software training tool for its sea-going and port personnel, since it focuses on effective communication in English. The publishing of such interactive rich media educational software on the Kwebo e-learning 2.0 platform will launch the set-up of the first online Maritime English learning community, facilitated further by collaborative authoring and online communication tools and services in a complete integrated learning environment dedicated to enhance Maritime English learning. The EU Leonardo funded CAPTAINS project is expected to result in both novel, software based maritime communicative English learning material, accessible from within the KWEBO e-learning 2.0 platform, and the birth of the first online Maritime English learning community. This paper provides the rationale of the formulation of the new "canon", i.e. an intercultural, real-life inspired, communicative, and cutting edge, in terms of technology, learning approach to which new content could constantly be integrated.

Keywords: Maritime English, communicative language teaching (CLT), CAPTAINS, authenticity, rich media interactive educational multimedia, 3D virtual learning environment, online learning community, e-learning 2.0 platform, KWEBO

1. Introduction

English has been established as the language of the sea at an international level and is used in all situations such as ship-to-ship, ship-to-shore and on board communications.

Linguistic, paralinguistic and cultural issues hinder the safety of the ships at sea (Ziarati, 2006). A careful study identified that 80% of maritime accidents are caused by human factors (Verbek, 2011), of which failure of communication represents one third (Ziarati, 2006, Trekner, 2007). The IMO has also underlined the importance of effective communication in an International Seminar as a crucial issue for Marine Safety (Winbow, 2002). It is important to look for solutions to resolve and remedy these problems on a global scale (Loginovsky, 2002).

Communicative Language Teaching (CLT) set in the context of real-life situations at sea is not commonly applied in the curriculums for training merchant navy officers (Ziarati et al, 2011). It was also found that English language skills of the ships' crew are at a low level, resulting in ineffective communication. Recent research, has shown that ineffective communication is a major cause of accidents and incidents at sea (Ziarati et al, ibid, 2011; Verbek, 2011; Trekner, 2007; IMO, 2005). The CAPTAINS project (Ziarati et al, ibid) has reviewed a number of accidents and incidents based on communication failures. The appropriate accident scenarios were used to support the development of learning content on the CAPTAINS advanced e-learning platform.

The CAPTAINS project (EU Leonardo Captains Project, 2010-2012) is creating and publishing interactive educational multimedia, simulations, and 3D virtual learning content on an advanced e-learning 2.0 platform. The content was based on real-life scenarios on linguistic and cultural diversities with respect to effective communication in English among seafarers on ships and ashore. The CAPTAINS project (ibid) will develop software based maritime communicative English educational multimedia and e-courses in which the created learning scenarios will make use of proper learning approaches, online communication, virtual collaboration and learning spaces as a medium facilitated by the e-learning 2.0 platform, KWEBO, enhanced with 2D/3D interactive rich media simulations. This will be seamlessly interlinked with other forms of online educational content and be bundled and offered as complete online learning e-courses, accessible from within KWEBO. It is significant to point out that the knowledge base of real scenarios is intended to be included in the curriculum of Maritime English in maritime education and training institutions. Industrial and vocational training for sea-going and port personnel would benefit from the existence of the CAPTAINS software-based training content since it focuses on effective English language communication, which is an essential ingredient in safe and efficient ship operations.

The CAPTAINS project will use Communicative English Language Teaching with 2D/3D simulations in its scenario-based learning approach. The scenario based learning approach will show how to communicate effectively and take the appropriate actions, as well as demonstrate how poor communication skills can lead to being in critical situations.

Moreover, it will develop, add value and enhance the attractiveness of VET systems and practices incorporating state of the art computer assisted language learning (CALL) in an experiential environment. Such an environment is brought around from within the KWEBO e-learning 2.0 platform. KWEBO is a novel system, in constant development, with the aim to introduce a number of educational, collaborative and communication tools and services for educational and not only stakeholders, integrated in a single platform with single sign-on access. Among its current technological innovations one can enlist the integration of social networking and collaborative authoring tools, the interfacing with existing social networking sites, to boost technology-enabled social learning, along with incorporation of 3D virtual learning environments and seamless integration with rich media interactive educational content and simulations. The main aim is to enhance the way people learn, share and communicate using a single platform and user account.

This paper is presented and structured in the following manner:: Section 1 has provided a brief introduction to the rationale, aims and objectives of the CAPTAINS project (ibid) as well as an initial insight into the novelty of its e-learning platform. Section 2 presents the innovations brought around by the CAPTAINS project and how they have materialized: (i) innovative educational content, ii) novel learning approaches (scenario-based, experiential), iii) course design and development results instantiating the learning approaches. Then, methodological/ didactic approaches and areas that have been considered in the design and the development of the CAPTAINS educational software and e-courses are discussed. Section 3 summarizes the results of the user feedback questionnaire, which gave significant inputs into the design and development processes. Section 4 presents KWEBO, AIT's e-learning 2.0 platform, brought into the project to form the medium for publishing the CAPTAINS developed e-courses and educational software, along with its novel features. Section 5 describes the CAPTAINS digital courses- standalone and e-courses. Finally, in the last Section conclusions and future work are presented.

2. THE CAPTAINS PROJECT AND ITS INNOVATIONS

2.1 CAPTAINS` INNOVATIVE BACKGROUND RESEARCH

The CAPTAINS project has been based both on results from other successful Leonardo projects as well as on the findings from current research in the area of Sea at Safety. In particular, the project has exploited the research findings of the Leonardo SOS project (2005-07) on the review of the IMO requirements for education and training for merchant navy officers as well as the findings of the Leonardo project MAIDER (2009-11) which reviewed the accidents and near accidents. Another result that has been used as input for the CAPTAINS project is a review of SMCP (Standard Marine Communication Phrases, International Maritime Organization, 2001) , that has been considered as the basis of developing the intended case studies/scenarios.

2.2 CAPTAINS` NOVEL LEARNING APPROACHES

The CAPTAINS project based on real-life situations has adopted novel learning approaches for effective English communication, outlined in more detail in the IMEC 23 conference paper "New Tools for New Seafarers: Presenting the Captain`s Platform for Maritime English" (Iakovaki, 2011).

As regards the foundations of the approach, first of all, linguistically, the modern tendencies call for an intercultural competence rather than plain native speaker level of proficiency as well as the communicative approach to language learning. Moreover, there is a need in the professional and human resources management level to have their discourse understood and legitimized as learning materials as well as the need to integrate safety in the working culture. Furthermore, technological breakthroughs such as state of the art experiential simulations and virtual learning/collaboration environments greatly contribute to the transfer of knowledge and skills.

The CAPTAINS project has thus focused on defining novel learning approaches for supporting experiential and scenario-based/problem based learning, with the aim to enhance effective verbal communication on ships in order to avoid accidents. These approaches have been defined based on a created within CAPTAINS knowledge base of real-life critical situations emerged by ineffective communication onboard ships.

2.3 CAPTAINS` DIGITAL COURSE DESIGN AND DEVELOPMENT

Another aim of the CAPTAINS project has been to design and develop digital courses on communicative English learning, both in standalone and e-course mode, based on scenarios and experiential learning approaches.

The designed and developed courses, as described in Section 5, are composed by a set of interactive rich media learning content. The primary learning content consists ofa variety of digital photos, graphics, text, sounds/recordings, images, videos, etc. whereas the developed secondary learning content has focused on more complex learning content such as interactive rich media simulations of real-life scenarios and multimedia presentations, (e.g. representing a virtual dialogue) utilizing the collected/created primary learning content.
The designed and developed digital courses are primarily suited to learners at an Immediate English Language level. Furthermore, the courses have been designed and planned in such a way to consider the requirements of accreditation and certification.

2.4 CAPTAINS` METHODOLOGICAL / DIDACTIC APPROACHES

In a report by Ziarati (2010) it is noted that in pedagogical terms, there is an important distinction between knowledge and skill. Full competence in the use of Maritime English involves both knowledge of the English language and the skills in applying it correctly in a maritime context. Communicative skills are thought to be the most appropriate approach in teaching English to Merchant navy officer cadets. Loginovsky (2002) also argued that English to maritime officers should be taught in the context of maritime English. The CAPTAINS learning material will take note of the argument forwarded by Loginovsky (ibid).

The new intercultural, communicative approach emphasizes the plurality of Englishness and their use onboard as equally legitimate versions. Therefore the material developed in CAPTAINS project mirrors such differences by employing a variety of representative discourse types in real-life situations.
Authenticity of materials is also a prerequisite, although the dominant feature of the pedagogical framework would be authenticity of tasks and situations. A novelty in the way such material is usually developed, lies in the fact that provisions will be made so that all levels of competency will be addressed and not just the intermediate-upper level as it is customary.

Moreover, distinctions will be made between specialties, in which Engineering, Navigation and all-around soft management skills will be called to action making for a differentiated target group. The use of virtual reality tools will allow a degree of freedom and authenticity of tasks unprecedented in such enterprises and therefore it will push the limits of the purely linguistic content so that an altogether new learning experience, a sum larger than its parts, will emerge, creating value for the trainers, stakeholders and community of practice.

3. TEACHING CONTEXTS - USER REQUIREMENTS COLLECTION

The CAPTAINS project partners distributed a questionnaire which was handed out to lecturers, professors, and seafarers who have sea experience. (Ziarati et al, 2011). This distribution of the questionnaire is part of the user requirements collection phase, prior to the definition of the novel learning approaches and the design and development of the digital courses, a total of 109 seafarers from 12 different countries completed the properly formulated questionnaire for seafarers. Over two thirds of participants were under the age of 35. Over half had more than 6 months of sea service, with almost a quarter having

between 5 and 10 years at sea. The majority had served on bulk carriers, and tankers. There were responses from 25 senior officers, 18 officers, 65 officer cadets, and 1 rating (Ziarati et al, ibid).

The questionnaire for maritime English teachers was completed by 64 lecturers and professors from over 30 maritime academies and universities worldwide. 39% of responses came from participants who had prior seafaring experience. Around half of the participants told us that they prepare their students for formal English language exams or tests of maritime English(Ziarati et al, ibid).

One of the issues investigated in the questionnaire was the participant's language level. Maritime English teachers told us that 41% of their current students were at B1 level, and 34% were at B2. 75% of the students covered by the survey were at either B1/B2 level (intermediate) with their English. Another questions dealt with English language qualifications. Approximately one third of the seafarers possessed a formal English language qualification, such as IELTS, FCE, or TOEIC. The research showed also that English is most cases was a language of instruction in nautical studies. Moreover, the questionnaire revealed that 72% percent of the seafarers said that more than one language was spoken on board during their current of most recent service on board. Furthermore, it was indicated that cultural differences have an effect on the level of communication on board.

The open responses reiterated the idea people can say that they have understood something, but in actually, they have not. This clearly underlines the need for communication to be made using standard vocabulary, and for seafarers to be able to give the correct feedback (as documented in SMCP) to confirm that they have understood an order. (Ziarati et al, ibid).

The two most popular methods of teaching provided by the English teachers are 'communicative approach' style lessons and lectures with audio recordings, pictures and videos. The respondents said that they seldom use distance learning, and online learning methods utilizing 2D and 3D animations. When asked to rate certain types of activities as to how appropriate they would be in the proposed new e-learning software, the maritime English teachers almost unanimously marked 'simulations and games' and 'interactive activities' as being appropriate. They also marked '2D / 3D animations' and 'self learning CDs' as being extremely useful. This shows that there is a demand, and room for, a technological e-learning solution.

Maritime English teachers told us that they would like to see teaching contexts/subject areas relating to 'safety and security' and 'emergencies on board' in the new e-learning software. Other contexts such as VHF communications and anchoring / mooring operations were also popular, although one participant suggested that the e-learning software might contain a section relating to the engine room department.

Seafarers told us that they thought practical training on board was the most appropriate way to learn maritime English, followed by conventional classroom lessons. Following these two essential elements were interactive scenario based applications and self learning. These categories were broken down into the four skills (reading, listening, speaking, writing). Participants told us that these methods are useful for them to practise all their English language skills.

3.1 CAPTAINS` METHODOLOGICAL / DIDACTIC APPROACHES

The VHF communication was a topic discussed in many of the workshops organised by the project partners. For example in the Turkish workshop, the participants emphasised the point that most accidents are caused by problems with external communication, such as collision situations. This was similarly pointed out by the colleagues in the Spanish workshop. In this workshop, it was noted that VHF communication by VTS operators was required to be fluent and masterful in its use of SMCP.

The Greek workshop reported that VHF operators try to guess the nationality of the person who is trying to communicate with them from their accent. All workshops reiterated the need to deal with pronunciation. This reflected the results of the questionnaire, which highlighted the fact that most of our survey participants felt that pronunciation was a major factor in whether or not they were understood. The issue of seafarers providing feedback was mentioned as an important matter in the Greek workshop.

According to the regulations, seafarers must repeat an order that they have been given to confirm that they have received it. The Turkish and Spanish workshops put forward the suggestion that an effective way for people to learn maritime English is through using Content Language Integrated Learning approaches.

4. THE CAPTAINS E-LEARNING 2.0 SYSTEM – KWEBO

The CAPTAINS digital courses are accessible from within an advanced e-learning 2.0 platform, KWEBO (KWEBO, AIT), that has been developed by AIT. Its added value lies in the fact that it integrates a number of educational, communication and collaboration tools and services in a single platform with single sign-on access. Furthermore, it is a dynamic, evolving system, into which novel tools and services are constantly being integrated, such as social networking, collaborative authoring tools and a 3D virtual learning space. The core technology of KWEBO is the open source OLAT LMS/LCMS (OLAT, Univ. of Zurich). KWEBO allows the authoring, structuring and publishing of complete e-courses, composed of both synchronous and asynchronous learning objects and activities (rich media learning content including audio, video, animations, games, etc., as well as chatting, video-conference, virtual class, forums and other such services). KWEBO currently integrates the following components:

- Learning Management System (LMS)
- Synchronous and Asynchronous Communication and Collaboration tools and services for its internal Learning and User Communities, such as:
  - Chatting
  - Video conference
  - Virtual Class
  - Whiteboard
  - Discussion Forums
  - Email
  - Notifications
  - Calendar
  - Notes
  - Internal Communities Management
  - Etc.
- Collaborative Authoring Tools and Services, such as
  - Blogs
  - Wikis
  - Podcasts
  - Vidcasts
  - Etc.

- Digital Library with primary digital multimedia content and metadata (including attribution information)
- Synchronous transmission system of live and pre-recorded webcasts and podcasts

KWEBO serves as the **host and access system** for the CAPTAINS e-courses, which are rich with interactive multimedia content and adopt innovative learning and evaluation methodologies both on an individual as well as a community level. Moreover, e-courses utilize the calendar, scheduling, **video conference and virtual class capabilities** of KWEBO to allow the implementation of remote classes brought together over the Web to be taught on the subject areas of the CAPTAINS project and further promote the communicative approach of CAPTAINS by exploiting such online synchronous communication, collaboration and interaction channels among remote students and teachers. To advance the communicative approach of CAPTAINS to teach Maritime English, many learning activities and learner tasks of the CAPTAINS e-courses refer to the use of the **chat and video conference** capabilities and require from online learners to communicate online and collaborate with other online learners logged in KWEBO in the same learning community and carry out learning tasks together. Such synchronous communication tools can be used for educational purposes such as pair work, sharing knowledge, ideas, discussion about tasks, asking questions and providing answers. Storing the chat history or recording the video conference session may be submitted as an assignment and may be assessed by the teacher.

Furthermore, a number of online activities of the CAPTAINS e-courses have been developed considering the **Web 2.0 collaborative authoring capabilities** of KWEBO, such as **Blogs, Wikis, etc**.

- **Blogs** often act as a basic tool for personal knowledge-management, which can be used as a personal diary or as an instrument to support group-dynamic processes (Hilzensauer & Gruber 2005). RSS technology enables bloggers to gather information from a variety of sources and to interlink these sources. This triggers the group-dynamic processes since blogs reflect an individual user's approach to gathering and arranging information. As a result, blogs also reflect a user's personal approach to learning, because sources of knowledge are interlinked individually (Petter et al, 2005:10). Blogs are used in educational context to enhance the communication among students and teachers. They are mainly used to replace the out-dated way of communication such as the e-mail. Students share their knowledge and learning experience with the teacher and other students through course blogs. Moreover, course blogs increase their interactivity (Kim, 2007). Blogs are not only used for writing-reading skills, critical thinking skills, supporting interaction, analytic, communication and discussion, but also for sharing and publishing artifacts like e-portfolios (Kalelioglu and Gulbahar, 2010). These numerous advantages of blogs show that students taking the CAPTAINS course may benefit from being involved in blog activities.
- **Wikis.** Wikis are websites which allow for creation and editing of the contents by every user. They act as a supportive tool for communication and cooperation as well as learning (Petreski et al., 2011). Wikis are used by educators as teaching and learning tools. A research has indicated that teachers and students can be very creative in developing innovative and useful activities for learning" (Fountain, 2012). For instance, a teacher supervising a student taking the CAPTAINS course may assign a task to create a wiki about navigational aids.
- **Podcasts.** "Other social based tools present at the KWEBO platform are the podcasts. Podcasts are social based media in video format used to help and enhance the course quality and experience" (Petreski et al., 2011). Students taking the CAPTAINS course may find it interesting to share the podcasts with their co-learners and teachers.

One of the major capabilities of KWEBO is the support and management of **online communities** within its system: both Learning communities and Communities of practice. KWEBO has started hosting and enabling the expansion of a dynamic learning community in Maritime English. A number of communication and collaboration tools and services are available for such learning communities. According to the role and access rights of each member, different capabilities are given to them by the system. Group administrators are given for example a rich set of tools to manage online communities in KWEBO, such as adding new members, configuring tools and services available to each member (chat, email, notifications, calendar, etc.). Learning communities are linked with specific e-courses and are granted access to those, as in the case of CAPTAINS. The 1st Maritime English learning community is granted access to the developed CAPTAINS e-courses. Among the capabilities of KWEBO are listed those that can track what the members of the learning community (learners, tutors) are interacting with, with respect to the learning material, as well as when they accessed the system and how long they remained connected, and report that to members of advanced rights, such as tutors/teachers/mentors. Specific tools are given to privileged users for initiating the creation of such automatic reports.

To boost the community and online socialization capabilities of KWEBO, deployed further within the CAPTAINS project beyond its end, a current advancement of KWEBO involves its **integration with social networking and social media tools**, utilized in a learning context to add value and bring dynamic learning content and recommended experts in the internal KWEBO learning communities. These capabilities will allow the expansion of the CAPTAINS learning community with external experts, the additional communicative learning channels through social media, mainly for informal type of learning, and the dynamic updating of the CAPTAINS e-courses with recommended external learning resources from within social networking communities (Petreski et al, 2011).

A motivating factor, expecially for young learners, is the **enganging learning material in animated 2D/3D simulations and interactive educational software**. Such forms of educational learning material are easily uploadable and published within KWEBO e-courses as learning resources or learning objects (in many cases in standardised learning packages such as SCORM). One of CAPTAINS innovations has been to design and develop such new enganging, types of learning material in both 2D and 3D – more details on the developed such content are given in the next Section. The published CAPTAINS e-courses are rich of interactive educational multimedia, that focus on the active participation and interaction of the learner in the online learning process (Tsekeridou et al, 2012). As an example, interactive developed simulated dialogues and self-assessment exercises in CAPTAINS are based on past accidents and near misses, in an attempt to demonstrate the wrong and right ways to communicate, highlight potential critical situations and train the maritime personnel on what action to take in order to avoid them.

More details on the use of KWEBO and its tools/services and features within the context of CAPTAINS are given in the next section, in which specific instances of the developed e-courses and the involved learning activities are described.

5. CAPTAINS DIGITAL COURSES - STANDALONE AND E-COURSES

The CAPTAINS digital courses have been produced following a design and development process. The design process involved the learning design of the digital courses including their thematic foci, subject areas, structure of contents, learning activities design, primary learning material collection. The development process involved the visual and interaction design of the interactive educational multimedia

and the development of the former, based on the design guidelines and the provided primary material, as well as the structuring, development and publishing of the online learning activities and complete e-courses within KWEBO, and finally the creation and management of the 1st online Maritime English learning community.

The CAPTAINS digital courses, both in standalone and e-course versions, were designed based on the results of the needs analysis, which provided the thematic & content foci of the designed activities, the novel learning approaches for supporting experiential and scenario-based learning, which set the framework of the learning principles and the level to be targeted, and last but not least the user interest and perceived advantages of an advanced e-learning 2.0 platform, AIT's KWEBO, which would enhance the educational content integration, provide access to it over the Web, and facilitate learners to discover an innovative, state-of-the-art web-environment and set the foundations of the first online Maritime English learning community. Moreover, the course design process followed the guidelines of the Common European Framework of Reference for Languages: Learning, Teaching, Assessment (Council of Europe, 2009), the IMO Model Course 3.17 (International Maritime Organization, 2009), and STCW (Standards of Training, Certification and Watch keeping for seafarers) (International Maritime Organization, 2011).

Top priority of the designed courses has been to ensure that all seafarers are able to speak and understand maritime English in order that they are able to communicate and carry out their duties effectively. Therefore, the designed activities encourage end users to learn or improve their English through communicative skills, enhance language awareness and to facilitate learners acquire intercultural competence integrating the concept of EFL (English as a Lingua Franca) via authentic tasks which incorporate authentic material, thus, enhancing their employability at home and their mobility within Europe and worldwide.

All learning activities of the CAPTAINS digital courses have been designed so that the communicative approach framework is widely implemented grounded in the notion of communicative competence as the goal of second and foreign language learning, and a communicative syllabus and methodology as the way of achieving this goal as it is vital to ensure that all seafarers are able to speak and understand maritime English in order to be able to communicate and carry out their duties effectively.

- Learners are engaged in interaction and meaningful communication based on the scenarios.
- Effective learning tasks and exercises provide opportunities for users to negotiate meaning, expand their language resources, notice how language is used in critical issues where safety is at stake such as collisions, and take part in meaningful interpersonal exchange.
- Students are processing content that is relevant, purposeful, interesting, and engaging due to the state of the art web environment are able to interact with objects in the virtual bridge resulting in meaningful communication.
- Communication is a holistic process calling upon the use of several language skills or modalities integrating language with attitudes and cross-cultural assumptions - not just focus on mental processes, but also highlighting beliefs and attitudes, fears and expectations. For example, the learner might form false or incorrect assumptions due to cultural diversities. .
- Language learning is facilitated both by activities that involve inductive or discovery learning of underlying rules of language use and organization, as well as by those involving language analysis and reflection. The kinds of training activities are based on trainees' direct experience: they are not simply told how to do things, but actually asked to work through task-based activities. In other words, they are provided not just with information but also with practical, "hands-on" experience, and they will be prompted to think about what they are doing.

- Language learning is a gradual process that involves creative use of language, and trial and error. It starts with a diagnostic approach showing the strengths and the weaknesses of the learner focusing on them for better motivation.

The new intercultural, communicative approach emphasizes the plurality of Englishness and their use onboard as equally legitimate versions. Therefore, the material developed mirrors such differences by employing a variety of representative discourse types in real-life situations pertaining to safety and emergency situations and the end user should be made sensible to the pragmatic and metapragmatic, intercultural and communicative qualities of language in use. Authenticity of materials was also a prerequisite, although the dominant feature of the pedagogical framework is authenticity of tasks and situations. The use of virtual reality tools allows a degree of freedom and authenticity of tasks unprecedented in such enterprises and therefore it pushes the limits of the purely linguistic content so that an altogether new learning experience, a sum larger than its parts, emerges, creating value and a meeting place – the first online Maritime English community- for the trainers, stakeholders, experts, community of practice and partner in general.

CAPTAINS digital courses are available in two forms: the **standalone**, self-learning form provided on a CD/DVD and composed of interactive educational multimedia with self-assessment capabilities, and the **e-course**, online blended (self and collaborative learning) form, including self-learning activities of the standalone form but enhanced and further extended with online learning and collaborative/group learning activities, facilitated by the capabilities of KWEBO and the Web as resources medium, and further offering the potential for virtual class synchronous sessions. Both forms of digital courses are further enhanced with engaging 3D virtual learning material that allows for enhanced experiential learning and user interaction in simulated environments as in real-life work conditions.

Each Module of the course undertakes a notional-functional syllabus collaborating scenario-based learning stemming from real life accidents such as collision and it is divided into three units. Units 1, 2 and 3, all delivered in both standalone and e-course forms. Units 1 and 2 are composed of different sections which focus on all learning skills: Reading, Writing, Speaking, Listening. Units 1 & 2 have been implemented using 2D interactive educational multimedia, while Unit 3, under development, focuses on exploring the use of a 3D virtual interactive world and how such a form of educational material will enhance the learner experience and knowledge acquisition.

In the sequel, a screenshot-based presentation of the designed and developed Units will be given to better illustrate the learning and visual/interaction design of the learning activities as well as how the novel learning approaches have been instantiated. The differentiation among the standalone and e-course forms is further emphasized to showcase the advanced capabilities of the latter, facilitated by KWEBO. Thus, for **Module 1: Collisions and for both Units 1 & 2**, the **standalone** form's initial screen is similar to the one shown in Figure 1.

The units are structured according to the primary focus of the designed learning activities and are divided into the following Sections:

- Introduction: states the objectives of the unit
- Lead in: warms up the learners
- Reading: focuses on the reading skill but incorporates other skills too
- Vocabulary Focus: focuses on the expansion of the vocabulary targeted and SMCP,
- Use of English: gives emphasis on the grammar and structure of language,

- Writing: develops primarily writing skills but includes also practice of other skills too such as listening,
- Listening: focuses primarily in developing listening skills together with intercultural competence,
- Speaking: encourages the learner to speak, record their answer and evaluate it comparing it with the suggested answer.
- Consolidation & Self-assessment: wraps up all the learnt content of the unit.

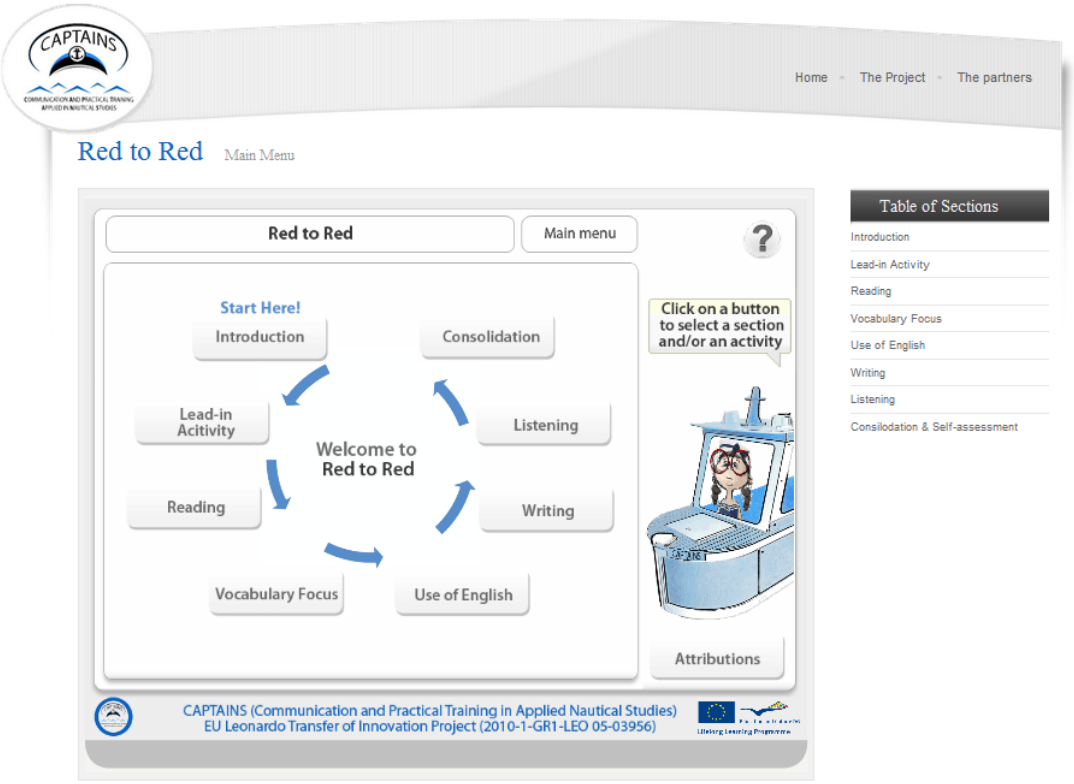

Figure 1: Initial screen of the standalone forms of Units 1 and 2

Each activity uses authentic material from the consortium's Maritime experts and worldwide while there was an effort of collecting a vast array of different pronunciations for the necessary recordings of the designed activities to allow for intercultural familiarization with the users' future colleagues. As per needs analysis, speaking activities were of top priority when designing the course encouraging learners to speak in authentic role-play situations or prompts and record their answer. This familiarization enhances speaking skills as the learners free themselves of the usual inhibitions they feel when speaking in front of an audience. They perform their speaking activities and listen to their performance getting the necessary feedback which enables them for self-correction and improvement. (Susan L . Fearn)

Apart from the focused skill of each section, other skills are also practised, i.e. the reading section starts with a pre-reading activity focusing in listening, as shown in the developed pre-reading activity of Unit 1 in Figure 2.

Module 1: Collisions, Unit 3, introduces the learner in a 3D virtual learning environment. The learner is invited to enter the 2D/3D environment and experience and practise the learning content acquired in the previous units. The unit is divided into three sections:

- The 2D accident simulation movie: The learner watches a 2D movie which simulates a real life accident related to the thematic module: collision. Multiple choice questions

examines key points of communication failures that led to the accident to ensure full competence in the use of Maritime English in safety issues based on real life critical situations emerging from English communication problems and diverse cultures due to multi-national ship crews.

Figure 2: Pre-reading activity from Unit 1.

- **The 3D user/avatar simple interaction:** The learner enters the 3D environment as an avatar and starts interacting with the objects of the bridge to attract and assess learners' familiarization with the 3D environment of a ship's bridge before proceeding to more complex interactions.
- **The 3D user/avatar more complex interaction:** The learner is allowed to be active, interact and socialize with others, be represented as digital entities, etc. thus significantly reducing the learning curve and the time needed for transferring of skills, a key issue in competence-based and learning by doing.

The **e-course** forms of all Units are composed of the Sections, Learning activities and associated interactive educational multimedia and assessment exercises of the standalone form, converted to SCORM learning packages and imported in properly structured e-courses within KWEBO. Additional online learning and collaborative learning activities as well as virtual class sessions further enhance and complement the self-learning activities of the standalone form, in the e-course form, exploiting the capabilities provided by KWEBO. These complementary activities make use of all the tools of KWEBO promoting the set up of the first online Maritime English learning community. An example of the Unit 1 e-course within the KWEBO environment is shown in Figure 3.

The left menu of the e-course describes the structure of the unit which remains almost the same compared to the standalone form, with however more online collaborative activities

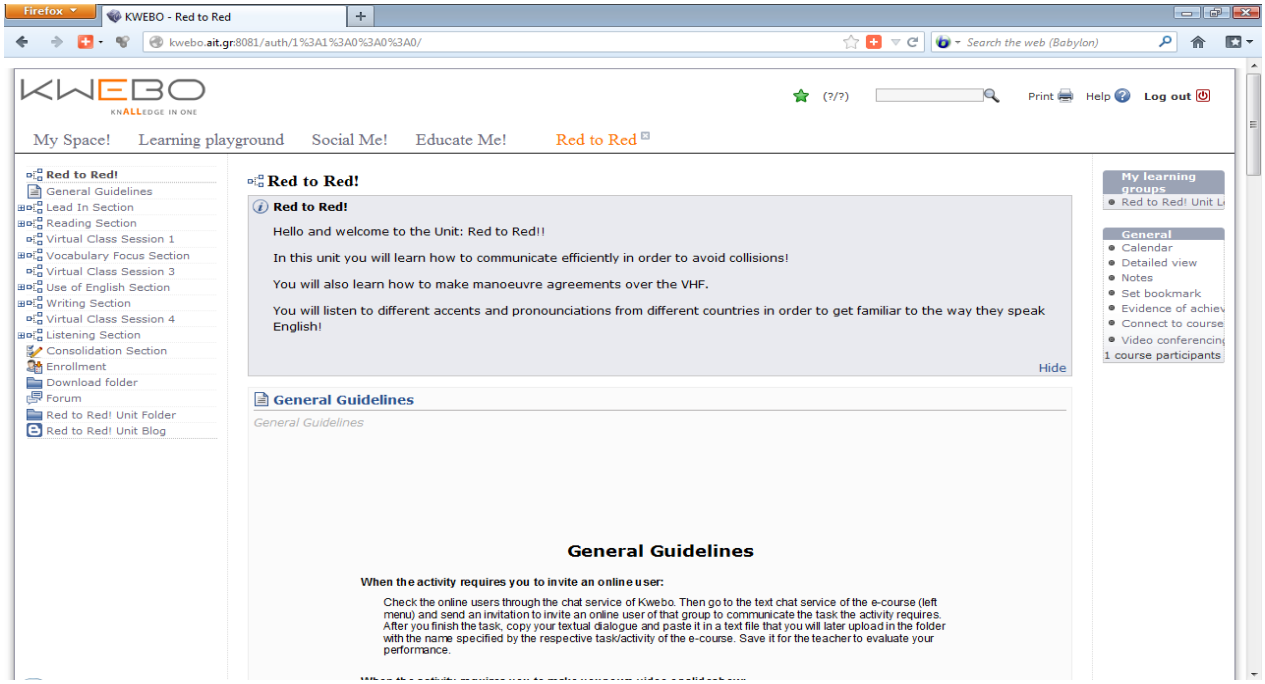

Figure 3: A sample page in Unit 1of the e-course in KWEBO.

added as well as virtual class sessions to follow the blended e-learning approach (self-learning and collaborative synchronous e-learning), as shown in Figure 4. The structure of the e-course is further enriched with forum and blog learning content and activities as required by the learning design of the unit. All the online complementary learning activities have been designed and developed taking advantage of KWEBO's available tools and services such as chat, video conference and virtual class services as shown in the right menu of each e-course in Figure 4.

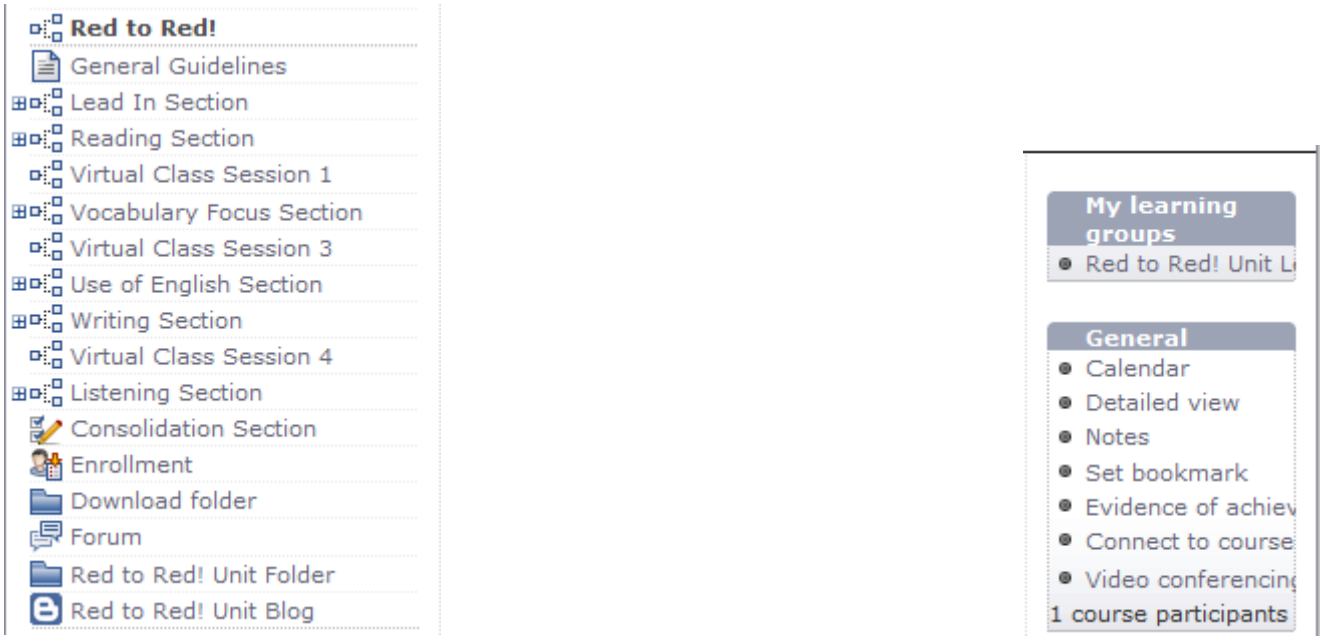

Figure 4: The structure of Unit 1: Red to Red! An e-course in KWEBO with the menu of additional tools and services provided by KWEBO.

KWEBO can provide a detailed view of any e-course published and can be hosted within its environment. It provides the description and the objectives of the e-course, as shown in Figure 5.

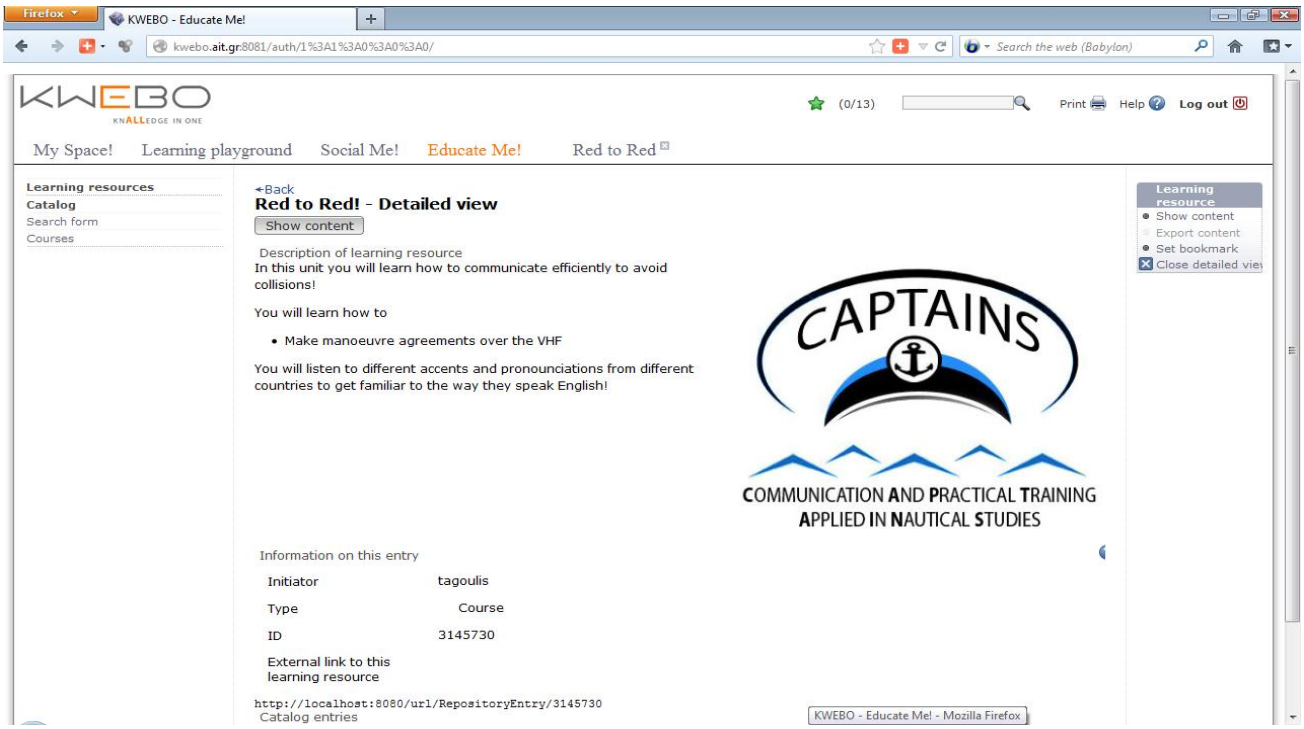

Figure 5: Detailed view of an e-course on KWEBO

Learners are able to use supplementary services from the right menu of the e-course, provided by KWEBO, such as the Notes to take notes and save them for future use or share them with other online users, as shown in Figure 6.

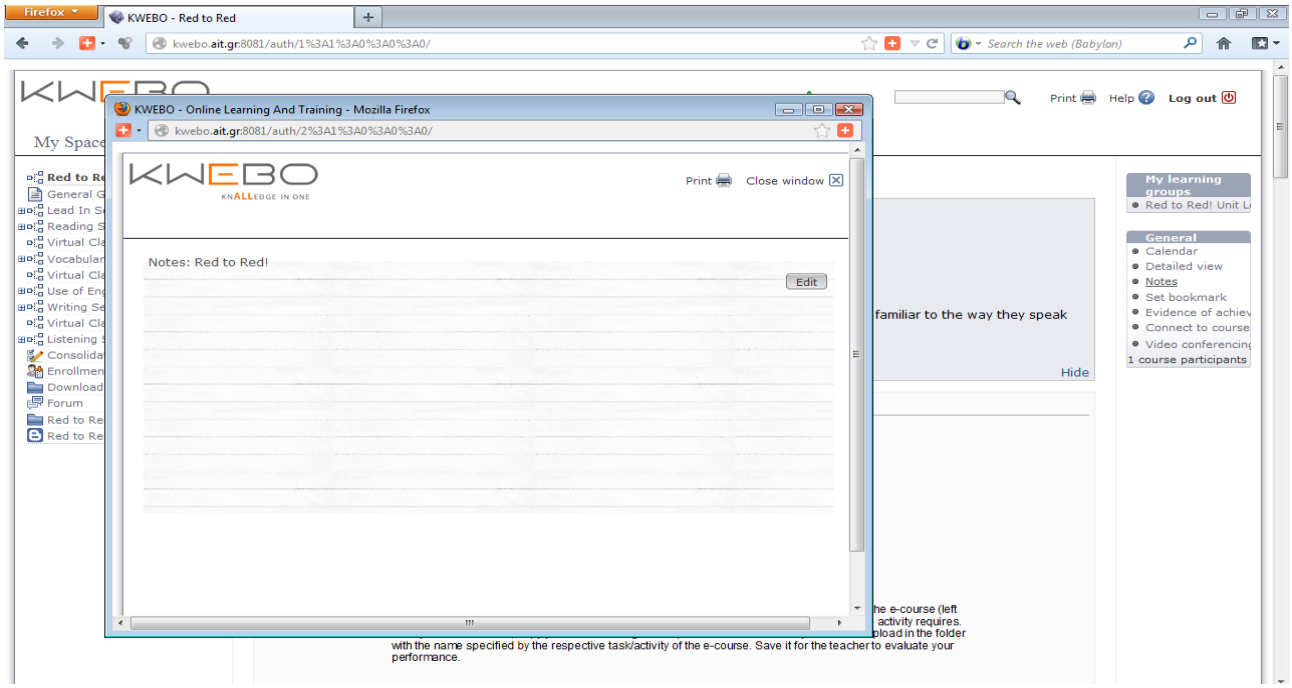

Figure 6: Use of supplementary e-course services provided by KWEBO: an example of the note taking feature.

Another example is the e-course Calendar tool. Teachers, experts and learners within the specific learning community can take advantage of the calendar tool to schedule meetings, conferences or even virtual class sessions, as shown in Figure 7.

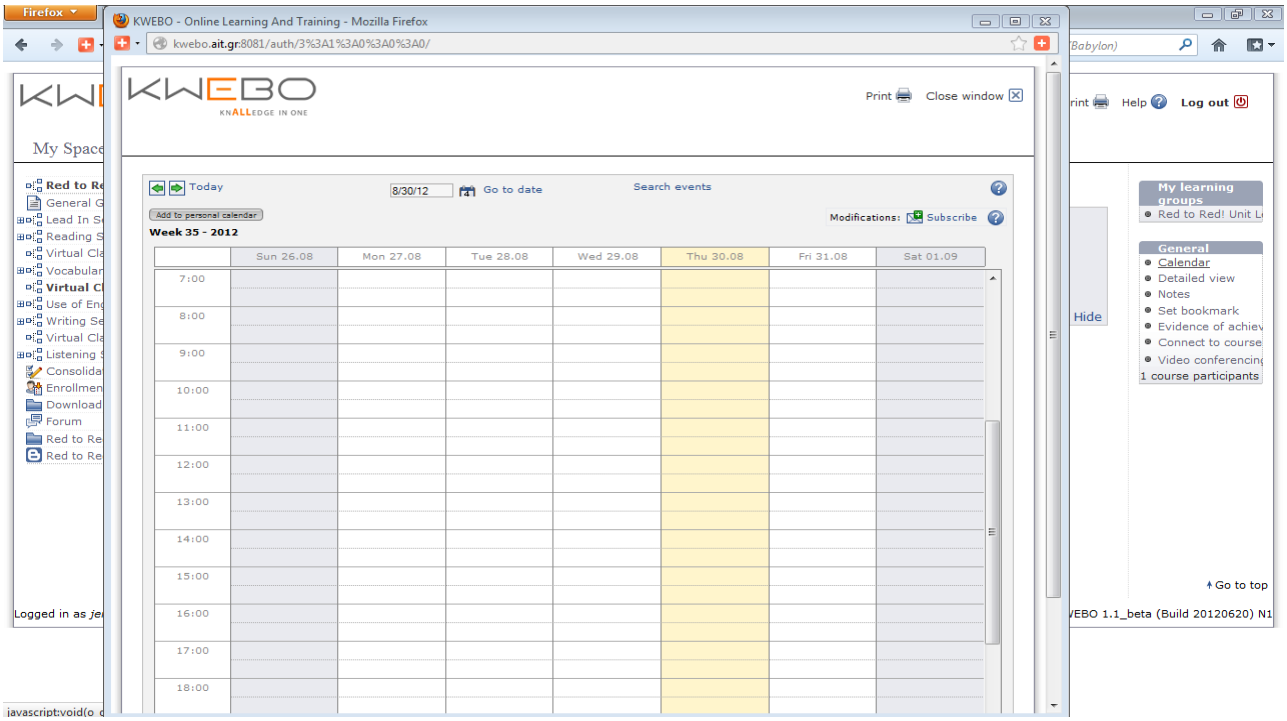

Figure 7: An example of the e-course calendar tool to schedule events and notify the respective learning community.

As already mentioned, all standalone self-learning activities in each e-course are complemented with group task activities, provided by KWEBO, which encourages interaction with other online users via facilities such as chat, video conference, forum, blog and wikis creation, as the Lead In group task activities of Unit 1 e-course shown in Figure 8.

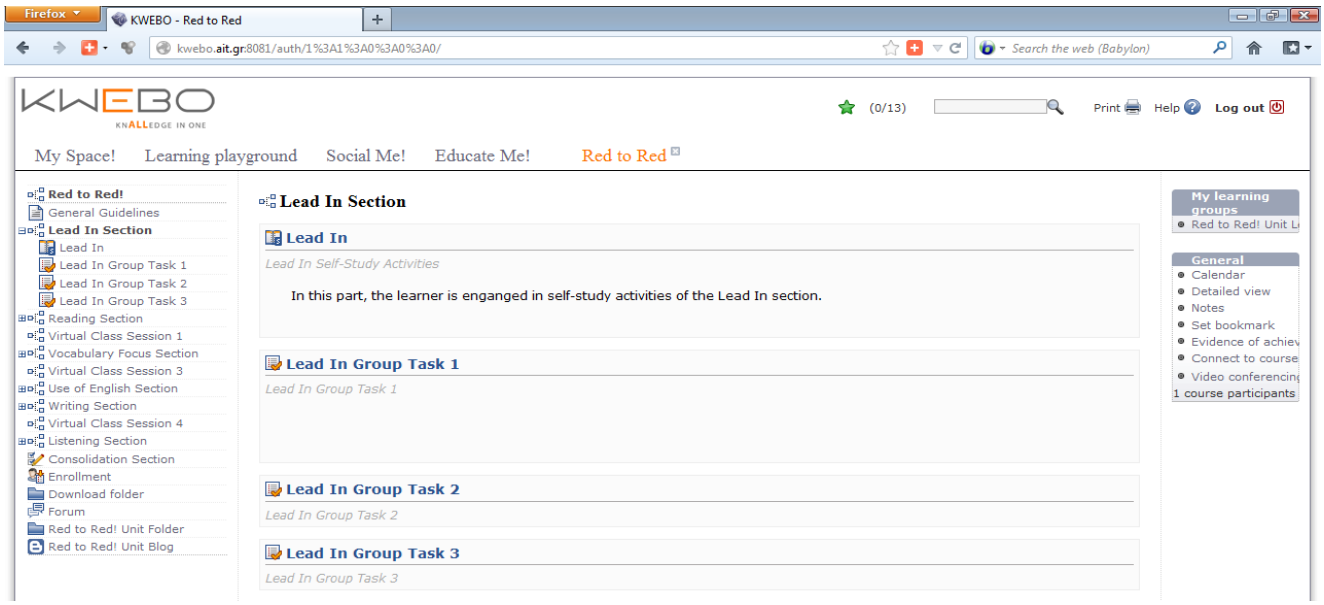

Figure 8: An example of the complementary Group tasks feature in the Lead In Section of Unit 1.

Learners can view the group task activity, proceed to upload their answer for the assignment. After the evaluation by the teacher, an assessment score is provided, as shown in Figure 9.

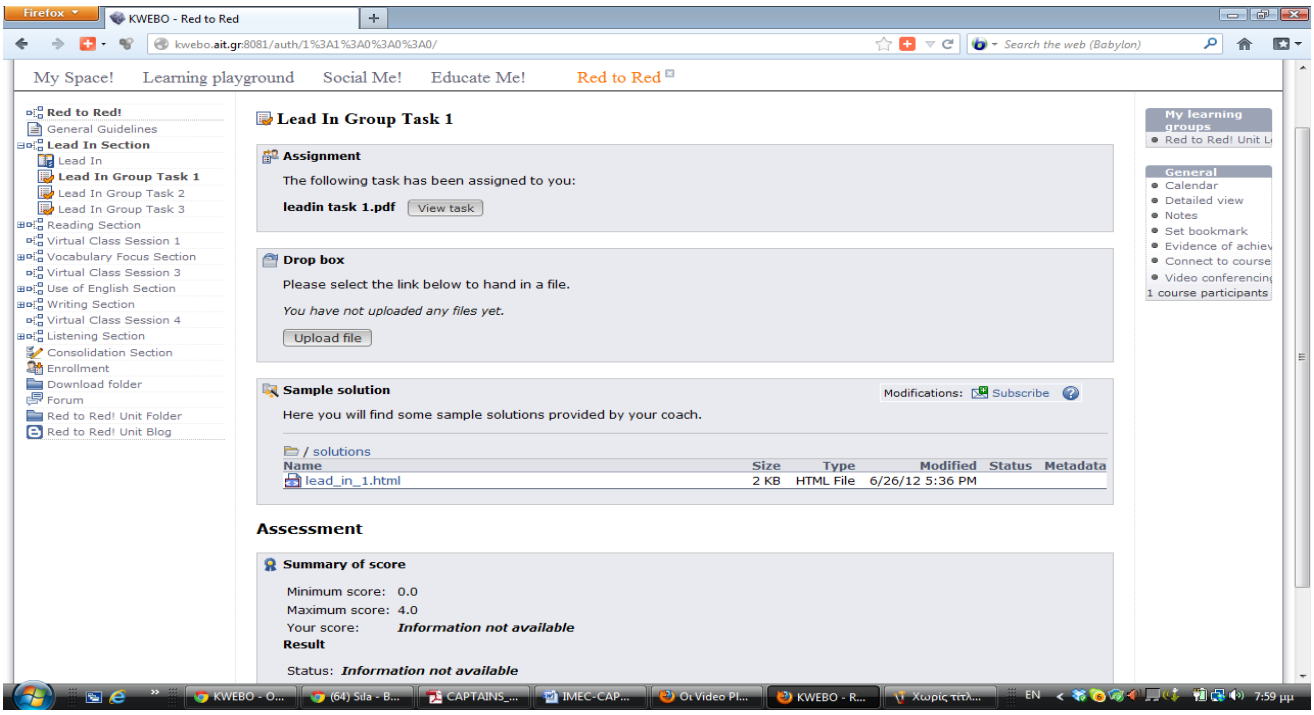

Figure 9: An example of Lead In Group Task activity of Unit 1, with its different sections, provided by KWEBO.

KWEBO supports a variety of assessment activities, many of which are automatically evaluated, based on correct answers inputted by the course/activity author during the development phase, as shown in Figure 10, for a multiple choice assessment activity.

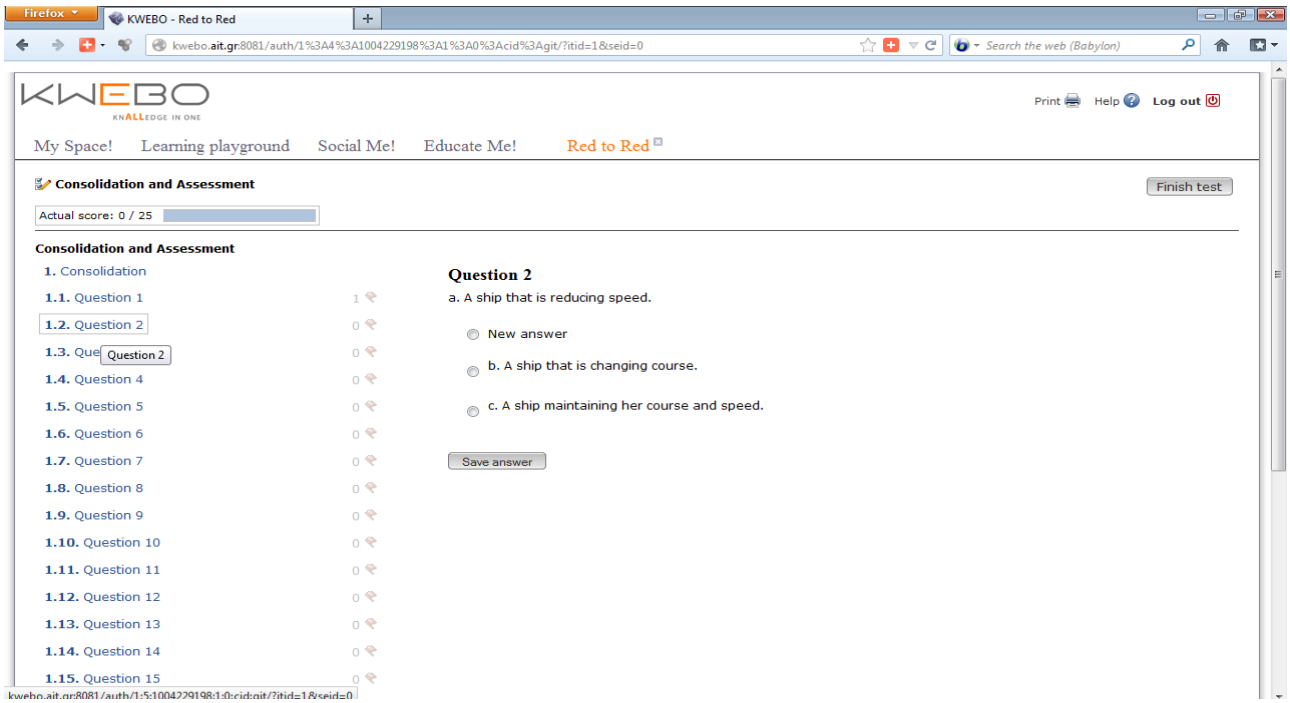

Figure 10: An example of a multiple choice assessment activity in Unit 1 which is automatically scored by KWEBO.

In virtual class activities within KWEBO and the CAPTAINS e-courses, teachers are encouraged to invite Maritime experts from their countries to share their expertise with learners via the virtual class tool of KWEBO allowing video-conferencing, chatting, presentation sharing, desktop sharing, presenter switch and whiteboard. Discussions on the thematic module or more specific real life safety issues in the maritime context are encouraged between learners and experts. The virtual class sessions can be recorded and included later in the e-course in the form of recorded webcasts for any interested learner, and for future use and sharing.

6. CONCLUSIONS & FUTURE WORK

The CAPTAINS project nearing to its end has led to significant outcomes and concrete results with respect to Maritime English Teaching and Learning, including: i) the definition of novel learning approaches to teach maritime English, that are based on scenarios, experiential learning and problem solving methods, tackling the communicative approach in language learning and focusing on the intercultural dimension of the latter, crucial for Maritime English teaching in multi-national crews, ii) the design and development of digital e-courses following the guidelines dictated by the novel learning approaches and exploiting the latest technological advances in interactive rich media educational multimedia, software simulations, e-learning 2.0 systems and virtual learning environments, iii) the initiation of the creation of the 1st online Maritime English learning community, hosted in AIT's e-learning 2.0 system, KWEBO, and accessing the CAPTAINS developed e-courses. Future work, beyond the project end, will include expansion of the vibrant and dynamic Maritime English learning community, extension of the respective e-courses or addition of newly designed and developed e-courses in related subject areas, focus on the full exploitation of 3D interactive virtual simulations and learning environments targeting to boost the experiential and communicative learning modes. The basis for all these has already been set.

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Ship's Correspondence

Abstract

This manual is designed for all categories of seafarers and levels of service in the shipping industry.

The originality of this tailored manual is supported by the following arguments. It includes all possible types of documents circulating in relationship of ship-to-shore, employer and employee, shipper, shipowner, charterer, subcharterer, carrier, broker, insurer and consignee. It includes documents used in everyday routines, and emergency situations. The forms of documents are from the simplest to the most complicated.

This book includes the original samples of documents from real business marine life.

The objective of this manual is to teach and train future and present seafarers in their writing skills, their immediate understanding of the proforma ready-made documents in order to fill them in, legal basis for drawing up these documents and their practical application.

The manual includes the samples of the documents, exercises and vocabulary.

The main idea of this manual is in accumulating the textual material and repetition of similar forms to better remember them.

Keywords: contract, order, instruction, check-list, NOR, damage report, sea protest

1. Introduction

We fly from Kiev to Constantsa, shape our course through Istanbul Bogazi (the Bosphorus Strait) already on board our vessel, then through the Sea of Marmara & Canakkale Bogazi (the Dardanelles Strait).Proceed through the Aegean Sea, the Mediterranean Sea to Barcelona (Spain).Passing through the Gibraltar Strait we sail to the North Sea, London, Dover, then cross the Atlantic Ocean to San Sebastian (Spain).On passing across the Pacific Ocean, call at the port of Honolulu (Hawaii islands, USA).Then we enter the inner waters of Japanese Sea, call at the port of Manila (Philippines). The final port of destination is Osaka (Japan).

2. Ship's Documents

During this long training and commercial voyage our ship transport some kinds of cargo to the named ports of call and destination and uses different types of ship's documents, papers and letters. Most of all existing and mentioned in our book shipping documents are being demonstrated in this presentation. The order of presenting these shipping documents is defined by their functionality and priority in commercial transactions and cargo operations.

They are:

- Charter Party
- Bill of Lading
- Letter of Authorization
- Letter of Indemnity
- Checklist for Superintendents
- Master's Standing Order
- GMDSS messages
- Muster List
- Emergency Party Duties
- JSA Report
- Near Miss Report
- Safety Meetings
- Ballast Water Management Plan
- Garbage Management Plan
- Oil Spill Training Records
- Sea Protest
- Log Book
- Damage Report
- Letter of Protest

3. Lesson Structure

1. Key words
2. Definition of the document
3. Samples of the document
4. Questionnaire
5. Vocabulary of the lesson
6. Explanatory / Grammar Notes
7. Exercises

4. Conclusion

This book is intended to provide some guidance in the art of writing letters and to assist in overcoming the difficulties which cadets will meet when at some future time they are called upon to write letters in English in connection with the ship's business.

Now, although the book deals with a certain kind of correspondence namely that on the ship's business, the cadet should not at once think that some special or difficult style must be learnt, for letters concerning the ship's business or other commercial letters for that matter merely differ from ordinary correspondence by their brevity and conciseness of form together with the use of certain technical and business-like terms and expressions. Hence it is first and foremost a question of sufficient knowledge of the language and in the second place of ability to present the letter in due form.

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A TERMINOGRAPHIC ESSAY AS A MEANS OF DEVELOPING TEACHING/LEARNING MATERIALS FOR INDIVIDUAL WORK OF STUDENTS

Abstract

The purpose of the paper is to describe some techniques and to present samples of terminographic essays based on linguistically centred concept (LCC) and specific methodological approaches used in the process of ME students training. The thematically organised and linguistically interpreted materials consist of a) a list of common and special words and expressions; b) specialist texts on a particular subject with (or without) illustrations; c) tasks to be fulfilled. Terminographic essays are meant for extra-curriculum independent work and self-education of non-native ME learners and represent a specific type of teaching/learning materials designed to improve Maritime students' language proficiency during the 1st and 2nd years of training. The term "early specialisation" implies ME skills development process on the basis of General English skills level without separating English for general Purposes (EGP) and English for Specific Purposes (ESP) at the early stage of training.

Key words: A terminographic essay, a linguistic approach, early specialisation

1. Introduction

Defined as a piece of writing which is often written from an author's personal point of view and as a device for saying almost everything about almost anything, usually on a certain topic [Huxley, 1961, p.9] , *essays* have eventually become objective and factual, especially those which turn attention outward to some scientific theme. As far as the trainees are concerned, we should state that the word "essay" comes into the English language through French from the Latin verb 'exigere', which means "to examine, test, or (literally) to drive out." Thus, the purpose of essays is to encourage students to test or examine their ideas concerning a particular topic. Terminographic essays perform the role of reference and learning/teaching materials with properly arranged thematic groups of terms on some particular topic studied by students. The term "terminography" was introduced by Alain Rey in 1977 who defined it as applied descriptive terminology. The procedure of a terminographic description is as follows: the units are defined as terms, i.e. as units whose value is relative in a set and whose purpose is to establish, by means of the process of naming, a relationship with a concept, i.e. with a class of objects of knowledge. The first objective of terminography is to describe an object of a particular field [Rey, 1995, p.135-136]

In this research terminographic essays are mainly meant for extra-curriculum independent work and self-education of non-native ME speakers and represent a specific type of teaching/learning materials developed to stimulate Maritime students' language skills during the 1st and 2nd years of training. The thematically organised and linguistically interpreted materials consist of a) a list of common words and expressions as well as special terms; b) specialist texts on a particular subject with (or without) illustrations; c) tasks to be fulfilled.

2. A terminographic essay as a product of Linguistically Centred Concept (LCC)

A Linguistically Centred Concept (LCC) as considered in the methodology of Maritime English training presumes priority of linguistic analysis in any study of ME oral and written texts meant for MET use. In case of any application of authentic materials for educational purposes a language teacher should clearly understand the outcomes of such application in his/her practical work. Nowadays linguistics becomes very helpful in creating new teaching/learning materials for Maritime students as it gives reliable foundation for methodology. Any linguistic theory emerges from synchronic (concerned with the events at a particular period) or diachronic (concerned with phenomena as they change through time) research data and thus may be successfully applied in the process of teaching English as a foreign language. In comparison with theoretical language studies, *applied linguistics* is a pragmatic science. It's an interdisciplinary field that identifies, investigates and offers solutions to language-related real-life problems including education. Any detailed linguistic study in a format of a theory or a concept aims to lay a foundation for designing systematised language classroom materials taking into account former experience and future occupation of learners.

Language teachers do not use linguistic theories on a day-to-day basis; still their knowledge is based on linguistics. A linguistic approach suggests professionally written ME teaching/learning materials for language classroom activities. For example, the starting point for describing ship's particulars is the language itself but not the technical essence of the subject. From this point of view, grammar translation method, for example, can't assist properly as the only instrument of teaching when training Maritime cadets as members of multilingual crews aiming proper language proficiency level.

In ME methodology the most serious factors to be studied are a) absence of consolidated *methodological guidelines* recognized by the Maritime administration, b) certain *isolation of researchers* of multiple national schools and traditions, c) *detachment of Maritime English from General English practices* and neglecting of the basic linguistic principle of integrity which aims to teach students in full-life communicative context, d) insufficient *development of an interdisciplinary concept* implying the contacts between language teachers and professionals in Navigation and Marine Engineering.

A terminographic essay may be characterised as a purely linguistic piece of ME description purposing to motivate students for further mastering of General and Maritime English and improvements in their profession. Different levels of students' language proficiency presume differentiated additional tasks which may be of help in their independent work. Several essays suggested here give an idea about their format and contents.

3. Samples of terminographic essays

3.1. Sample 1: Core vocabulary for the text comprehension and discussion

Topic: Maritime Jobs. Sea Cadets.

What is a Cadet? Trained people are essential in the field of international trade. A cadet starts at the bottom of the maritime job ladder. Trainees, or cadets, must join the 'Deck' or Navigation department to progress towards a Master's (Captain's) rank. Typically, he or she must have twelve years of formal school/college education with at least Physics and Mathematics among the subjects at the end of appear for the 2nd Mates competency exams 12. English is also essential. In addition, age limitations apply and excellent eyesight is required. The options the student who wants to join the merchant navy as a deck cadet will include a 3 year degree course in Nautical Science. After completing of the 3-year course, a student is awarded a Degree in Nautical Science and is required to go on board ship for sea

training or around a year or in some cases a little more. After completion of the course, the student has to get sea training for anything between eighteen months and 3 years, depending on the country. The student will be usually paid a stipend while under sea training. Room and board is free, of course, and medical benefits and some others are common.

What do the studies and training involve? Amongst the many subjects which he must excel in, a cadet will learn terrestrial and celestial navigation, chart work, meteorology, maritime law, maritime management, instruments, cargo work and seamanship. He will also learn about international regulations that cover all aspects of shipping. In addition, sea training will involve bridge and port watchkeeping, shiphandling, practical use of instruments, navigation and chart work and training in hundreds of tasks which must be carried on board by the Deck department. He will be an understudy to an officer for at least part of the time. After the requisite sea training is complete, the student can appear for the 2nd Mates competency exams. As soon as he is successful in the examinations, he will be employed as an officer on board one of the thousands of ships that ply the oceans. He is now an officer.



a) **to train** (обучать, инструктировать) – **a trainer** (инструктор) – **a trainee** (стажер) – **a training** (обучение, подготовка) – **sea training** (морская подготовка); **college education** (образование); **an understudy to an officer** (дублер, замена офицера); **a 3-year course** (3-х летний курс); **a stipend** (стипендия); **a degree** (степень); **a subject** (предмет); **a grade** (ступень, класс); **a rank** (ранг, звание, чин); **a free room and board** (бесплатное жилье и питание); **common medical benefits** (общедоступное медицинское обслуживание); **common medical benefits** (общедоступное медицинское обслуживание); **age limitations** (возрастные ограничения);

b) **to start at the bottom of the maritime job ladder** (начинать с низшей ступеньки карьерной лестницы); **to pay a stipend** (платить стипендию); **to complete a course** (окончить курс /подготовки/); **to excel in …** (отличиться в …); **to learn terrestrial and celestial navigation, chart work, meteorology, maritime law, maritime management, instruments, cargo work and seamanship** (изучать земную и небесную навигацию, морские карты, метеорологию, морское право, менеджмент, приборы, приспособления и инструменты, грузовые операции, морская практика); **to involve bridge and port watchkeeping, shiphandling, practical use of instruments, navigation and chart work** (охватывать/включать ходовую и портовую/стояночную вахту, управление судном, практическое использование приборов и приспособлений, навигацию, навигационные карты); **to award a degree** (присудить степень); **to apply limitations** (применять ограничения) **to require excellent eyesight** (требовать отличного зрения); **to appear for the 2nd Mates competency exams** (сдать экзамены на квалификацию 2-го офицера); **to ply the oceans** (бороздить океан)

TASKS:

1. **Read the text and answer the questions:** *What is a Cadet? What do the studies and training involve?*
2. **Use the additional vocabulary to describe professional duties of crew members:**
   - **to be responsible for** (отвечать за…) **to be in charge of** (руководить) **to carry out** (осуществлять) **to report to** (подчиняться) **to run** (управлять) **to maintain** (обслуживать, поддерживать) **to repair** (ремонтировать) **to play a role** (играть роль) **to participate in** (участвовать в…) **to take part in** (принимать участие в…) **to keep watch** (нести вахту) **to operate** (действовать; работать; производить операции; эксплуатировать; обслуживать) **to keep** (держать) **to upkeep** (поддерживать) **to clean** (чистить, делать чистым) **to wipe** (вытирать, обтирать) **to oil** (смазывать) **to lubricate** (смазывать) **to direct** (направлять) **to oversee** (контролировать) **to supervise** (направлять) **to instruct** (инструктировать) **to inspect** (инспектировать) **to execute** (исполнять) **to store** (хранить) **to inventory** (проверять наличие) **to serve** (служить) **to receive** (получать) **to issue** (давать, выдавать) **to cook** (готовить пищу)
   - **a rank** (чин, ранг) **a position** (должность) **a profession** (профессия) **a crew** (экипаж) **a member of the crew** (член экипажа) **a junior member of the crew** (младший член экипажа) **a senior member of the crew** (старший член экипажа) **a chief** (начальник) **a subordinate** (подчиненный) **an assistant** (помощник) **officers** (офицеры) **ratings** (рядовые)

3.2. Sample 2: Terms denoting natural disasters with definitions, pictures and a thematic word group:

disaster, n – ***natural*** **disaster**

storm

Ocean Storm - Storm conditions out at sea are defined as having sustained winds of 48 knots (55 mph or 90 km/h) or greater. This can sink vessels of all types and sizes.

an earthquake

(also known as a **quake**, **tremor** or **temblor**) is the result of a sudden release of energy in the Earth's crust that creates seismic waves

rough sea

A sea state is characterized by statistics, including the wave height, period, and power spectrum. **Rough sea:** wave height 2.5 to 4 meters.

a tornado

(**twister** or, erroneously, a **cyclone**) is a violent, dangerous, rotating column of air that is in contact with both the surface of the earth and a cumulonimbus cloud or, in rare cases, the base of a cumulus cloud.

A **whirlpool** is a swirling body of water usually produced by ocean tides.

A **volcano** is an opening, or rupture, in a planet's surface or crust, which allows hot magma, volcanic ash and gases to escape from below the surface.

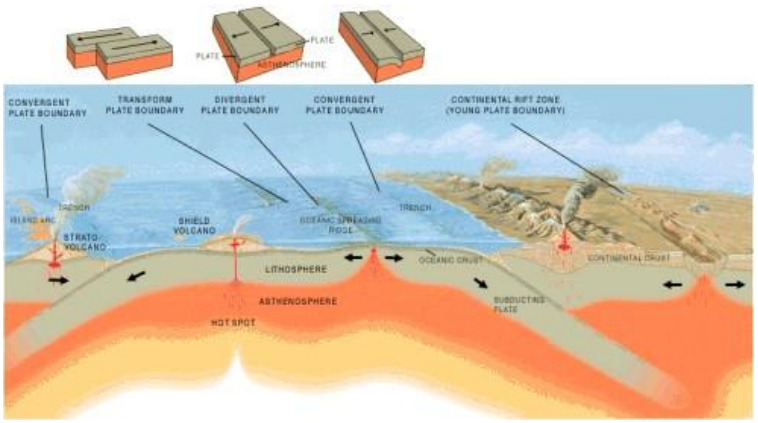
a tsunami

(plural: tsunamis or tsunami; from Japanese: "harbour wave"; also called a **tsunami wave train**.

Natural disasters:

hail, hurricane, earth-quake, sea-quake, tornado, monsoon, flood, tropical storm, eruption of a volcano, drought, gale, cyclone, tsunami, slide

TASK: Read the text and explain the causes of tsunami using an English-Russian vocabulary:



In Tokyo, Japan, a 7.0-magnitude earthquake hits under the south Sea of Japan on Sunday, trembling buildings in the capital but causing no perceptible harm or tsunami. The quake struck close in the unpopulated island of Torishima in the Pacific Ocean, about 600 kilometers (370 miles) south of Tokyo, its epicenter was about 370 kilometers (230 miles) below the sea, the Meteorological Agency said. With pleasure, it did not generate a tsunami. Earlier, Japan was struck by an 8.9 magnitude earthquake in March 11, 2011 that triggered a 30-foot tsunami. The ferocious tsunami spawned by one of the largest *earthquakes* ever recorded caused major damage in broad areas in northern Japan. The incident left nearly 20,000 people dead or missing. Japan, which lies along the Pacific "Ring of Fire," -an arc of earthquake and volcanic zones stretching around the Pacific where about 90 percent of the world's quakes occur, is one of the world's most seismically active countries. Fig.: T*he plates slide up next to each other. They move close together and one plate (oceanic) subducts under the one next to it (continental), or the two plates (both continental) collide*

and corrugate, giving rise to mountain chains. Or the plates move away from each other, as occurs in the oceanic crests, along which there is a continuous re-ascending of material from the mantle.

Nouns: **a quake** (дрожание, землетрясение) **an earthquake** (землетрясение) **a seaquake** (моретрясение) **an underwater earthquake** (подводное землетрясение) **a submarine earthquake** (подводное землетрясение) **a tremor** (дрожание, толчки) **an epicentre** (эпицентр) **a disturbance in the solid earth** (сотрясение твердыни земли) **a wave – waves** (волна-волны) **under the sea** (под морем) **below the sea** (под морем) **beneath the ocean** (под морем) **an incident** (происшествие) **an accident** (крушение, катастрофа) **a casualty** (несчастный случай, потери) **an area** (район, территория) **a seismically active country** (сейсмически активная страна) **a volcanic zone** (вулканическая зона) **oceanic crests** (океанические горбы) **mountain chains** (горные цепи, массивы) **tectonic plates** (тектонические плиты) **the mantle** (мантия Земли)

Verbs: **to strike** (ударять, поражать) **to record** (регистрировать, отмечать) **to cause damage** (причинять ущерб) **to slide** (скользить, плавно двигаться) **to collide** (сталкиваться) **to corrugate** (сморщиться, образовывать складки) **to subduct** (пододвигаться) **to occur** (происходить, иметь место)

3.3. Sample 3: Using a key word and its derivatives to introduce a series of definitions and texts:

Engine	- двигатель
Engine + -er	- инженер
Engineer + -ing	- техника

Marine engine	- судовой двигатель
Marine diesel	- судовой двигатель
Marine motor	- электродвигатель морского исполнения
Main engine	- главный двигатель
Auxiliary engine	- вспомогательный двигатель
Marine engineer	- судовой инженер [механик]
Marine engineering	- проектирование и производство судовых машин и механизмов
Marine mechanic	- судовой механик
Marine technician	- судовой техник

Engine, n [ɛndʒɪn] any machine designed to convert energy, esp heat energy, into mechanical work (‘a steam engine’, ‘a petrol engine’). A motor that converts thermal energy to mechanical work. *Synonyms*: motor, generator, gearing. *Etymology*: [Middle English engin, *skill, machine*, from Old French, *innate ability*, from Latin ingenium].

Marine engine **-** a steam engine for propelling a vessel. *A* ***marine engine*** is an engine that propels a ship or boat. Types of marine engine include: Marine steam engine. Petrol engine or gasoline engine. Diesel engine. Steam turbine. Gas turbine.

Engineer, n -A person who designs, makes, or works with, machinery an electrical engineer. A person who uses scientific knowledge to solve practical problems. (Usually civil engineer) – a person who designs, constructs, or maintains roads, railways, bridges, sewers etc. *Etymology:* early 14c., "constructor of military engines," from O. Fr. engigneor, from L.L. ingeniare (see engine); general sense of "inventor, designer" is recorded from early 15 c.; civil sense, in reference to public works, is recorded from c.1600. Meaning "locomotive driver" is first attested 1832, Amer. Eng. A "maker of engines" in ancient Greece was a mekhanopoios.

Marine engineer - an officer who manages a ship's engines. A naval officer responsible for the operation and maintenance of the ship's engines. An engineer is responsible for all heavy machinery on a ship or an offshore structure.

Engineering, n - the art or profession of an engineer. 1680s, from engineer (n.). Meaning "work done by an engineer" is from 1720. As a field of study, attested from 1792. An earlier word was engineership (1640s); engineery was attempted in 1793, but it did not stick.

Marine engineering **- Marine engineering** refers to the engineering of boats, ships, oil rigs and any other marine vessel. It can refer to: The engineering of vessel's propulsion systems. The engineering of structures to support vessels, A ship's engineering department, an organizational unit that is responsible for the operating the propulsion systems and the support systems for crew, passengers and cargo.

1) DIESEL ENGINE. A diesel engine (also known as a **compression-ignition engine**) is an internal combustion engine that uses the heat of compression to initiate ignition to burn the fuel, which is injected into the combustion chamber. This is in contrast to spark-ignition engines such as a petrol engine (gasoline engine) or gas engine (using a gaseous fuel as opposed to gasoline), which uses a spark plug to ignite an air-fuel mixture. The engine was developed by Rudolf Diesel in 1893. The diesel engine has the highest thermal efficiency of any regular internal or external combustion engine due to its very high compression ratio. Low-speed Diesel engines (as used in ships and other applications where overall engine weight is relatively unimportant) the largest of which can have a thermal efficiency that exceeds 50 percent. Diesel engines are manufactured in two-stroke and four-stroke versions. They were originally used as a more efficient replacement for stationary steam engines. Since the 1910s they have been used in submarines and ships.The diesel internal combustion engine differs from the gasoline powered Otto cycle by using highly compressed hot air to ignite the fuel rather than using a spark plug (*compression ignition* rather than *spark ignition*).In the true diesel engine, only air is initially introduced into the combustion chamber. The air is then compressed with a compression ratio typically between 15:1 and 22:1 resulting in 40-bar (4.0 MPa; 580 psi) pressure compared to 8 to 14 bars (0.80 to 1.4 MPa) (about 200 psi) in the petrol engine. This high compression heats the air to 550 °C (1,022 °F). At about the top of the compression stroke, fuel is injected directly into the compressed air in the combustion chamber. This may be into a (typically toroidal) void in the top of the piston or a *pre-chamber* depending upon the design of the engine. The fuel injector ensures that the fuel is broken down into small droplets, and that the fuel is distributed evenly. The heat of the compressed air vaporizes fuel from the surface of the droplets. The vapour is then ignited by the heat from the compressed air in the combustion chamber, the droplets continue to vaporise from their

surfaces and burn, getting smaller, until all the fuel in the droplets has been burnt. The start of vaporisation causes a delay period during ignition and the characteristic diesel knocking sound as the vapour reaches ignition temperature and causes an abrupt increase in pressure above the piston. The rapid expansion of combustion gases then drives the piston downward, supplying power to the crankshaft.

2) MARINE ENGINEERS. Definition and Nature of the Work. Marine engineers design, operate, maintain, and repair the mechanical systems of ships. Working closely with the architect who designs the ship structure, a marine engineer designs the propulsion, auxiliary power machinery, and other equipment needed to run the ship. Most marine engineers are employed by private firms that build ships or make the equipment used in them. A few engineers do freelance work as consultants to these firms. Marine engineers may specialize in certain kinds of equipment such as pumps, engines, gears, heaters, or deck machinery. Others concentrate on certain steps in shipbuilding, such as estimating the cost of the equipment needed. Still others may deal largely with one area of a ship's functions, such as lubrication. Marine engineers may also be inspectors. Inspectors make sure that the equipment works properly before the ship is launched. Some engineers specialize in the repair and maintenance of a ship when it is in dry dock. Marine engineers are sometimes responsible for installing equipment in ships. They may, for example, supervise the crews that install electrical equipment. Others may be in charge of crews that build heating and cooling systems to protect the cargo. When marine engineers design systems within a ship, they must make sure that these systems cannot be damaged during an ocean voyage. Some marine engineers work with ship officers who train crews to operate the ship's equipment at sea. These engineers may also help officers select tools and spare parts that may be needed for emergency repairs. Some marine engineers write technical reports and manuals for other engineers and for members of a ship's crew.

TASKS: Read the texts. Write a list of main terms according to parts of speech – nouns, verbs, etc. Write a summary of the texts in 40-50 words. Make a presentation before a group.

4. Conclusion

When researching marine terminology the linguistic methods and techniques are of great help. The linguistic analysis gives the reliable knowledge for a language teacher in his/her day-to-day classroom work. The problem of “early specialisation”, in fact, is mostly connected with the mechanisms of introducing English into the sphere of Maritime Education and Training. The Introductory Maritime English Course becomes the means which covers the gap between EGP and ESP. Specialised terms (nautical and technical) appear in abundance during the 1st and 2nd years of maritime training. The problems of teaching terminology for non-native English learners can be explained by the three factors:

a) the lack (or absence) of professional Maritime experience of the students,
b) the lack (or absence) of Maritime English language proficiency,
c) the lack of General English language competency.

The solution comes with understanding that the language teaching is primarily focused on the language in its oral and written forms which implies the use of EGP methods. The idea of early specialization requires the Introductory Course implementation from the first semester. The Introductory ME Course is conducted alongside the General English Course which is completely justified for non-native learners

training. The linguistically centered course model presumes systemic work with linguistic entities: words, sentences, texts. Hence, a language teacher develops methods and techniques different from a specialist instructor but constantly works in contact with the latter to attain their common goal – students' language and professional skills and abilities.

Teaching terminology mostly depends on availability of efficient teaching/learning materials. The search of appropriate teaching tools never ends, and the experimentation with terms becomes a source of new ideas and new materials. Terminographic essays suggested in this paper reflect the experience of Maritime English corpus research and the analysis of methodological aspects of its presentation in the language classroom purposing communicative skills development of Maritime students.

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Validation of the MarTEL Test: the Importance of Validity of the Test and the Procedure for Validation in MarTEL

Abstract

This paper reports on the development of the EU funded Leonardo project called MarTEL. MarTEL concerns the development of a novel set of Maritime English Language Standards. MarTEL is designed to test mariner's Maritime English through a series of online tests designed to cater for all types and ranks of seafarers. A number of major piloting exercises have been carried out with the target groups, viz., cadets, officers and senior officers within the MarTEL partnership. The paper also outlines the reason for MarTEL and reports on one of the methods used to evaluate its value to the target groups.

The subject of validity has been the core of MarTEL development activities for any given test. Validity is the appropriateness of a given test or any of its component parts as a measure of what it is expected to measure. A test is said to be valid to the extent that it measures what it is supposed to measure. Furthermore, test-developers, not only have to ensure that the material included in a test is appropriate for the purpose for which it is intended, but also to ensure the results are accurate. The paper discusses the measures taken to make MarTEL tests reliable and valid in terms of content, requirement, structure, range, depth, assessment and professional judgement. The reliability is ensured through the design of specifications for each MarTEL test after several pilot exercises to ensure the consistency of the test through the application of 'reverse engineering' development methodologies.

Key words: Maritime English, test validity and reliability, MarTEL

1. Introduction

It is acknowledged by all concerned that effective knowledge of English at sea and in ports is a must for all seafarers responsible for safety and security of the ship, its crew and its passengers. Yet as evidenced by recent reports, articles and papers particularly accidents reports by major and reputable investigation authorities that the standard of English of some seafarers is so bad that they have difficulty communicating not only between themselves but also with agencies outside the ship (Alert, 2007).

Investigations into the human factor regarding disasters at sea, which focused on communication behaviour according to Trenker (2007) revealed that one third of accidents happen primarily due to insufficient command of maritime English. He reported that in VTS (Vessel Traffic Service) controlled areas for instance, poor communicating of relevant factors contribute up to 40% of collisions involving the human element, most of them caused by failures in radio communication even in routine conversations, but some also through face-to-face communication deficiencies.

The studies by Trenker (2007) is in line with the authors own findings (Ziarati, 2006). A review of some 300 accidents revealed that standard of English of seafarers is one of the two main causes of accidents and incidents at sea and in port (Ziarati, ibid). What is so alarming is that while accidents at sea and in ports are decreasing, accidents due to human failure, particularly due to poor standards of English by seafarers are on the increase (MarTEL, 2007, Ziarati. 2009). This is attributed to increasing use of multi-lingual crew and lack of competence in Maritime English.

Trenker (2007) reports 80% of all SOLAS vessels are presently crewed with multilingual personnel who, for diverse reasons, are frequently unable to render the maritime English skills required. It has been argued that in order to improve management, operation and/or support on board vessels, the amount of paperwork in the form of procedures, leaflets, questionnaires, e-mails and checklists are on the increase, stating that all have come about in response to an earlier accident or incident at sea or in ports.

To improve the standard of Maritime English, the IMO in 2001 introduced the SMCP (Standard Marine Communication Phrases). The aim was to get around the problem of language barriers at sea and to avoid misunderstandings which can cause accidents. The question often asked is SMCP used at sea? (Alert 2007). The problem is that the IMO does not carry out inspections to see if the STCW is correctly implemented let alone monitoring the implementation or usage of SMCP at sea or its effective application.

While SMCP has provided a sort of survival kit, it only includes the essential safety related communication events where spoken English is required. The IMO in introducing the SMCP neglected two very important considerations. The need for competence in English language by all seafarers and a means of monitoring and measuring this competence, and second, that without competence in English language and reliance on memorising SMCP, when emergencies do occur psychology plays an important role viz., if these marine communication phrases are not learned in a con text of English language environment, then at the time of panic, there are no assurances that they are recalled correctly and this has been observed in several recorded accidents (Ziarati, et al, 2009). Valerie Short states that while STCW95 contains guidelines to watch keepers stipulating that standards of English of seafarers should be ‘adequate’ (whatever this means!) for general OOW duties, yet she notes that the STCW code does not provide indications of English proficiency levels to be achieved.

To date the response to poor English competences has been reactive and IMO practice as has been the case in the past been often a response to specific disasters, see for instance, SOLAS, MARPOL, etc. The interest in Maritime English was renewed in a recent meeting of the IMO MSC 2006 meeting when the UK delegation supported by several other countries warned the Committee of severe consequences if action is not taken to remedy the poor standards of Seafarers’ English. There were discussions at the workshop meetings at the event that what is needed is to develop a set of comprehensive standards for Maritime English and provide a means of assessing English proficiency level of seafarers. The assessment system should also test the English skills and not maritime knowledge of a seafarer. It should be a vocational in nature and unlike conventional testing system should be skilled based with not too much reliance on grammar. There was a strong feeling that English should be taught in the context of maritime English as suggested by Loginovsky (2002).

2. IMO Requirements

2.1 Speaking

- Use the IMO SMCP and use of English in Oral form

- Communicate with other ships, coast stations and VTS centres
- Communications are clear and understood
- Ability to establish and maintain effective communications during loading and unloading
- Ability to explain to ensure reliable detection of defects and damage
- Effective communications on board and ashore
- Radio communications are established and correct communications procedures are followed at all stages of SAR operations''

In effective writing, the IMO states that the communication must be clear and unambiguously given and received:

2.2 Writing

All above as for Speaking but in particular:

"Table A II/1

- Use the IMO SMCP and use English in Written form
- Adequate knowledge of English to enable the officers to use English publications and to perform the officer's duties (STCW and IMO Model Courses)."

Transmission and reception of messages are consistently **successful,** communication recorded are complete, accurate and comply with statutory requirements.

In references to Reading and Listening:

2.3 Reading and Listening

"As for Speaking and Writing and that the requirement of 'Reception of communication emphasises Listening noted by Peter Trekner, (28 October 2010, IMEC 2010) **Reading**, listening, **understanding** and **acting** (speaking, writing)"

What is significant is that none of the above can be quantified to classify as standards for competency in English Language or Maritime English. There are no international standards for Maritime English. It is for this reason that C4FF and TUDEV with support from the EU initiated or supported a series of Maritime English projects. Two of these projects were instigated primarily to set standards for Maritime English, MarTEL (2007-09) and MarTEL Plus (2010-2012).

2.4 MarTEL Standards

In response to the IMO requirements for effective communication summarised above and in particular the MSC 2006 call by the UK delegate in 2007, C4FF (UK) with support from TUDEV (TR) and a number of MET institutions and progressive enterprises in several EU countries instigated a project called MarTEL.

MarTEL is a set of standards for Maritime English. The proposed standards are expected to make seas and ports safer and save lives and to improve the quality of live on board vessels through improved communications. The initial standards included three assessment phases, ranging from Intermediate to Upper-intermediate/advanced levels. There are English tests for given skills of entry level onto Cadet training programmes in Phase 1, English Tests for given skills for Deck and Marine Engineering Officers of Watch in Phase II and English Tests, again for given skills, for Senior Deck and Marine Engineering Officer in Phase III. The Phase 2 online test's start screen can be viewed in Figure 1 below.

MarTEL is not a tool set to solve problems but a pro-active approach to avoiding problems in the future, hence a Newtonian approach. It overcomes the limitations of SMCP and removes the need to use standards such as IELTS or TOEFL as these are not designed for seafarers' requirements. Unlike IELTS or TOFEL, MarTEL is a vocational approach and relies on the languages skills needs of different types and ranks of seafarers.

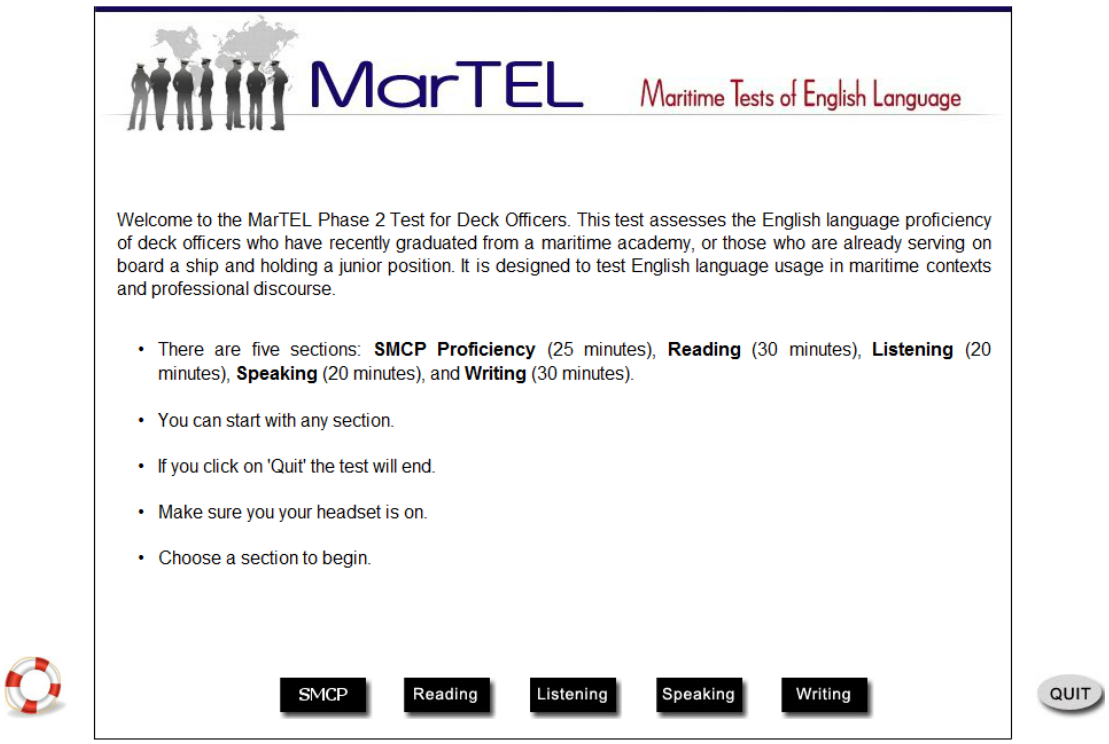

Figure 1 - Start Screen for the Phase 2 Deck Officer Test

MarTEL, abides by the findings of an earlier EU funded Leonardo pilot project that, there is no language called 'Maritime English' and that competence in English Language is only attained if developed in the context of English language. Maritime English is the vocational element of the English Language for seafarers and should be treated as any other ESP (English for Special Purposes). This concept agrees with findings of arguments presented by Loginovsky (2002). MarTEL also clearly identifies the English Language needs of each type and rank of seafarers, setting English proficiencies levels at three different phrases. MarTEL embraces SMCP and incorporates additional content which has been emanated from the study of some 700 accidents. MarTEL, places less reliance on conventional English Language tests such as IELTS, TOEFL, etc. The latter standards are developed for academic studies. Most Merchant Navy Officers come through vocational routes. Furthermore, IELTS, TOEFL do not distinguish languages skill needs, of different types and ranks of seafarers and they do not embrace SMCP. One very important attribute of MarTEL is that it is about the Maritime Test of English Language and not English Language test of Maritime knowledge. MarTEL, takes the arguments of all scholars and researchers in the field of English language competency requirements at sea. The development of MarTEL Standards necessitated the views of Logie (2007) to be taken into consideration. She is of the opinion that Maritime English training at METs lacks the following:

- Time allocated to Maritime English
- Up-do-date resources integrating Maritime English content with the Communicative Approach to language training.

- Time to develop practical skills of listening and speaking (with priority given to learning terminology).
- Exam systems evaluating spoken competence.
- A standardised qualification for Maritime English trainees and trainers.
- Opportunity for Maritime English trainers to update their knowledge of both subject content and methodology.

MarTEL, initially offered the Tests at three different levels/phases:

Initially, each phase contained a standard (test) supported by a set of study guidelines and each having a series of study units, language skills and skill levels for each type and rank of officers. In Phases 2 and 3 these skill needs are clearly identified which are based on the outcome of some 700 accident investigations. Each phase has been tested and evaluated in several countries involved with the MarTEL project.

- Phase 1 - Cadet – Cadet Programme Entry Level
- Phase 2 - Officer of watch – Deck
- Officer of watch – Marine Engineers
- Phase 3 - Senior Officer – Senior Deck
- Senior Officer– Senior Marine Engineers

There have been several papers and workshops on MarTEL since the project commencement; a number of these are listed in the bibliography section at the end of this paper.

To support the development of a comprehensive framework for the MarTEL standards, an additional standard, features and functionalities were incorporated into MarTEL through the MarTEL Plus project (2010-12). Following on from the three initial phases, a fourth phase was devised in this new project in an attempt to overcome the problem of not having international or European standards for Maritime English for Ratings. In devising a standard for Non-officer ranks, a similar structure to the initial Phases was developed. The MarTEL Plus project will also improve the quality of MarTEL standards for Ratings, Cadets, Officers and Senior Officers by providing teachers guidelines for each phase. To fully assess the communicative abilities of seafarers, a separate enhanced oral test with supporting materials was also developed, which will be assessed through a one- to-one session with a qualified examiner. In order to help students to prepare for the MarTEL phase tests, a learning and revision application using mobile phones (Mobile App) for each of the different phases has been created. This will allow test takers to prepare for their tests when an opportunity arises at any location, at sea or ashore. This mobile learning/revision tool will not only extend the materials available to the test takers, but will also allow for easy accessibility to these materials. The increased access will inevitably lead to more users. All these additional features and functionalities and standard make the tests more sustainable and in parallel improve the validity of the tests for all phases of MarTEL.

3. Validity in language test and the purpose of MarTEL

At the early stage of the MarTEL development the notion of validity as prescribed by Ziarati (1995) in testing has been taken into consideration. The concept of validity adopted for MarTEL from language testing in general is based on Ziarati (ibid) that the validity which is taken as embracing:

Content validity (relevancy) – the content is based on IMO standards and model courses approved by major awarding, accrediting and licensing authorities.
Requirement validity (competency, IMO STCW) – the test covers all stated requirements of major national and international competency requirements such as IMO STCW.
Structural validity (consistency) – the tests are in line with various European English language frameworks and abide by a set of rules and specifications.
Range validity (coverage) – the tests relate to known tasks carried out on board vessels at sea or in ports.
Depth validity (assessment/performance criteria) – the depth is defined by a set of assessment criteria and a sample test acceptable to a major awarding body.
Assessment validity (fairness) – the assessment is validated by a set of marking criteria.
Professional validity – the test is graded through internal and external sampling and verification by language specialists and an appropriate and qualified seafarer.
It is crucial to know whether we really measure what we intend to measure. Furthermore, the unified notion of validity of language testing also concerns consequential aspect of the test, which means how the use of the test will impact on test users (Messick 1989). The recent theory of validity in language testing has been shown to acknowledge that there is no absolute answer to the validity question (Fulcher and Davidson, 2007: 18). Thus, the question of validity is: "how would we decide whether an argument was adequate to support an intended use of a test? (Fulcher and Davidson, 2007: 18). This concept of validity argument can be raised in any process of testing development (Chapelle, 2008). Therefore, MarTEL has acknowledged that valid tests can provide sufficient evidence and theory rationale when test users interpret the scores gained from the tests and this will help them to make inferences based on the score for their purpose. Bearing these concepts of validity in mind it has been realised that defining the purpose of the test should be the very first of step of testing development. The MarTEL team from the start based their work on the existing practice of developing tests taking into consideration the state of art in English Language testing practice and abiding by several known good practices (BTEC/Edexcel System of assessment).

4. Language Specific Purpose (LSP) tests and the maritime context analysis

MarTEL is a set of the tests which aims to assess Mariners English language ability in their job performance. Therefore, it is a Language Specific Purpose (LSP) test which is combined between assessment of language ability and background knowledge of specific domain. Douglas (2000: 2) points out that "authenticity of task" and "interaction between language knowledge and specific purpose content knowledge" differentiate LSP from general language tests. Douglas (2000: 2) suggests that authentic test tasks reflect characteristics of language tasks used in the target domain. Then these tasks will allow test takers to perform the language ability as they may do in the real situation. The MarTEL project has begun with analysing the maritime context. First, we attempted to define what language ability is and what job-specific knowledge is in the context we would like to assess. Then, we examined task types in the context in five skill sections we would like to include in the test, such as reading, listening, writing, speaking, and SMCP. In order to analyse the maritime context, MarTEL has taken on **'people'** from maritime contexts such as former captains, deck and engineer officers, maritime English teachers, and maritime subject lectures and this has provided us with insight into the knowledge domain identifying the specific tasks involved in real and the language used in the target context. Consequently, the MarTEL team has realised that the tests should be developing different phases in terms of job positions as the language and the knowledge used in the context are different. The maritime domain has been divided into

4 phases; Phase 1 for cadet officers, Phase 2 for deck and engineer officers, Phase 3 for senior deck and engineer officers, Phase R for ratings in order to reflect the language and knowledge that are used in the different job positions. The purpose of each test has been set up for each phase of the language ability and the specific knowledge required carrying out the different job positions on board. Table 1 provides the purpose of each Phase test.

Second, the MarTEL team has also considered the materials provided by the IMO (International Maritime Organisation) such as the STCW (Standards of Training, Certification and Watch keeping for seafarers) and IMO Model course 3.17 Maritime English (2009 Edition). According to the STCW, the minimum requirements of English language proficiency is included into the specification of minimum standard of competence for officers of navigational watch, officers of engineering watch, electro-technical officers and GMDSS radio operators. For example, the minimum requirements of English proficiency is defined for officers as "Adequate knowledge of the English language to enable the officer to use charts and other nautical publications, to understand metrological information and messages concerning ship's safety and operation, to communicate with other ships 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 Maritime Communication Phrases (IMO SMCP)". It seems that STCW is aware of the importance of the English language ability, but the requirements of English proficiency have not provided a deep insight of it, and it can be said that the explanation of requirements is vague. However, MarTEL has adopted the specification of knowledge, understanding and proficiency for Phase 2 and Phase 3 which will be based on the testing competence. The use of MarTEL may affect the amendment of STCW in terms of the requirements of English proficiency, which may be the potential positive for MarTEL and its future impact.

Test		Purpose
Phase 1		The MarTEL phase 1 test aims to assess the English language proficiency of those wishing to enter maritime training institutions as officer cadets
Phase 2	Deck officers	To assess the English proficiency of deck officers who have recently graduated from a maritime academy or are already serving on board a ship and holding a junior position. It is designed to test English language usage in maritime contexts and professional knowledge.
	Engineer officers	To assess the English language proficiency of marine engineer who have recently graduated from a maritime academy or are already serving on board a ship holding position. It is designed to test English language usage in maritime contexts and professional knowledge.
Phase 3	Senior deck officers	The phase 3 test for senior officer assess the English language proficiency of senior rank deck officers at management and operation level in a maritime linguistic context
	Senior engineer officers	The phase 3 test for senior engineer officers assesses the English language proficiency of senior rank engineer officers at management and operation level in a maritime linguistic context.
Phase R		The MarTEL Phase R aims to assess the English language proficiency of crew members who have chosen a career on board ships as deckhands. It is designed to test English language usage in maritime contexts and professional discourse.
Enhanced Oral Test (EOT)		MarTEL Speaking Test is aimed to assess language proficiency in Maritime English. The purpose of the test is to determine whether test takers have sufficient language competence according to specific criteria to perform their professional duties. It does not test professional competence.

Table 1 - The Purpose of each MarTEL Phase Test

5. Task design and Item writings

After analysing the maritime context in terms of what English language ability and what Job specific knowledge are used with people from the target domain and investigating existing materials such as STCW and IMO Model course 3.17 Maritime English, the MarTEL team has focused on developing each phase of the test in language ability to be assessed, suggested topics related to specific job positions, language skills required and task types. As Douglas (ibid) suggests the authenticity of the task and the interaction between language ability and professional knowledge are the crucial part of LSP, where the team has analysed the language and the knowledge used is based on the actual job positions. Therefore, task types are designed differently to assess the language and the knowledge of a given target group. For example, the Phase 1 speaking section has three task types: picture description, independent speaking, and reading and speaking integrated tasks which have been designed to assess speaking skills required in academic settings. However, as we have concluded the senior level of officers may require speaking skills to describe their professional knowledge and job experience in a higher level, thus phase 3 speaking section for senior deck officers provides one reading and speaking integrated task to elicit those skills we intend to assess. Furthermore, the SMCP has been included in Phase 2 test for both deck and engineer officers since we have acknowledged that Phase 2 tests for deck and engineer officers require more operational level of language use onboard ship where maritime-specific vocabulary is more widely used. The same is true for tests for Ratings, where the emphasis is primarily on support aspects of seafaring.

6. Improving the validity of the MarTEL Standards

Validity, as defined by Henning (1987), in general refers to the appropriateness of a given test or any of its component parts as a measure of what it is purported to measure. MarTEL measures ability in carrying out a set of tasks/jobs as specified by the IMO STCW requirements.

The tests also need to ensure that the content of the test is 'fit for the purpose' hence the need to develop a set of hypothesis, to check whether the results are accurate (Ziarati, 2008). MarTEL pilot tests applying a set of hypothesis developed by the profession have consistently shown to be valid over a period of time. The results of these hypotheses are provided in Table 2 below.

The following paragraphs list the hypotheses and the result of one of the several pilot tests. Similar pilots tests have been carried out in several MarTEL partner countries but the one summarised below is an example of attempts to make MarTEL tests valid and more reliable through actual testing of target groups and learn from the outcome of these pilot evaluations.

Set of hypothesis:

Sub-hypothesis H 1 - MARTEL can be used to measure your writing skills in Maritime environment and content

- Is MARTEL an adequate test to measure your ability to write official letters in English?
- Is MARTEL an adequate test to measure your ability to write a short notice (memorandum) for multi-lingual crew in English?
- Can MARTEL be used to measure your ability to fill in an official form?
- Can MARTEL be used to measure your ability to prepare an accident report?)

Sub-hypothesis H2 - MARTEL can be used to measure your speaking skills in Maritime environment and content.

- Can MARTEL be used to measure your English skills for external communication?
- Can MARTEL be used to measure your English skills for internal communication with crew (SMCP) for a ship manned with multilingual personnel?
- Can MARTEL be used to measure your English skills for internal communication with inspectors during Port State Control onboard a ship?

Sub-hypothesis H 3 - MARTEL can be used to measure your listening skills in Maritime environment and content

- Can MARTEL be used to measure your level of understanding during VHF communication with a VTS operator?
- Can MARTEL be used to measure your level of understanding during VHF and/or telephone communication with English speaking shore parties during port operations?

Sub-hypothesis H 4 - MARTEL can be used to measure your reading comprehension skills in Maritime environment and content.

Can MARTEL be used to measure your knowledge and understanding of NAVTEX messages (meteorology)?

- Can MARTEL be used to measure your knowledge and understanding of List of Radio Signals?
- Can MARTEL be used to measure your knowledge and understanding of Pilot Books written in English?
- Can MARTEL be used to measure your knowledge and understanding of English Notice or Guidance published by Maritimes authorities?
- Can MARTEL be used to measure your knowledge and understanding of a Notice to Mariners written in English by a local or national authority?

Sub-hypothesis H 5 - MARTEL is more suitable to be used to measure Maritime English skills when compared with previous tests

- In your opinion how would you rate the MARTEL test against other Maritime English tests you are aware of / taken?
- In your opinion is MarTEL Phase 2 level an adequate test of the maritime English level required for an Officer of the Watch?
- At what level can MARTEL Phase II be used to assess an Officer of the Watch's Maritime English skills?
- In your opinion how well does MARTEL cover the main subjects of Maritime English (SMCP, meteorology, Navigation, Watch, Safety, and Maritime Management, etc.

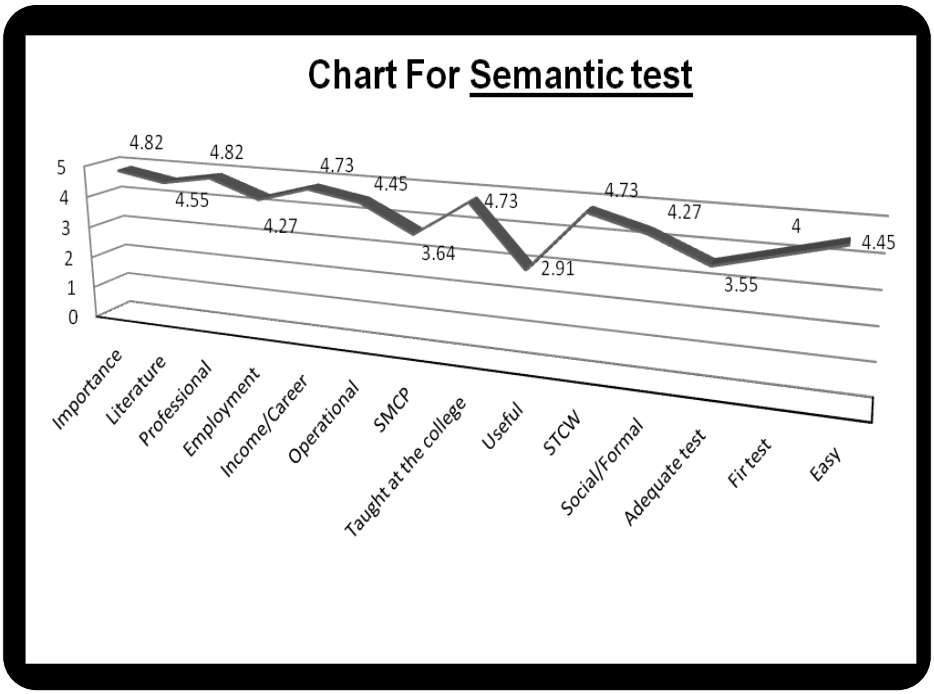

Figure 2 – The results of the Hypotheses are provided in the Chart for Semantic Test

As MarTEL is primarily about transfer of innovation from existing language testing systems the issue of validity is also seen from the point of how the existing language testing practices ensure validity of their tests. MarTEL is a series of Language Specific Purpose (LSP) tests and hence the characteristics of LSP have to be taken into consideration. The distinctive aspects of each phase of MarTEL will have to be explained in terms of task types and how each test has reflected the target domain in terms of language ability and professional knowledge MarTEL tests intend to measure.

7. Ongoing processes and future directions of the MarTEL

7.1 Test specification development

Test specifications are 'blueprints' for tests (Alderson, Clapham and Wall, 1995:9), which provides us with the whole plan of constructing a test. Developing a test specification is usually followed by setting the purpose of the test, defining the construct in the target domain. However, the MarTEL has adopted a 'reverse engineering' (Davidson and Lynch, 2002: 41) method to develop the test specification as we had started to develop the specification after producing a number of testing tasks and items. The component of each phase of MarTEL test specification entails skills to be assessed, the structure, test item description, multiple choice description, expected performance, marking criteria and scheme, and sample items. The MarTEL team strongly believes that the test specification may allow item writers to produce equivalent testing items and finally it can be a reference for test developers and researchers to develop valid test and to evaluate the test validity accordingly.

7.2 Rating scale development

Analytic rating scales have been recently enhanced to assess speaking and writing performance for the Phases 1 and 2. For the speaking assessment, there are 5 criteria: Communicative ability and content, Lexical accuracy and range, Fluency, Grammar accuracy and range, and Pronunciation. Each criterion will be scored from 0-6. For the writing performance, we also put the criteria: Structure and

organisation, Communicative quality and tone, Lexical accuracy and range, Lexical accuracy and range, Grammar accuracy and range, and Mechanics, which are arranged from 0-6. The rating scales have been developed based on the expertise's knowledge of Maritime English and the existing rating scales, such as CEFR's global scales and analytic scales. For the next step, MarTEL team will look into the speech samples and written performances collected from the piloting and will investigate whether developed rating scales reflect the outcomes of test-taking performance and the rating scales will be calibrated with evidential outcomes. Rating scales for Phase R and Enhanced Oral Test have been developed alongside with the rating scales for Phase 1 and 2.

7.3 Piloting

The piloting for all MarTEL tests is being conducted with our potential test-centres located in European countries such as Finland, Turkey, Spain, Republic Ireland, and Bulgaria. The purpose of the piloting is to investigate whether the on-line system works perfectly as MarTEL tests are internet-based tests except Enhanced Oral tests. However, for quality control purposes the audio/video recordings of the Enhanced oral test takes place using the existing online system. Moreover, we need to check whether the testing items are designed appropriately to assess our target levels and whether multiple choice items are discriminated well by analysing the scores statistically. Furthermore, as we have circulated the questionnaire including the questions of test contents, test presentation, and time allotment to the participants, maritime English teachers, shipping companies, or those who are already working in the maritime contexts the results have been implemented into the alteration of the tests. After the piloting stage the large scale of field testing is planned with the numbers of actual test-takers who can represent the target field.

7.4 Assessor training

The MarTEL team has acknowledged that reliable scoring is a crucial part of valid testing development. Therefore, training assessors for the speaking and writing is a part of our project. As MarTEL is the test of English language and Maritime specific knowledge we believe that Raters/assessors for the test are the ones who should have the both English language knowledge and the Maritime knowledge or an assessment team composed of both types of specialists are assigned to grade/mark the tests.

8. Conclusion

The MarTEL standards are developed to help MET institutions to fully embrace IMO Maritime English requirements and take on board the language comparability developments in the EU.

It is also common sense that a great deal has and can be learnt from accidents and incidents. In fact all major maritime rules and conventions have emanated from major accidents at sea and in ports. The problem seems to be that different accident authorities use different formats to investigate and report accidents. For obvious reasons the owners also do their utmost not to shoulder any responsibilities for any accidents that may be used against them no matter what. A review of accident reports and technical papers clearly elucidates that there is no unified format for classifying the causes of accidents that could sensibly be used to classify communication failures and those that do, some do not consider the communication errors to be the main cause of many accidents or incidents.

However, the review of many accidents to date clearly shows that communication failures to be one of the main or contributory causes of accidents, and more importantly they can be avoided if those involved with developing and delivery English language training for merchant navy cadets and officers learn from the

identified causes and support the development and implementation of standards such as those being developed by project such as MarTEL. Thus, MarTEL should be considered a positive development and a valuable contribution in improving safety at sea. Improved competence in English language would also help in improving communication among the crew and with others as well as creating a more amenable environment on board of vessels at sea.

It was noted that deficiencies in Maritime English causes accidents and therefore needs to be seriously taught in the basic and the main training of all Chapters of the STCW Code of practice. It is interesting to note that both of the above issues were also the findings of an IMarEST paper and report (Ziarati, 2006; Ziarati and Ziarati, 2007).

In short:

MarTEL is a direct response to IMO requirements for effective communication. It has helped MET institutions to quantify the terms used in the IMO requirements in the context of the language competency and based on the actual job the seafarers are expected to carry out at sea and in ports.

MarTEL is a series of tests and associated materials and guidelines developed by the profession for the profession with direct support from the English language and Maritime English specialists.

MarTEL tests are based on previous accidents and developed in line with IMO Maritime English Course Model 3.17 and the European language development frameworks (Council of Europe, 2009).

MarTEL therefore is a maritime language competency assessment project for the language certification with the main aim of developing a series of maritime English language standards at Elementary, Intermediate, Upper intermediate and Advanced levels, incorporating also the IMO's SMCP, at four different phases: i) Cadets Entry Level (on Cadets Training Programmes) , ii) Officer- Deck and Engineering, and iii) Senior Officers – Deck and Engineering, also senior officers at port and pilots and iv) Ratings. The tests have been piloted in several countries (Ziarati et al, 2008, Sernikli and Sihmantepe 2009).

The pilot tests were highly effective and proved that MarTEL tests are valid.

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The importance of developing test specification in the process of the Enhanced Oral Test design

Abstract

The paper will explain the factors taken into consideration in the development of the Enhanced Oral Test, which is one of the outcomes of the EU Funded Leonardo MarTEL PLUS project. The development of an International test of the speaking skills of seafarers will be by its nature a very high stakes test and should be based on solid testing principles to ensure validity and reliability of the test scores. Therefore, the test specifications are important in the establishment of the test's construct validity. They are also important for test writers in developing new versions of the test to ensure its sustainability.

Keywords: test specifications, Enhanced Oral Test, construct validity, sustainability, test design, MarTEL, Maritime English test

1. Introduction

Developing a speaking test which will be used for job selection purposes is a very demanding and highly responsible activity considering the fact that important decisions will be made based on the test results. However, as experts in the field of testing agree, before any test is put into practice, its quality and sustainability should be examined carefully to provide evidence that the test can be used as a valid and reliable measurement instrument. Test developers should provide comprehensive answers to a number of universal questions related to all stages of the test design process. These answers should be reflected in the test specifications document which will guide the entire process of test development from specific tasks to complete tests to ensure a balance between different aspects of test usefulness (reliability, construct validity, authenticity, interactiveness, impact, practicality) and find the most acceptable solution in the specific context.

The paper will identify the potential users of the test specifications and specify the particular testing context. Then, the most important questions at each stage of the test design process will be addressed. Finally, conclusions will be drawn based on what researchers suggest and our own experience.

2. Users of Test Specifications

A number of researchers in the field of testing have contributed to the structure and purpose of the test specifications (e.g. Lynch and Davidson, 1994; Alderson *et al*., 1995, Bachman and Palmer, 1996). They view the structure of this document from different standpoints; however they agree that the different versions should be aimed at different audience. As the aim of this paper is to focus on the importance of

this document in the test design process, the different versions will not be discussed. Nevertheless, targeted users will be identified.

First, test developers will need the detailed version of the test specifications to use it as guid for the writing of new tests and ensure sustainability. Test items moderators will also need to consult the document when they review the work done by the test developers. When test validity is established the evaluators will need to refer to the document, too.

Another group of test specifications users are the test-takers themselves who want to become familiar with the test structure, task types, expected performance, time allotment, assessment criteria. Teachers might also be interested in the same issues in order to prepare their students for the test or include similar content in their lessons.

Furthermore, information for public use may be needed by university admission officers, company managers who will have to select a valid test for their needs.

3. The testing context

Assessing linguistic competence in Maritime English adequately and reliably at internationally recognized levels has been set forth in recent years as a major issue because it reaches out equally to merchant marine officers, cadets and students, as well as Maritime English Training (MET) institutions, maritime administrations, ship owners, etc. Indeed, all the above mentioned parties have come to recognise the need of developing exam systems evaluating spoken competence (Logie, 2011). and conducting Maritime English oral tests to this effect. Furthermore, the necessity to ensure effective communication (in both written and oral form) in its diverse manifestations in various nautical and technical spheres has been explicitly expressed in the Manila amendments (2010) to the STCW Convention 1978/95 STCW (2011).

Based on feedback received from different parties and in response to the need of developing a more comprehensive process for the evaluation of oral competence, as raised in the 2010 IMO STW 41 meeting, the MarTEL Plus project set, as one of its goals, to embark on enhancing the speaking part of the MarTEL test of Maritime English language proficiency. The MarTEL projects were developed under the EU Leonardo da Vinci funding stream, as part of the EU's Lifelong Learning Programme (MarTEL, 2007). They envisaged this as a complement to the existing MarTEL standards, with a two-tier system, including the current MarTEL speaking section in the Phase tests, plus a separate one to one oral examination – the Enhanced Oral Test (EOT) (MarTEL Plus, 2010).

Testing the speaking skills of seafarers is by its nature of very high stakes as it will affect a large number of people. Therefore, the approach to test design was determined by the basic principles of test development. Writing the guiding test document – the EOT test specifications implied asking and answering all relevant questions at each stage of the process.

4. Design stage

This is the first stage of test development which involves gathering important information to write the test specifications. The most important aspects to consider are the test purpose and the definition of the construct. Test developers should also identify the target population, i.e. who the test-takers are and their real world specific speaking needs.

4.1 Purpose of the test

Identifying the test purpose, i.e. how the test should be used and who it is intended for is related to the validity of test results. Validity is a complex phenomenon and has several aspects. One of them relates to the correctness of the inferences or decisions made on the basis of test results. Each test can be valid only for the purpose it was designed for. It means that as a proficiency test the EOT should not be used as a diagnostic or progress test, for example. The test developers have made it clear in the Test Specifications how the test will be used. All attempts to use the EOT for other purposes should be referred to as inappropriate or test misuse.

4.2 Defining the construct

The construct is a term which refers to the definition of what the test is supposed to measure. The test specifications should clearly state the test developers' definition of what speaking means for seafarers and what aspects of it the test will attempt to assess. To put it simply, the test is valid when it measures what it is intended to measure. Therefore, research on the specific oral capabilities or skills required by the maritime industry was carried out to identify the target language use domain of the EOT as the test tasks must represent the language skills needed in this specific domain. Following the Common European Framework (CEFR) (CEFR, 2011), five levels of speaking proficiency were developed and called Martel Plus Level Descriptors. These descriptors broadly define the specific purpose speaking skills needed by the target test population.

As the Model course (3.17) on Maritime English presents the IMO requirements on use of Maritime English in professional context a list of topics was created to provide the job-related context of the speaking tasks.

Tests, in general, are only samples from a content domain. One would not expect a test of specific speaking ability to measure every single aspect or function of speaking involved in a particular context. The test developers should make sure that the test is as representative of the content domain as possible. However, if one or more important aspects of the content domain are not included in the test, then construct validity is under question and this is known as "construct underrepresentation". An example of this would be to omit from the definition of the construct the ability of seafarers to communicate using the IMO's Standard Marine Communication Phrases (SMCP). The test will not be valid for its intended use. In addition, the inferences based on the test results will be far from valid. When safety at sea is at stake, this is a real danger.

Another potential danger to construct validity would be what test evaluators call "construct-irrelevance". This is observed when a test task assesses something else than it is supposed to test. For example, in a role play where the test-taker assumes the role of the Officer of the Watch on board a ship, the examiner gives instructions about the conversation in such a complex language using low frequency vocabulary and grammar patterns that the test-taker fails to understand the instructions and to complete the task. What is assessed in this case is not the test-taker's ability to demonstrate language skills to perform a work-related task but whether s/he can understand the examiner's highly complex language.

5. Operationalization stage

At this stage the test developers use the information from the design stage to create guidance for the development of specific tasks and complete tests. The most important questions to ask and answer during

this process are how to make test-takers demonstrate the specific speaking abilities defined in the construct, what criteria will be used for assessing these abilities and how the test score will be formed.

5.1 Developing task specifications

5.1.1 Major concerns on the EOT speaking tasks selection

Research findings show that it is difficult to find suitable and novel tasks that test communicative ability alone and not intellectual capacity, educational and general knowledge or maturity and experience of life.

In addition, the choice of the type of assessment is limited to construct based and task based where the latter is especially used in professional contexts as the scores give information about the test-taker's ability to deal with the demands of the situation. Researchers do not look at the two perspectives as 'conflicting' (Luoma, 2010). Therefore, combining elements of the two appeared to be the tool that satisfied the needs of the EOT maritime context.

Another issue to consider refers to ethics. Being fair to all test-takers is a major matter of concern for all test developers and examination boards. This is the reason why some formats come with the accompanying test materials, e.g. sample materials, preparation materials, etc. to provide conditions for fair testing. Therefore, ample Tasks were developed, piloted and incorporated in the EOT Task Specifications document. This would give equal opportunities to all those interested in taking the test to become familiar with the task types, expected response and assessment criteria.

Last but not least, the washback effect (or backwash as used in the general education field) should not be ignored. The notion of `washback` refers to the influence that tests have on teaching and learning. Different aspects of influence have been discussed in different educational settings at different times in history due to the fact that testing is not an isolated event (Shohamy, 1993).

Furthermore, researchers suggest that `high-stakes tests` would have more impact than low-stakes tests (Alderson and Wall, 1993). If we consider the new EOT a high-stakes test, we should then be aware of factors such as the status of the subject, i.e. English within the curriculum, the nature of teaching materials, teacher experience and teacher training, teacher awareness of the nature of the test as they all would affect the amount and type of washback. New tests do not necessarily influence the curriculum in a positive way as changes do not happen overnight and teachers do not always feel ready to implement changes. In his study on the washback effect of the Revised Use of English Test, Lam concludes that it is not sufficient to change exams: "The challenge is to change the teaching culture, to open teachers` eyes to the possibilities of exploiting the exam to achieve positive and worthwhile educational goals" (Lam, 1994).

One conclusion based on washback research findings is that there is a complex interaction between tests on one hand and language teachers, material writers and syllabus designers on the other hand and we should be aware of this.

5.1.2 Major aspects of test task development

There are seven task types employed in the EOT. To ensure sustainability test developers must provide information on how the new versions of the test will be developed. A set of task characteristics for each individual task guides test writers and includes the following:

- the definition of the construct to be assessed (the speaking skills),
- task difficulty,

- genre,
- stimulus material,
- the setting of the task,
- time allotment,
- type of interaction involved,
- instructions for responding to the task,
- type of input (specifying the quality of visual prompts),
- assessment criteria

Without this information which will serve as a template for task design test developers will find it difficult to be consistent in providing comprehensive guidelines for writing new test versions and being fair to all test-takers.

5.2 Specifying the assessment criteria

The next set of questions which the test developers must answer relates to the criteria for correctness. They should provide information about how the criteria were developed and how the rating scale is used to measure the construct. This information is an important part of the test specifications as it will be used for validating the rating scales. The rating scale (analytic or holistic) and the assessment criteria should be used during examiner training sessions to ensure reliability of marking.

In assessing speaking skills in general, reliability is a big problem area. The test specifications may have the assessment criteria but it is important to ensure that the same rater or assessor will apply the scales in the same way on different days or at different times of the day (intra-rater reliability) and the different assessors apply the scales in the same way (inter-rater reliability). These issues can be addressed by assessor training workshops to minimize the assessor variables (background, experience, expectations, etc.) which can be very influential in determining the scores.

The EOT developers have produced a separate document accompanying the test specifications. This document will serve as guidelines for assessor training with the purpose of achieving consistency of measurement. During the training process part of the test specifications may undergo some changes in the wording of a certain criteria, for example, so that assessors reach agreement on the interpretation of some or all assessment criteria.

6. Administration Stage

At this stage pre-testing is carried out to collect information and feedback about the test. This information is then analysed and discussed by test developers. The feedback received may make it necessary to return to a previous stage to rectify a problem. This in turn, may lead to making changes and reviewing the test specifications.

7. Conclusion

Developing speaking tests for maritime purposes should be done with greatest care possible and by a team of test developers including a subject matter specialist, somebody with a testing background and a statistician.

Test writers should follow all stages of test design and produce the accompanying test specifications to provide a system for test development.

Time and efforts should not be sacrificed to review the test and the entire test documentation after pre-testing so that the test becomes a valid and reliable measurement instrument.

We owe this to seafarers.

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ECDIS CHALLENGES UNLOCKED

Abstract

There is no doubt that the implementation of ECDIS as the primary means of navigation will place enormous pressure on the maritime industry, due to complex training and compliance issues. The lack of common standard for ECDIS makes the challenge even greater. With significant differences between manufacturers' models, as well as major variances in model and software versions from the same manufacturer – but all complying with IMO Performance Standards – the difficulties of effective and relevant training could not be more obvious. One of the major and continuing issues will also be that experienced seafarers transferring ships regularly will invariably require type specific training on an on-going basis for some time to come.

This presentation aims to address the issues faced by the industry and examines the most practical and flexible way of providing effective learning for seafarers through multistage learning. It looks at the elements required to maintain a sound ECDIS mind-set, the principles behind understanding ECDIS systems and achieving effectively type specific certification.
As time is fast running out, there is understandably, a real concern about the realities of ECDIS compliance within the maritime industry which is looking for the most practical solutions and assurances within a cost effective perimeter.

Key words: Primary means of navigation, effective learning¸ ECDIS mind set

1. Introduction

ECDIS is a big challenge affecting the industry during the implementation phase of 2012 – 2017. There are of course others such as MLC, Ballast Water etc Mastering ECDIS operations especially when used as the primary means of navigation will require training to complement class room teaching. Whilst the challenge is not new, it is very unique and can be overwhelming if the transition is not managed efficiently as ECDIS will be the primary means of Navigation. ARPA, AIS have been and continue to be aids to navigation. This substantially changes the situation. It is going to cause the biggest challenge for Ship Owners and Managers with multi crews and multi systems, making tanker officer matrix compliance look significantly easier than ECDIS compliance. One of the reasons for this is that there are significant differences between different manufacturer's equipment, although they all comply with the IMO Performance Standards. ECDIS sets of the same manufacturer are known to have significant differences. In a perfect world if navigating officers were to go through college and do both 'generic ' and type-specific training on one manufacturer's ECDIS and, thereafter, find the same equipment on board all the ships they sail on, we would not have an issue. For many, if not most, this will not be the case. Addressing the basic principles, establishing the ECDIS mind set in the student is paramount. Providing a sound understanding of the strengths and weaknesses of the system and how it should be used will provide a

good foundation and a thorough understanding of the basic concept of ECDIS and will help them crew from equipment to equipment without unpleasant surprises.

2. **Sea Training** - Illustrations and advice complement and support shipboard drills and exercises on safety, environmental protection and security

3. **Group & Instructor-led training** - Classroom based scenarios and through a virtual academy.

4. **Supplying and supporting individual learning and assessment** - Using cutting edge technology equipment specific training requirements are being delivered online.

5. **Supporting IMO and National Administrations** - Illustrating the Conventions and Regulations created by the authorities and translating them into practical advice and exercises which can be understood by seafarers from different cultures and backgrounds

6. **Conclusion**

One of the big challenges foresees for the future is total dependency on technology with an ever decreasing lack of situational awareness. Whatever advances there are in technology, good seamanship will still be required for safe and efficient navigation. And that requires good training and consideration. It will not be surprising if ship `owners and managers decide to defer their decision to convert their vessels to ECDIS as 'primary means of navigation', as late as possible, so that in the interim they are able to get their officers well trained on ECDIS - both Generic and Type Specific.

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A survey report on Maritime English teaching in China

Abstract

The paper reports a survey study on Maritime English teaching in several maritime colleges and higher vocational schools. The study aims at examining the status quo of Maritime English teaching at higher vocational level in China, shedding light on the possible factors underlying the teaching patterns, in an attempt to improve Maritime English teaching to meet the IMO requirements on maritime English for deck and engineer officers, as stated in Manila Amendments to STCW Convention. The descriptions and interpretations are based on data from various sources including questionnaire study, interviews and classroom observation.

Keywords: Maritime English teaching, patterns of classroom interaction, large class teaching

1. Introduction

In China, Maritime English teaching has long been focusing on the linguistic knowledge such as grammatical features and vocabulary with little attention to the practical use of language for communication. As a result, Chinese learners generally know a lot of grammar and words, yet they are unable to produce utterance appropriately or to negotiate meaning successfully. Fortunately, there has been growing acknowledgement of the problems of the Maritime English teaching system. In recent years, teaching reforms and curriculum innovations have been advocated in Maritime English teaching, aiming to improve the quality of language teaching and to foster students' communicative competence. There have been some fruitful achievements in various aspects. Some new textbooks have been designed based on communicative orientation. Since 2000, Test in English listening and speaking skills has been incorporated into Competency Examination for seafarers rather than a sole written test.

Despite the strong appeal for communicative competency, the situations in Maritime language classrooms are still far from satisfactory. On the one hand, predominance of teacher lecturing with students passively taking notes is still a common scene in many classrooms. On the other hand, many teachers complain it is difficult to elicit interaction in English classroom. When teachers do invite students' participation by asking questions or designing some interactive activities, there are at best a few responses or just some 'smart' students participate in, with the other students keeping silence throughout the lesson. To make things worse, Maritime English teaching has a tendency towards large class teaching since the expanding of enrollment in higher education institutes. Maritime English teachers have to face classes of over 50 students and even up to 80. It is self-evident that the large class teaching poses a great challenge in terms of the teaching techniques, classroom management and in particular teacher-student interaction.

As a Maritime English teacher in a higher professional college herself, the author got a glimpse of why such a situation exists. However, due to complexity of classroom teaching and learning processes, a thorough investigation into the status quo of Maritime English classroom interaction is needed, so that

some suggestions can be put forward for Maritime English teaching, especially in the case of large class teaching.

2. Methodology

The present study involved 18 Maritime English teachers and 116 second-year students majoring in marine engineering or navigation in two maritime colleges at vocational level in Guangzhou. All the students were full-time college students and took the Maritime English course as a compulsory school subject for one year (at the third semester and fourth semester). The purpose of the course is to foster academic competency in Maritime English through a variety of listening, speaking, reading and writing activities. The students were expected to take the English Test for Competency as 3rd officers or engineer on sea-going ships before graduation. The teachers, 12 females and 6 males, were teaching Maritime English to the second-year students majoring in marine engineering or navigation. They ranged in age from 26 to 47, with an average age of 36. Their teaching experience varied between 2 and 16 years, with an average of 7 years in maritime English teaching.

The data were collected through questionnaires and interviews. Questionnaire I was administrated to the teachers in an attempt to elicit the subjects' background information and their retrospective reports on their classroom practices. Informal discussions with some teachers also helped to provide some detailed information as complementary data. At the same time, Questionnaire II were randomly sent out to the second-year students majoring in marine engineering or navigation to gather information about the students' background and the 'real' classroom processes they were experiencing. Both questionnaires comprised 9 multiple choice questions. Among them, items 1-6 were similar except addressing and reference conventions: teaching patterns (item 1), classroom activities (item 2), student participation (items 3, 4, 5), way of interaction (item 6). In this way, different perspectives on the same classroom phenomena were collected from the two groups of participants – the teachers and the students. Items 7, 8 in Questionnaire I dealt with factors influencing classroom interaction (items 7, 8). The teacher subjects were also required to give information of the size of their classes (item 9). While in Questionnaire II for the student subjects, the other 3 items dealt with teacher support (item 7), student-initiated questions (item 8), and students' evaluation of the English course they were taking (item 9).

Items about student participation were scored using a 5-point Likert scale ranging from 1 "never" to 5 "always". The choice of "often" would be scored 4, and that of "sometimes" or "seldom" would be respectively scored 3 or 2. The maximum and minimum score would be 15 and 5. Table 1 provided the criteria to judge the student participation ratio under categories of Participation Opportunity, Participation in Group work and Voluntary Participation:

Table 1 - The criteria for judging the level of student participation

Degree	Participation Opportunity	Participate in Group Work	Volunteering Participation	Total scores
High ratio	5-4	5-4	5-4	15-12
Medium	3.5-2.5	3.5-2.5	3.5-2.5	10-8
Low ratio	2-1	2-1	2-1	6-3

Data collected from the questionnaire surveys were sorted out, computed and analyzed using SPSS statistical package version 14.0. Responses from the teacher subjects and student subjects to the same items were compared for difference in percentage.

3. Results and discussions

3.1 Characteristics of classroom interaction patterns

As mentioned above, questionnaires I (teacher's version) and II (students' version) probed into the real classroom practices which included teaching patterns (item 1), classroom activities (item 2), student participation (items 3, 4, 5), way of interaction (item 6), student initiation (item 8 in students' version). The responses derived from the two groups were compared and analyzed. The results are presented in the following tables:

Table 2 shows the frequency distribution of the dominant teaching patterns obtained from the two groups of subjects. There seems to be a discrepancy between the responses of the teachers and students. While 72.2% of the teachers claim that their dominant teaching pattern is lecturing yet with some interactive activity to invite student participation, there is however only 37.1% of students agree on that. And about half of the students (51.8%) report a dominance of teacher lecturing in their classrooms.

Table 2 - Frequency distribution of the dominant teaching patterns

	Frequency /Percent (%)		Total
Type of teaching patterns	Teacher	Students	
Lecturing	3 / 16.7	60 / 51.8	63
Lecturing with some interactive activity for student participation	13 / 72.2	43 / 37.1	56
Group work	2 / 11.1	13 / 11.2	15
Student initiating, teacher responding	0 / 0	0 / 0	0
Total	18 / 100	116 / 100	134

However, the two groups are strikingly consistent when considering group work, accounting for about 11% from the both groups, indicating a low ratio of student-student interaction. In addition, student initiation is the least likely adopted teaching pattern in the present study.

Table 3 - Frequency distribution of the classroom activity which occupies most of class time

	Frequency /Percent (%)				Total
	Lecturing	Question & Answer	Group work	Doing Exercise	
Teacher	10/55.6	5/27.8	2/11.2	1/5.6	18
Student	64/55.2	21/18.1	14/12.1	17/14.7	116
Total	74/55.3	26/19.4	16/12	18/13.5	134

As shown in Table 3, 64 out 116 (55.2%) students report that their teacher spend most of the class time giving lectures, explaining vocabulary and grammar features. Similarly 55.6% of teachers (10 out of 18) regard lecturing as the most frequent activity which occurs in their classrooms. Again, the two groups of subjects show consistency regarding group work, 11.2% to the teachers and 12.1% to the students, reechoing a lack of students' peer interaction in language classrooms.

Student participation is an important aspect of classroom interaction patterns. Opportunities and tasks offered for students to actively involve themselves in classroom interaction are found intimately relative to quantity and quality of learner participation. Items 3, 4, 5 of both questionnaires aimed to elicit responses from participants regarding to participation opportunity, group work and voluntary participation. As previously stated, the responses to these items were graded on a 5-point Likert scale. The scores obtained from each group were calculated for the Mean, as shown in Table 4:

Table 4 - Mean of student participation scores obtained from both groups

	Participation opportunity	Group work	Voluntary participation	Total
Teachers	3.39	2.44	2.72	8.55
Students	2.71	2.48	2.44	7.63

The mean scores for Group work and Voluntary Participation (in student's responses) are lower than 2.5. According to the criteria illustrated in Table 1, it indicates a low ratio of group work and students' voluntary participation, which again supports the previous finding of deficiency in student-student interaction. In contrast to the low ratio in group work and students' volunteering, both groups report a medium ratio of participation opportunity for the students as the scores are over 2.5. It is, however, premature to infer that the students do not fully take advantage of the opportunities offered by their teachers. To probe into what affect students' willingness to participate, teacher's interactive strategies – the way they interact with their students need to be further investigated.

When asked the way they interact with their students in classroom (item 6 in teacher's version), the teachers responded with a high frequency of initiating questions, either to check comprehension or to elicit communication, accounting for 61% (see Table 5). Group work is the second preferable choice (24.4%) while student initiation (student raising questions, teacher responding) is the least frequent way adopted (only 14.6%).

Table 5 - Frequency distribution of the preferable way the teachers interact with their students in classroom (item 6)

		Frequency	Percent	Valid Percent	Cumulative Percent
	Asking questions to elicit communication	13	31.7	31.7	31.7
	Asking questions to check comprehension	12	29.3	29.3	61.0
	Conducting group work	10	24.4	24.4	85.4
	Student raising questions, teacher responding	6	14.6	14.6	100.0
	Total	41	100.0	100.0	

According to literature, ESL teachers tend to ask a lot of questions in their classrooms (see, for example, Long and Sato 1983). Teacher questions serve not only to check learners' comprehension of language knowledge, but more importantly provide learners with opportunity to produce target language and elicit communication. The above table shows that the sample teachers recognize the importance of questions in interacting with the students.

Then, how do the students evaluate the questions initiated by their teachers? The results are shown in Table 6. Not surprisingly, questions related to the texts and grammar account for 60.3% of the questions initiated by teachers, showing a preponderance of display questions over referential questions (60.3% as opposed to 22.1%) which serve to elicit communication by talking about students' daily life. Further, only 9.3% of the questions are considered as interesting enough to stimulate students' responses. This may explain the discrepancy between the participation opportunity and the student participation ratio (see Table 4).

Table 6 - Frequency distribution of students' evaluation of teachers' questions

		Frequency	Percent	Cumulative Percent
	Simple questions related to text	70	34.3	34.3
	Grammar-oriented questions	53	26.0	60.3
	Questions related to students' daily life	45	22.1	82.4
	Questions which arouse students' interest	19	9.3	91.7
	Questions which are difficult to answer	17	8.3	100.0
	Total	204	100.0	

Many scholars and educators (Ellis, 1990; Rivers, 1997) have highlighted learners' active involvement in using language. For this purpose, the interaction initiated by students, mostly taking the form of raising questions, is considered very important in classroom interaction. The extent to which students actively involve themselves in the classroom activities is believed to affect their learning outcomes. Item 8 in the questionnaire for students aimed to evaluate to what extent student initiate questions in classroom. The results are shown in Figure 1.

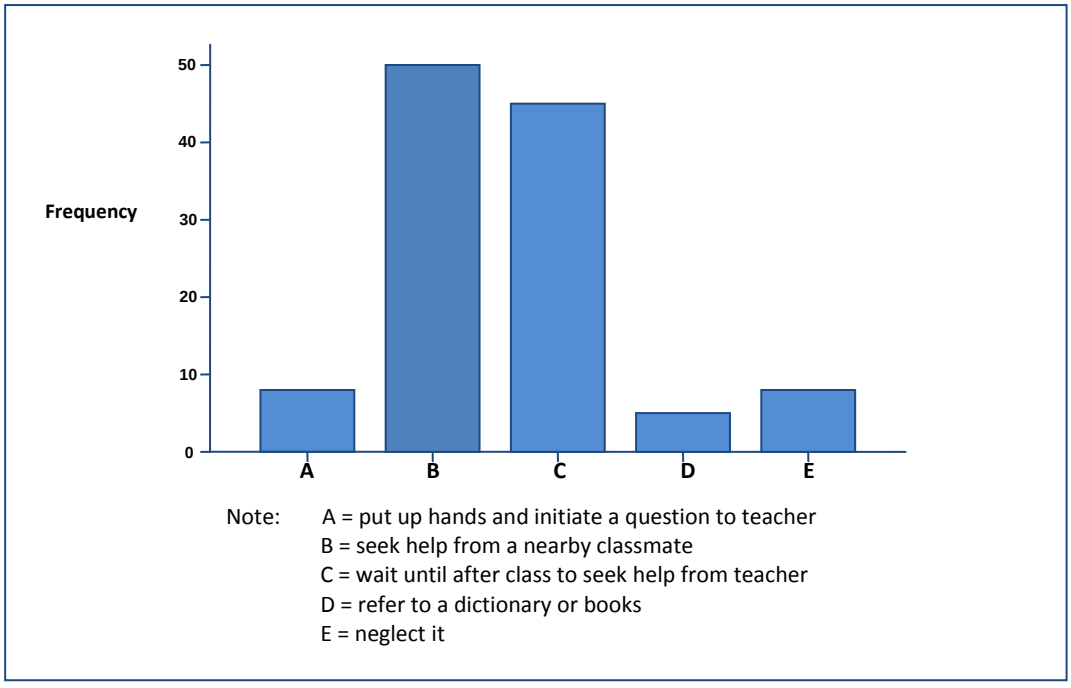

Figure 1 - Distribution of the preference for seeking help

3.2 Factors underlying the classroom interactive patterns

Item 8 in Questionnaire for teachers dealt with external factors which may shape the classroom interactive patterns. These factors were carefully designed and based on the author's informal discussion with the teachers and students to elicit the teachers' views on the external factors which most influence their classroom interaction. The distribution of the frequencies of each factor is illustrated in Figure 2.

As shown in Figure 4.2 below, factors such as class size, teaching time, and pressure of assessment rank the top three positions, much more frequently occurred than factors of teaching device, textbook and classroom atmosphere. It seems that class size, teaching time, and pressure of teaching assessment are most likely to constrain the way the subjects choose to interact with their students.

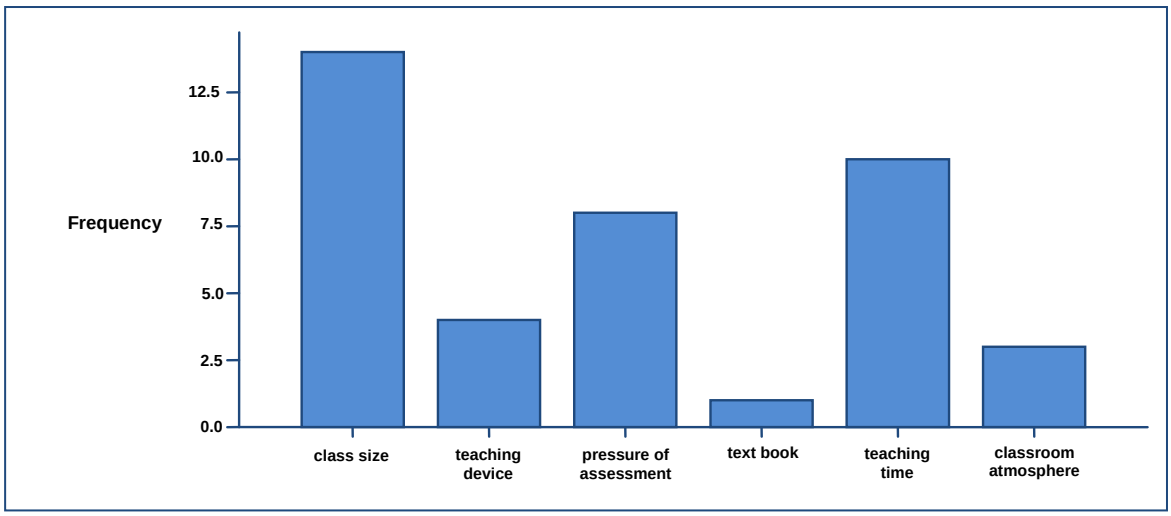

Figure 2 - Frequency distribution of external factors most influencing the subjects' classroom interaction

Large class teaching is a common practice in Maritime English course in the two schools. The large classes comprised two natural classes with the number of student ranging from 60 to 80. It is recognized that large size of class inevitably impairs the interaction between the teacher and the individual student (Ur 1996). Information obtained from informal discussion with the teacher subjects shows that the other two factors, pressure of assessment and teaching time, are actually interrelated. The pressure of assessment stems from the National Competency Test for officers on ocean-going ships. All students majoring navigation or engineering are required to take the test, and students' achievements in the test have potentially become one of the criteria for the appraisal of teachers' work. Teachers are under pressure to teach "exam English". In China, when students are given a test in English, it is often their ability to memorize words and grammar rules rather than their ability to communicate that is tested. There is no exception of the Competency Test. Some teacher subjects complained about the insufficiency of teaching time and there were so much vocabulary and rules required by the test. They were pushed to provide as much knowledge as possible in the class time for their students to memorize. Oral communications based on real sea life are irrelevant to the test, thus being neglected more or less by either teachers or students. Although teachers tend to ask questions to promote class participation, not a few teachers admitted that they usually initiated questions to the whole class rather than to the individual student for the sake of saving time. Obviously, the test-oriented teaching and learning dramatically impair the motivation to communicate in the class on the part of either teacher or student. This may explain the dominance of lecturing pattern in Maritime

English classrooms as identified in the current study. Just as the saying goes, the examination is the piper that calls the tune. Perhaps the tide will turn only when English testing has changed its focus.

4. Conclusion

Based on qualitative and quantitative analyses of data from teachers' and students' questionnaires, the study has revealed a predominance of teacher-class interactive pattern, in which teacher initiates questions to the whole class, students give responses and then teacher provides feedback, with little student initiation or voluntary participation. The interaction between teacher and individual student is strikingly limited in large classes. In addition, students' peer interaction seldom takes place.

Since teaching and learning is considered to be an interactive process, or as Barnes (1976, cited from Johnson 1995/2001:12) claims, a give-and-take between teachers' and students' shared understandings, then the interaction patterns in the classroom will be shaped by the interrelationship between participants' (both teachers' and students') perceptions of classroom interaction and external factors – the pedagogical contexts and sociocultural contexts. In the present study, evidence from non-participant classroom observation, informal discussion and unstructured interviews with the teachers and students suggests that it is associated with some external factors including large class size, pressure of examination system and assessment system. Under the pressure of the national competency exam for deck officers and engineers, which lays greater emphasis on reading than on speaking, many teachers are pushed to teach "exam English", and many students view passing the exam as the ultimate goal for English learning. This is one of the main reasons for the unsatisfactory classroom interaction, which partially leads to the "dumb English" problem in Maritime English learners. The solution to this problem depends on a new evaluation system for both students' proficiency level and teachers' teaching effectiveness.

Due to the complexity and uncertainty of the classroom teaching and learning process, the factors underlying the various behaviors that take place in classroom are in no way clear cut. Further study is needed to probe into factors which shape the classroom interaction so as to provide deeper insights into the Maritime English teaching.

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What did you say? – Why communication failures occur on the radio

Abstract

In the use of Maritime English over the radio, communication failures often take place due to variations in English proficiency levels and different first languages of both speakers and listeners, threatening navigation safety in some cases. In order to investigate which elements are possible contributors to communication difficulties, and to seek for measures to ameliorate the status quo, a questionnaire survey was conducted.

We asked 28 VTS officers, all native Japanese speakers, 1) Which nationalities of people they had had communication with. We then had them rate 2) How difficult their English was to understand, on a 7-point scale. We also asked them to point out 3) What made their English difficult to understand.

Among the 19 nationalities of people the participants had communicated with, English by Chinese, Russians, and Ukrainians was found to be very difficult because of their "heavy accent." Interestingly, Americans and the British were two other groups of people whose English was most difficult to understand. It turned out that the "speed" of the native speakers' variety of English, combined with the attitude that "everyone should be able to understand our English," oftentimes appear to hinder successful communication.

As is recommended in the application of Standard Marine Communication Phrases, every user of Maritime English is highly expected to speak slowly and clearly. English being a lingua franca and not a sole possession of any one country in the maritime context, we strongly urge native speakers of English to pitch in and adjust their speech for everyone.

Keywords: intelligibility, foreign accent, speed, English as an International Language

1. Introduction

No one would deny that English serves as a lingua franca in the present-day international business, including the shipping industry. Exchanges between non-native speakers as well as those between native and non-native speakers are actively taking place, with non-native speakers outnumbering native speakers. Because of the users' differences in linguistic backgrounds, English as an International language (EIL) has a wide variability that stems mainly from transfer from various languages spoken as the users' mother tongues and the different levels of English proficiency among them, which, as a result, making successful interactions between speakers sometimes extremely difficult. In the maritime context, misunderstandings in ship-to-ship, ship-to-shore (or vice versa), and intraship comuunications could threaten navigation safety and lead to serious accidents.

Following the STCW Convention in 1995 which states that a good command of English is a requirement for all seafarers and that MET institutions should educate their cadets accordingly, the Standard Marine Communication Phrases (SMCP) were developed in 2001, providing standardized set phrases using simplified grammar and lexical items in English to be used at sea, if practicable. Further, in the use of the

phrases and other communications over the radio in general, it is strongly advised that the speakers enunciate them slowly and clearly.

Yet, despite these efforts, we often hear people in the maritime sectors encountering communication failures in various occasions. Why does this happen? – The objective of this paper is to answer this very question by colleting on-scene workers' voice and learn about the reality of what they face in the interactions in Maritime English. We conducted a questionnaire survey on radio officers currently active in Japan, focusing on comprehension difficulty in interactions with various nationalities over the radio. By sorting out the data collected, types and nature of the problems behind the communication failures will be presented and discussed, and a request to the users of Maritime English, especially so-called native speakers of English, will be proposed.

2. Method

2.1 Participants

Twenty-eight radio officers (27 males, 1 female) currently active in Japan agreed to fill in a questionnaire as part of activities of a seminar to improve their English communication skills over the radio. Nine of them were in their forties, and 19 in their fifties, and they had an average work experience of 6.95 years (SD = 6.99), with a range of 0.5-28 years. The officers were handed the questionnaire in paper format, all question items given in Japanese, and they filled out their answers in Japanese. It took them about 20 minutes to complete their responses.

2.2 Questionnaire Items

The main part of the questionnaire contained three questions:

Question 1: Which of the following 16 nationalities of seafarers have you had communication with in English over the radio?
American, Australian, British, Chinese, Croatian, Filipino, Indian, Indonesian, Korean, Malaysian, Russian, Singaporean, Thai, Turkish, Ukrainian, Vietnamese.
Add any other nationalities if not in the list.

Question 2: How easy/difficult was their English? Rate the English on a 7-point scale, with 1 = very easy to understand, and 7 = very difficult to understand.

Question 3: What makes the communication with the speakers you pointed out above difficult? Choose the factor(s) from the following:
(1) radio equipment (2) vocabulary used (3) speed of speech (4) foreign accent (5) others. Write comments if you have any.

Additional two questions (optional) followed this, allowing the participants to freely express their opinions and feelings about various types of English spoken by native speakers of different languages:

Question 4: How do you usually tell the nationality of the person you are talking with? How easy is it?

Question 5: What efforts do you make to promote good communication on the radio? What would you like to say to the person whose English is difficult to understand?

3. Results

3.1 Communication Experience (Responses to Question 1)

The numbers of radio officers (out of 28) who had had communicated with seafarers of respective nationalities are as follows:

American (20), Australian (10), British (14), Chinese (28), Croatian (1), Filipino (20), Indian (10), Indonesian (15), Korean (28), Malaysian (9), Russian (26), Singaporean (6), Thai (9), Turkish (0), Ukrainian (7), Vietnamese (17)

All officers in the survey had had communication with Chinese and Koreans, and many with Americans, Filipinos, and Russians. Among the 16 nationalities in the list, some officers had had experience of communicating with as many as 14 of them while others only 3 or 4. A wide variability in the experience is possibly due to the difference in the harbour district they had been in charge of as well as years of experience.

In addition to the nationalities in the list, the following nationalities were reported:

Cambodian (2), Dutch (1), German (1), Myanmarian (1)

In the analyses and discussions that follow, nationalities that had a response of 2 or less will be excluded.

3.2 English Difficulty Ratings (Responses to Question 2)

Table 1 is the summary of difficulty ratings. The number in parentheses on the left indicates the number of responses obtained for the nationality, and the percentage and number of rating for each nationality are shown in the rate columns. The average rating and variability of responses are shown in the right column. Keeping in mind that the difficulty ratings cannot be taken at a face value, since the number of responses obtained is not consistent among nationalities, we will describe what we found as a general tendency from the data.

Ukrainians and Russians were found to be the most difficult to understand, with the average rating of 5.86 and 5.81 respectively, followed by Chinese (5.14) and Americans (4.90). On the other hand, English by Filipinos (3.50), Indians (3.20), Koreans (3.04), and Singaporeans (3.00), were rated as the easiest to understand.

A comparatively high variability in judgments was found in English by Americans, Australians, and the British, with the standard deviation of 1.41, 1.40, and 1.54, while Malaysians (0.50), Indians (0.79), and Russians (0.80) received more or less consistent ratings.

Table 1: Summary of rating results on comprehension difficulty of English spoken by seafarers of 14 nationalities. The rating of 1 = "very easy to understand"; and 7 = "very difficult to understand."

Nationality	Rating	1	2	3	4	5	6	7	Mean SD
American (20)	%	0	5	15	15	25	30	10	4.90
	#	0	1	3	3	5	6	2	1.41
Australian (10)	%	0	0	50	10	10	30	0	4.20
	#	0	0	5	1	1	3	0	1.40
British (14)	%	7.14	7.14	14.3	14.3	35.7	21.4	0	4.29
	#	1	1	2	2	5	3	0	1.54
Chinese (28)	%	0	3.57	7.14	14.3	35.7	25	14.3	5.14
	#	0	1	2	4	10	7	4	1.27
Filipino (20)	%	10	5	25	45	15	0	0	3.50
	#	2	1	5	9	3	0	0	1.15
Indian (10)	%	0	20	40	40	0	0	0	3.20
	#	0	2	4	4	0	0	0	0.79
Indonesian (15)	%	0	6.67	26.7	40	20	6.67	0	3.93
	#	0	1	4	6	3	1	0	1.03
Korean (28)	%	3.57	35.7	25	28.6	3.57	3.57	0	3.04
	#	1	10	7	8	1	1	0	1.14
Malaysian (9)	%	0	0	11.1	77.8	11.1	0	0	4.00
	#	0	0	1	7	1	0	0	0.50
Russian (26)	%	0	0	0	7.69	19.2	57.7	15.4	5.81
	#	0	0	0	2	5	15	4	0.80
Singaporean (6)	%	0	50	16.7	16.7	16.7	0	0	3.00
	#	0	3	1	1	1	0	0	1.26
Thai (9)	%	0	0	33.3	33.3	11.1	22.2	0	4.22
	#	0	0	3	3	1	2	0	1.20
Ukrainian (7)	%	0	0	0	14.3	14.3	42.9	28.6	5.86
	#	0	0	0	1	1	3	2	1.07
Vietnamese (17)	%	0	0	11.8	52.9	11.8	23.5	0	4.47
	#	0	0	2	9	2	4	0	1.01

3.3 Factors of Comprehension Difficulty (Responses to Question 3)

When the officers were asked the reason(s) of difficulty, the majority of responses focused on "foreign accent" and "speed of speech," as you can see in Table 2. Along with the number of responses for each factor, a succinct summary of comments received will be shown in this section. When presenting comments of specific radio officers, their years of experience will be provided in parentheses, too.

(A) Radio Equipment

An officer (2.5 years) commented that poor condition of the radio equipment is typical of Russian vessels.

(B) Vocabulary Used

When the Japanese radio officers had problem with vocabulary, this was for either of two opposite reasons, i.e., the vocabulary of the other party was so poor that the communication failed, or the vocabulary items/expressions used were too sophisticated or advanced for them to understand. The former responses were frequented with Chinese and Korean vessels, whereas the latter problem was always encountered during the communication with American and British vessels. There was a remark that "Native speakers use expressions that are intelligible only in their community." (2.5 years)

Table 2: Factors that the 28 Japanese VTS operators reported as contributing to comprehension difficulty in English spoken by speakers with different native language backgrounds. (Multiple responses allowed per nationality.)

Nationality (# of responses, difficulty rating)	**(A) radio equipment**	**(B) vocabulary used**	**(C) speed of speech**	**(D) foreign accent**	**(E) others**
American (20, 4.90)		1	11	2	
Australian (10, 4.20)			3	2	
British (14, 4.29)		2	7	1	
Chinese (28, 5.14)		5	1	13	6
Filipino (20, 3.50)			2	5	
Indian (10, 3.20)			1		
Indonesian (15, 3.93)		1		2	
Korean (28, 3.04)		2	3	3	1
Malaysian (9, 4.00)					
Russian (26, 5.81)	3	3	6	15	3
Singaporean (6, 3.00)			1		
Thai (9, 4.22)				1	
Ukrainian (7, 5.86)	1	1	2	3	
Vietnamese (17, 4.47)				2	2

(C) Speed of Speech

All comments on the speed of native speakers' English claimed "too fast to follow." For instance, "British English sounds authentic, but they speak way too fast." (5 years)

Several officers who are bothered by Americans' fast speech reported their attitudinal problem as well. For instance, one officer (30 years) reported: "When asked to repeat, they either laugh or yell at me. I have been told to 'leave and bring a person who understand English.' "

Another officer (9 years) wrote: “Americans’ speech is too fast and too long with redundant and unfamiliar expressions. He also mentioned, “It is scary to talk with the British.” Yet another officer (6 years) pointed out possible ignorance of some native speakers: “Americans appear to take it for granted that their language should be understood since it is a common language. Even asked to say again, they just repeat the same expressions and never slow down. They are very uncooperative.”

(D) Foreign Accent

Those who received the response (D) were dominantly Chinese and Russians. With an attempt to express how “accented” their English is, various expressions were used: “Chinese English sounds squishy, just like the Chinese language.” (9 years); “Chinese English sounds soft, and Russian English sounds hard.” (6 years); “Russian English is accented to such a degree that I take it for Russian.” (6 years); “Russians speak with very low voice and the language sounds like Russian.” (5 years)

As for Chinese vessels, some pointed out differences in the English level among crew members. One commented “The difficulty level ranges from 2 to 6 on the rating, depending on who you talk with.” (7 years) Usually, “Higher-rank members, i.e., deck officers and Captains, are more reliable and easier to communicate with.” (5 years) Thus, for effective communication, one officer wrote: “I say ‘Captain, please’ when communication fails.” (5 years)

As in the case of Americans and the British, attitudinal problems were also pointed out: “Russians are too aggressive, possibly looking down on Japanese?” (9 years); “When I have to point out that I cannot understand their English, Russians feel offended and get upset.” (7 years); “Chinese say whatever they have to say, then stay silent after that.” (6 years); “Chinese say ‘OK’ even when they apparently do not understand us.” (1.5 years)

(E) Others

Most comments were relevant to accent: e.g. “Vietnamese and people of other Asian nationalities sound like they are mumbling.” (30 years)

3.4 Clue to Identify the Nationality (Responses to Question 4)

This question was asked since we wanted to know how the officers, laymen in linguistics, tell the speaker’s nationality over the radio. Besides making use of such information as the vessel’s name, vessel’s type, flag state, crew list, last port of call and port of destination, they make their judgment based on the speaker’s accent. As we expected, certain phonetic characteristics appear to help them identify the nationality, e.g. “In Filipino English, /f/ is pronounced as [p].” (28 years); “Australians pronounce /ai/ in a peculiar way.” (9 years); “Russians use a lot of trills.” (7 years) Many say it is easy to tell Chinese, Koreans, Russians, and Filipinos from their accents, including intonation, voice quality, and overall impression.

Among the officers, individual differences are likely to exist in how conscious they are of accent and/or how good they are in telling different nationalities. There was one officer who said, “I cannot tell the speaker’s nationality from their speech. My judgment of the speaker’s nationality is based solely on information other than language.” (3 years). Some reported degree of confidence in telling the nationality of the other party: “I am 60-70% confident.” (5 years); “I am 70-80 percent confident.”

(1.5 years) The number of nationalities they deal with and years of work experience seem likely to play certain role in the nationality judgment.

3.5 For Better Understanding of Difficult English (Responses to Question 5)

The last question was given so that possible solutions to comprehension problems may be available from on-scene workers themselves actually encountering communication problem. Although answering to this question was optional, apparently the radio officers surveyed had much to say. Many also wrote on efforts they make for better understanding over the radio. We will list them one by one in the following:

- I want them to communicate slowly and clearly.
- Speak slowly. In some cases, it helps to spell out the message.
- Speak slowly.
- Speak more slowly.
- Speak slowly.
- As for Russians, perhaps speaking slowly would help.
- Please enunciate slowly, clearly, and carefully.
- Speak slowly; Spell out the message; repeat the message.
- I want them to speak clearly and slowly.
- I speak slowly. Also, I try to ask questions to which they can answer with Yes/No.
- When I do not understand, I ask them to repeat the message slowly.
- When I speak slowly and softly, they are likely to do the same.
- I ask them to speak slowly. Time permitting, I continue conversation until they understand. To confirm understanding, I use the phrase “You mean …”
- There are times when I cannot understand a word or phrase which appears to be important. In such cases, I want them to repeat it slowly and clearly.
- Use short sentences; speak slowly, word by word; use standardized expressions; Learn some Japanese.
- Accurate pronunciation and use of comprehensible expressions is important.
- When I don’t understand, I ask them to spell out the message.
- Person in charge of the radio should have a better command of English.
- I believe using correct grammar or following the SMCP will help supplement poor pronunciation.
- I do not want people to give up a conversation half way through. Even when they do not understand the flow of conversation, they should keep going with their own words.
- People from any country should study a foreign language. That way, they will understand what it is like to communicate in a foreign language. I would especially like to direct this to native English speakers.

4. Discussion

Needless to say, the objective of this study is not to blame the speakers of certain nationalities for their English’s low ratings in comprehensibility. Communication is always mutual, and the low rating may be partially due to the Japanese officers’ shortcomings as well, such as their English competence, his/her years of work experience, and stereotypes for and against certain nationalities. Also, as the results in

Question 4 suggested, radio officers are not able to reliably identify the nationality of the speaker. Keeping all this in mind, we wanted to make an attempt to identify some tips from the information obtained that may help promote better communication.

4.1 Foreign Accents

One finding in this survey is consistent with what has been repeatedly said in the literature of second/foreign language learning, that non-native speakers cannot get rid of foreign accent influenced by their mother tongue, and that it can have an effect on the listeners' understanding. In previous studies on language transfer, the listeners who judged non-native speakers' English were more often than not native speakers of English, but as the outcome of the present study indicated, non-native listeners, too, have difficulty understanding English affected by the speaker's native language. The Japanese radio officers reported foreign accent to be one conspicuous factor that made it difficult to understand English spoken by Chinese and Russian speakers.

Yet, it is not clear why Chinese- and Russian- flavoured English was judged to be more difficult to understand than English spoken by other speakers, e.g., Filipino, Indian, Korean and Singaporean. Takagi and Uchida (2011) and Uchida and Takagi (2012) described the phonetic characteristics of English spoken by Filipino and Chinese, and found that both varieties of English have characteristics that deviate from so-called native varieties of English due to their native languages. For example, in the Filipino English study, it was revealed that /t/ and /d/ are used for "th" sounds (e.g. "ting" for "thing," "da" for "the"), and likewise, it was reported in the Chinese English study that /v/ is likely to be replaced with /w/ (e.g. "wessel" for "vessel"). However, the comparative phonetic approach taken in these studies is not able to predict which variety would sound more difficult to understand for Japanese listeners.

In order to clarify why some accented Englishes are more difficult to comprehend than others, further experimental research, such as difficulty ratings in response to exposure to actual accented English sounds, would be necessary.

4.2 Speed of Speech

Another outcome of this survey, which we found very interesting, was the low evaluation of the English spoken by native speakers. Contrary to an idea we tend to have that native speakers' English is authentic and thus easier to understand compared to non-native speakers who speak with accents, many non-native varieties of English, including Korean, Indonesian, and Thai, were judged to be easier to understand in this study. The problem was attributed to fast speech.

The extent of the problem the radio officers face is easily imaginable if you read the responses to Question 5, which asked what the radio officers expect of the party they communicate with. In their responses we do not see any demands of reduction of foreign accent or acquisition of "authentic" English pronunciation by Maritime English users. Instead, what they request is dominantly "to speak more slowly and clearly." If you go back to the list in 3.5, you can count many as 15 of "slowly"s and 5 "clearly"s in the responses. For them, perhaps this is the most practical and effective strategy to reduce communication failures.

We should keep in mind that language has two functions, communication and identity (Kirkpatrick 2007). That is, language enables people to communicate with one another, and at the same time, language signals the identity of the speaker – who s/he is, which groups s/he belongs to, … etc. Any user of a language unconsciously counterbalances the two functions: In a certain group such as family

or workplace, you may use jargons or special expressions to show intimacy or solidarity and claim you belong to that group; however, in other occasions, e.g., when you attend an international conference, you will modify your speech in such a way that everyone will understand what you mean. It goes without saying that the Maritime English context falls in the latter case, where communicative function of language is paramount, since getting the meaning through, (and 100% correctly all the time!) is the primary objective for the sake of safety, thus identity/culture function should be sacrificed as much as necessary. To use expressions that only people in your language community understand or to expect everyone to understand you without modification of your speech, only shows that the person lacks in communication skills.

The importance of slow speech is actually nothing new but has been repeatedly pointed out as essential in the use of SMCP. Perhaps native speakers of English are not familiar with the SMCP since they think it was devised for non-native speakers, and that it has nothing to do with them. It would be important to attract native English speakers' attention to SMCP, make them realize that English is not a possession of native English speakers in the maritime context, and call for cooperation to slow down their speech.

If you happen to be a native speaker of English, we strongly urge you to take a look at the "World Maritime English Accents" homepage by Takagi and Stone, where you will be confirmed of the importance of slow speech for navigation safety. Of course, non-native speakers are also welcome to visit the page.

5. Concluding Remarks

The bottom line of good communication is, after all, to put yourself in the other person's shoes. Let me reiterate one officer's comment:

> *People from any country should study a foreign language. That way, they will understand what it is like to communicate in a foreign language. I would especially like to direct this to native English speakers.*

This survey was a case study, asking just one group of non-native English group (i.e., native Japanese speaker group) to give their impressionistic view of varieties of English. To our knowledge, there is only one such study in the maritime context, Loginovsky (2002), who conducted a similar survey on Russian deck officers/cadets, and interestingly, the outcome was that English of native speakers (British in this case) was the most difficult to understand. Although this type of research has a limit in its objectivity, as has been pointed a couple of times already, it would be interesting to expand our target to maritime-related workers who are native speakers of other languages. Creating a matrix out of the collected data that shows which native speakers' English is more difficult or easier to which native speakers would be beneficial, so that the users of Maritime English will be able to learn how their English is perceived and what is expected of their English for mutual understanding.

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A Study on the Noun Phrases of the Marine Engineering English

Abstract

For a long time, the marine English is generally accepted as a tool language in the shipping circle. As a part of the marine English, the Marine engineering English used by the marine engineers is also of great significance. Therefore, this thesis will research on this Marine engineering English. Because the noun phrases are the basic constituent of the sentences in each texts, this study mainly focuses on the Noun Phrases of the Marine engineering English from the collected data.

The data is all collected from sorts of marine engineering English teaching materials and the related dictionaries and some operation manuals, containing over than 20,000 words. And in this thesis, a corpus on line is also used to compare with the self-made corpus so as to give the evidence to support the research processing.

With the ideas from the related previous linguistic studies on the noun phrases and semantics, this thesis will analyze the noun phrases (mainly with a structure of noun+ noun/ noun +noun +noun) of the marine engineering English. Within the analysis process, some computational program and statistical software will be applied to present a scientific support.

Finally, the new structures and semantic features of the marine engineering English will be summarized as the conclusions of this thesis.

These noun phases in the data are all terminology words of the marine engineering, whether each element within a phrase is attached under a role or not. Normally a phrase contains two or more words, and these noun words can demonstrate the features of the marine engineering English. As the objective of this thesis, these Noun Phrases will be put away differently according to the various numbers of elements within a phrase, like two words, three words, more than three words. These three groups will be studied individually.

Key Words: Marine Engineering English; Semantic Roles; Noun Phrases; Corpora; Statistics

1. Introduction

To conduct the analysis, two corpuses are involved: the FROWN Corpus as a controlled corpus is a representative of modern English while the newly-built Marine Engineering English Corpus as the study corpus symbolizes the whole marine engineering English to some extent.

As a result, the distribution of the special noun phrases and their frequent will be calculated. Table 3.1 shows the detailed data below:

noun	Structure	Frequency	Proportion
2	noun+noun	3,133	85%
3	noun+noun+noun	434	12%
4	noun+noun+noun+noun	70	2%
5	noun+noun+noun+noun+noun	24	1%
Total		3,661	100%

Tab.3.1 - The distribution of special noun phrases and their frequent in FROWN

Simultaneously, Table 3.2 shows the distribution of the special noun phrases and their frequent in MEE:

Noun	Structure	Frequency	Proportion
2	noun+noun	12,282	84.4%
3	noun+noun+noun	1,936	13.3%
4	noun+noun+noun+noun	305	2.1%
5	noun+noun+noun+noun+noun	31	0.2%
Total		14,554	100%

Tab.3.1 - The distribution of special noun phrases and their frequent in MEE

Since the distribution of the noun phrases with special structures from both FROWN corpus and MEE corpus, it is urgent to test whether they have significant difference. One of the SPSS tests-Chi-square test is used to compare the frequencies (Zhou Shijie, 2004). Except for comparing two categories, it also “can be extended to cover cases with more than two categories” (Zhou Shijie, 2004). As Table 4.1 shows, four categories will be concluded: noun+ noun, noun+ noun+ noun, noun+ noun+ noun +noun, noun+ noun+ noun+ noun+ noun. Because “the Chi-square tests must be calculated using frequencies” not the proportions (Zhou Shijie, 2004), the Table 4.1 is produced. In The following, Table 4.1 contains the data from two corpuses to be tested:

Number of the noun	Frequencies in	frequencies
noun+ noun	3,133	12,282
noun+ noun+ noun	434	1,936
noun+ noun+ noun+noun	70	305
noun+ noun+ noun+ noun+ noun	24	31

Tab.4.1 -The frequencies of four categories of noun phrases in FROWN and MEE

After inputting all the data above, the Chi-square test can output the results in terms of the SPSS.

df=n-1=3

(n=4)

The critical value of Chi-square for 3 degrees of freedom at the 5 percent level is 7.8147. The calculated value is 24.652. Since the calculated value is much greater than the critical one (Zhou Shijie, 2004), and there is a significant difference among the four categories from two corpuses at the 5 percent level.

Chi-Square Tests

Test the Differences among the four structures of the Corpus FROWN and MEE

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24.652(a)	3	.000
Likelihood Ratio	21.370	3	.000
Linear-by-Linear Association	.335	1	.563
N of Valid Cases	18215		

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.05.

Since this dissertation studies in the structure of noun+ noun and noun+ noun+ noun, it is of great necessity to test these structures between the corpora of FROWN and MEE, as well. In the following, Table 4.2 contains the data about the two structures from these two corpora:

Number of the noun	frequencies in FROWN	frequencies in MEE
noun+ noun	3,133	12,282
noun+ noun+ noun	434	1,936

Tab.4.2 - The frequencies of two categories of noun phrases in FROWN and MEE

After inputting all the data above, the Chi-square test can also output the results in terms of the SPSS.

df=n-1=1

(n=2)

The critical value of Chi-square for 1 degree of freedom at the 5 percent level is 3.8415. The calculated value is 5.187. Then the calculated value is much greater than the critical one, there is a significant difference between the two categories from two corpuses at the 5 percent level.

Chi-Square Tests

Test the Differences between the Corpus FROWN and MEE in the structure of noun + noun and noun + noun + noun

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5.187(b)	1	.023		
Continuity Correction(a)	5.062	1	.024		
Likelihood Ratio	5.287	1	.021		
Fisher's Exact Test				.024	.012
Linear-by-Linear Association	5.187	1	.023		
N of Valid Cases	17785				

a Computed only for a 2x2 table

b 0 cells (.0%) have expected count less than 5. The minimum expected count is 475.33.

From the calculated results of the Chi-square test, it is obviously known that the marine engineering English has a significant difference with modern English in the structure of noun + noun and noun + noun + noun. Therefore, the following sections emphasize on the semantic analysis of these two structures in the MEE.

From Biber's semantic theories, it is known that the sixteen types of the semantic relations in the "noun+noun" structures are as follows:

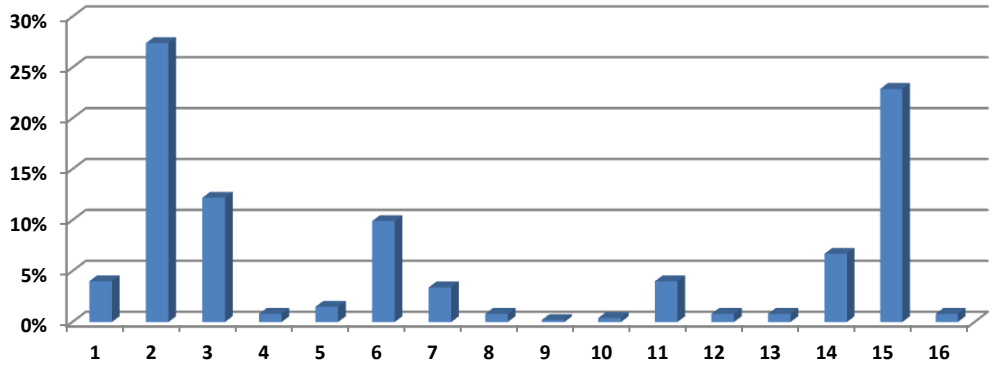
1) composition: glass windows; word classes
2) purpose: pencil case; chess board; radio station
3) identity: men workers; exam papers
4) content: sex magazines; interest rate
5) source: court messengers; Pentagon news
6) objective type 1: N1 is the object: water loss; taxi driver
7) objective type 2: N2 is the object: pilot project; discharge water
8) subjective type 1: N1 is the subject: child development; eye movement
9) subjective type 2: N2 is the subject: labor force
10) time: Sunday school; summer vacation
11) location type 1: world literature; heart attack
12) location type 2: notice board; job centre
13) institution: police station
14) partitive: cat legs; family member
15) specialization: education secretary, football fans
16) other type: riot police （Biber *et al*, 2000）

And after the analysis of the sample with nearly 500 examples, the distribution of these sixteen types can be clearly realized. Table 4.3 in the following shows the calculated results:

Type	Frequency	proportion
1	19	4%
2	130	27.40%
3	58	12.20%
4	4	0.80%
5	7	1.50%
6	47	9.90%
7	16	3.40%
8	10	0.80%
9	1	0.20%
10	2	0.40%
11	19	4%
12	10	0.80%
13	7	0.80%
14	32	6.70%
15	109	22.90%
16	4	0.80%
total	476	100%
*word	13	Null
*X	7	Null

Tab.4.3 - The calculated results of the frequencies of these sixteen types in the MEE

Extract from the table above, the most highly frequency ones are illustrated:



Type		Proportion
type2	Purpose	27.40%
type15	Specialization	22.90%
type3	Identity	12.20%
type6	objective type 1 N1 is the object	9.90%
type14	Partitive	6.70%

Tab.4.4 - The five high frequent types and their proportion in the MEE corpus

Then this paper will take some examples from these five types for detailed analysis.

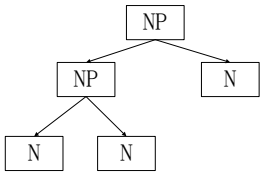
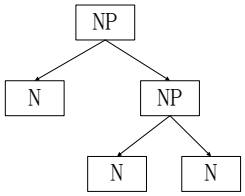
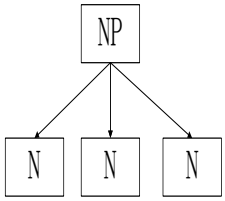
For type2 (Puepose), *Suction pipe* is counted as type 2: purpose. This kind of *pipe* is used to suck the air, oil, etc. Hence, the pipe has a purpose of suction; *Diesel engine* can be understood that the *diesel* oil is used to start the *engine*. Hence, the *diesel* has a purpose of starting the engine. The next type is type 15: specialization with a proportion of 22.90%. *Pressure difference* shows that the difference is limited in the pressure not other respects. Hence, the *difference* is specialized in the pressure. The third one to be introduced is type 3: identity, which covers a proportion of 12.20%. This type intends to show the noun can be distinguished from others through its identity. *Suction stroke* here is distinguished from other strokes, like the compression stroke, expansion stroke, etc. so the *stroke* has been identified by the *suction*. In type 6-Objective Type 1: N1 is the object of the process described in N2, or of the action performed by the agent described in N2 (Biber *et al*, 2000). And it covers a proportion of 9.90%. *Oil coolers* is also one member of type 6, for it is a machinery device to cool the oil with a high temperature. Hence, *oil* here is the object of coolers. The final type to be presented is type 14: partitive, which has a proportion of 6.70%. In this type, N2 is a part of the N1. In this type, N2 identifies parts of N1 (Biber *et al*, 2000). *Pump pistons* is limited to type 14: partitive, for the *pistons* are the indispensable part of the pump. Here the *piston* is a mechanical device that has a plunging or thrusting motion.

In addition, the structure of noun+noun can be ambiguity to the similar structure relative adjective +noun. There are still some examples selected from the corpus MEE. *Emergency procedure* is very similar to

emergent procedure; however, they have completely different semantic meanings. On board, the procedure is performed in case of emergency (emergent situation). Like the *emergency generator*, it means that the generator will be started when the emergency happens such as blackout.While the *emergent procedure* has a swallow meaning that the procedure is very urged to be drawn up.

Hence, the tree structure analysis can be adopted to avoid the semantic ambiguity to some extent.

After collecting and analyzing the data of noun+noun+noun from the MEE corpus, three basic constitutional analysis tree diagrams can be produced. In the following, Table 4.11 is the specific diagrams and their proportions in this corpus:

Type of the diagrams	marked No.	Proportion
	01	59.3%
	02	36.6%
	03	4.1%

Tab.4.5 Three tree diagrams of constitutional analysis and their proportion of MEE

Though the noun phrases with a noun+noun+noun structure has been classified into totally three types, they still have some differences in the sub-branch. For example, the tree No. 01 has covered 58.7% of the noun phrases with a noun+noun+noun structure, but there are still five different sub-branches: agent, theme, instrument, complement and partitive.

Agent here is the initiator of some action (Saeed, 2000), as the following examples:

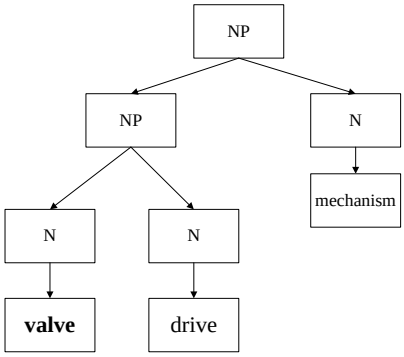


Fig.4. 1 Example

From the tree structure above, the *valve* acts as the initiator of the action *drive,* so the *valve* is the **agent**, the *drive* is the action. When they connected together, they become a complement of the *mechanism*.

Theme here is the entity which is moved by an action (Saeed, 2000), like the following examples:

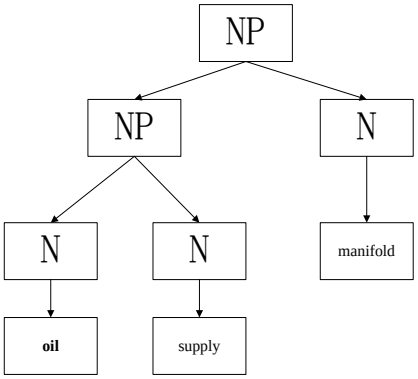


Fig.4.2 Example

As the tree structure demonstrates that the content of the manifold (the pipe lines or system) is about the oil supply. The sub-branch *oil supply* has a structure of *object+action*, and it equals to the entity *oil* can be moved by the action of *supply* from someone or some devices. Therefore, the semantic role of *oil* is the **theme**.

Instrument: the means by which an action is performed or something comes about (Saeed, 2000). Therefore, it is the device with which some action can be performed, as the examples below show the sub-branch acts as a whole part, the other main branch acts as an instrument:

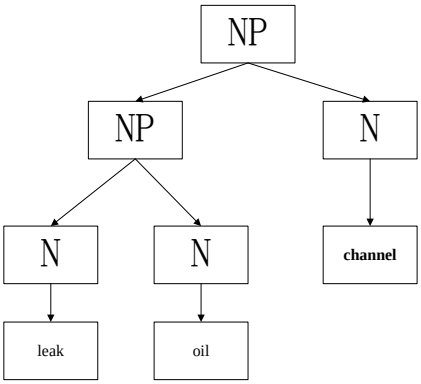


Fig.4.3 Example

This tree diagram also explains how the semantic roles work in the noun phrase above. *Leak oil* is the content of the *channel,* while the *channel* is the **instrument***,* with which people can collect or store the *leak oil*.

The other two types **complement** and **partitive** with a high frequency are not the semantic roles, but they still need to be explained from a semantic perspective.

The **complement** provides additional information to a certain noun. The trees of this type are as follows:

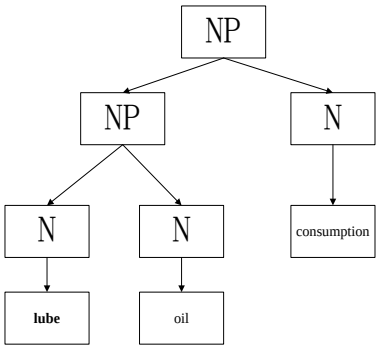


Fig.4.4 Example

The entire phrase undergoes a meaning of that the action of *consumption* of certain material, the material is a certain *oil* and then the *lube* plays a role as the **complement** of *oil*.

The final semantic function to be described is the **partitive**. In this type, N2 identifies parts of N1 (Biber *et al*, 2000). The followings are the examples:

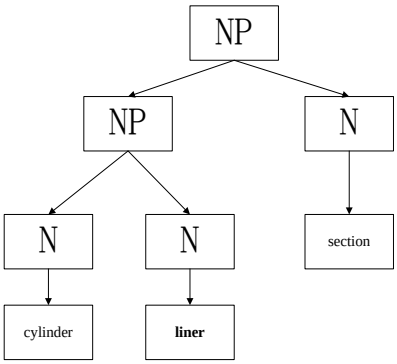


Fig.4.5 Example

The whole tree structure indicates a *section* equals to the *cylinder liner*. Within it, the section works as complement information of the sub-branch, and within the phrase *cylinder liner*, the *liner* is an internal part of the *cylinder*. Therefore, there is no doubt that a **partitive** semantic relation exists between *cylinder* and liner.

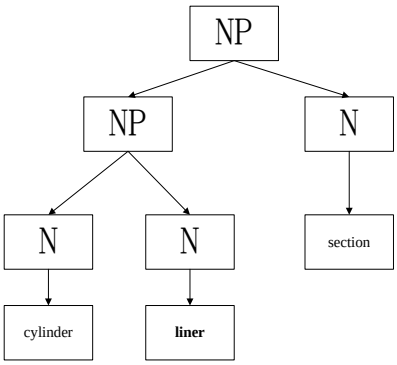


Fig.4.6 Example

The whole tree structure indicates a *section* equals to the *cylinder liner*. Within it, the section works as complement information of the sub-branch, and within the phrase *cylinder liner*, the *liner* is an internal

part of the *cylinder*. Therefore, there is no doubt that a **partitive** semantic relation exists between *cylinder* and liner.

After a detailed description of tree No. 01, the tree No. 02 will be explained. From the calculated results, it is known that the tree No. 02 has covered a proportion of 36.6% in the MEE Corpus with a structure of noun+noun+noun. And some semantic roles still take part in this tree diagram, like source, location, beneficiary and patient.

Source here holds a semantic meaning of the entity from which something moves either literally or metaphorically (Saeed, 2000). The following are the examples:

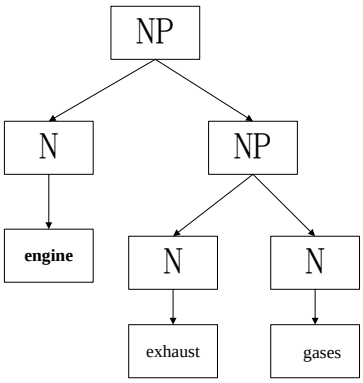


Fig.4.7 Example

From the tree diagram above, it can be easily distinguished the semantic meaning of the sub-branch on the bottom. The *exhaust gases* indicates the *gases* are limited in the *exhaust* ones, so the *exhaust* works as a complement role of *gases.* Going upward, the extra information is presented that the *exhaust gases* come from the *engine*. Therefore, the *engine* here acts as a semantic role of **source**.

The next semantic role represents a place as well as the **source**, but it is a place in which something is situated or takes place (Saeed, 2000). It is called **location**. The following examples will give us a deeper recognition of the **location**.

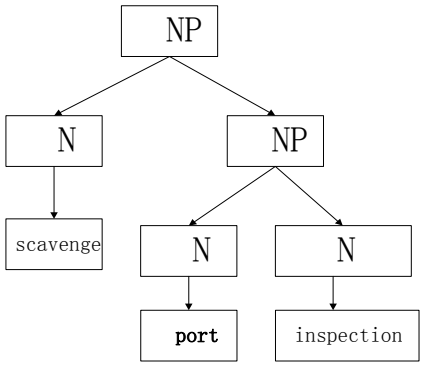


Fig.4.8 Example

This tree diagram has a little difference, for it has the semantic role of **location** on the bottom. The *port inspection* means that the *inspection* is performed on the *port*, so the *port* here acts as a **location**. The *scavenge* upward is the device on ship to be inspected, so it is the object which is affected by the action of inspection. Patient: the entity undergoing the effect of some action, often undergoing some change in

state (Saeed, 2000). From a semantic perspective, this object is called **patient**. And the third semantic role to be introduced is the **patient**.

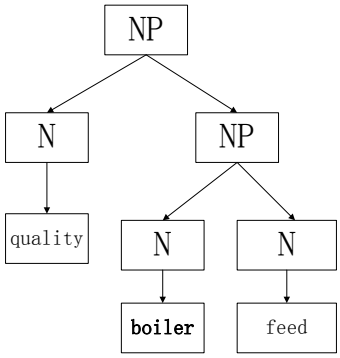


Fig.4.9 Example

From the tree above, the branch on the bottom holds a very vague meaning. However, in the marine engineering English, it has their special meanings. The *boiler feed* means to fill the *boiler* with water, so the entity *boiler* is affected by the action of *feed*. There is no doubt that *boiler* is the **patient.** And upward the *quality* takes a role of providing complement information to the *boiler feed*.

Within the tree No. 02, the final semantic role to be presented is called **beneficiary:** the entity for whose benefit the action was performed (Saeed, 2000). It is given this name as a result of that some actions are performed for its benefit.

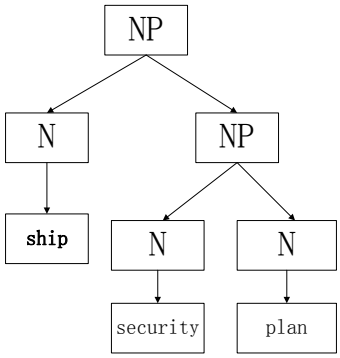


Fig.4.10 Example

Following the principle of bottom up, the *security* is the content of this *plan,* so it also adds complement information to the *plan*. On the side upward, the *ship* has become **beneficiary**, because the whole *security plan* is made and performed to make sure that the ship is in a safe condition.

The next part will be a description of the tree No. 03, which covers the lest proportion of 4.1%. Different from the previous types, this type has a head, but the other two elements stand independently.

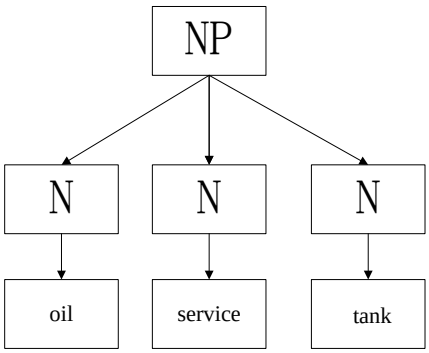


Fig.4.11 Example

Similar to the previous example, the head is *tank* in the tree diagram above. The other two elements have their own functions. *Oil* here tells the specific content of the *tank,* and the *service* here indicates the frequency of using the *tank*. Hence, the whole elements demonstrate that the *tank* is used for containing the dirty *oil* in the daily (service) life on board.

On the whole, the noun phrases in the modern English and the marine engineering English have significant differences especially in the structure of noun+noun and noun+noun+noun. When seeing the number of the nouns in the structure more than three (normally four or five), the frequent occurrence of each example is less than ten, the analysis of them will not concluded. The structure of noun+noun in the marine engineering English covers all the sixteen types of semantic relations, but only five of them has a high frequency, they are type 2: Purpose, type 15: Specialization; type 3: Identity; type 6: objective type 1, N1 is the object; type 14: Partitive. What's more, the structure of noun+noun+noun in the marine engineering English can be analyzed into three types of the tree structure, and for each type, the frequency of the distribution of the semantic roles are different.

According to this study, the types of the noun phrases are of variety to be identified. Therefore, the marine engineering students find it too difficult and complicated to memorize all the types of the terminology noun phrases. Sometimes the students cannot understand the noun phrases correctly for having no knowledge of their internal semantic meanings. In their later work on board, these kinds of inadequate knowledge will lead to some horrible accidents. Therefore, in the process of the teaching, the English teacher of marine engineer should pick out the types with a high frequency and attempt to let the students make clear of the internal semantic structure of the noun phrases.

Because of the limited time and space, this thesis only investigates the structure with two and three nouns. Therefore, the research on the number of four, five or more can also be carried out. It is also hoped that all the noun phrases in a larger marine engineering English corpus can be done.

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INTERMAR: intercomprehension at sea

Abstract

Umberto Eco (2000, 19) hoped that Europe might evolve into a kind of linguistic Utopia in which there existed perfect reciprocal understanding between speakers/writers of different languages. This understanding would then lead to an ability to use the language(s) in question productively, thus adding to plurilingual competences.

His particular version of Utopia involved intercomprehension or the use of linguistic and non-linguistic skills and knowledge to "unlock" the secrets of hitherto unknown languages. However, you don't have to be a linguist to unlock the door. It is known that in general human beings rely on a wide range of interpretive processes to "decode" unfamiliar or seemingly unintelligible messages. The capacity to interpret languages and to tap previous funds of knowledge lies within all of us but recognition or awareness of this ability is often lacking.

INTERMAR is a EU Key Activity 2 (KA2) multilateral project that aims to create a community of maritime and naval institutions that share an IC (intercomprehension) approach to foreign languages. A consortium of 18 partners, including 8 maritime or naval academies will create IC and Maritime English modules for formal blended courses. By enhancing maritime students' awareness of IC, the tailored modules encourage the learner to acquire the strategies needed for the understanding of texts and utterances of any new language they might encounter. Future maritime professionals thus add to their range of skills for coping with today's multi-ethic, multilingual crews. One entire module within the project is dedicated to Maritime English whilst other modules encompass the role of (Maritime) English as a "bridging" language.

The workshop will preview some of the materials created for the INTERMAR modules and offer participants the chance to take part in IC activities. Time will be allocated to structured discussion on the potential benefits of using IC in maritime academies.

Key words: Intercomprehension, plurilingual competences, interpretative processes, learning strategies, Maritime English, blended learning.

1. Introduction

In linguistic terms *intercomprehension* (Fr)[1] may be described as a form of "natural" communication where everyone speaks their own language and, at the same time, is able to understand their interlocuter/s. Umberto Eco (2000, 19) dreamed of Europe as a kind of linguistic Utopia in which there existed perfect reciprocal understanding between speakers and/or writers of different languages. This understanding would, in turn, lead to an ability to use the language(s) in question productively, thus adding to plurilingual competences.

[1] *Alsosometimesreferredto as "IC"*

Intercomprehension can be used as a starting point, a trigger or a tool for language learning. It may also be viewed as an educational goal in itself. The concept of intercomprehension as a means of developing and acquiring a plurilingual repertoire has given rise over the last few decades to different pedagogical initiatives to develop language skills or to facilitate communication. Emphasis during the learning process is placed on receptive skills, prior knowledge, learning strategies and, most often, on a common linguistic heritage (*IC2012*).Promoters of intercomprehension encourage the integration of IC education, procedures and practices into curricula in order to facilitate the acquisition of linguistic skills and competences.

As stated, a common linguistic heritage most often acts as the stepping-stone to enhanced plurilingual competences. It is easier for the learner to decode a foreign language if he or she already knows another language from the same language group (e.g. Germanic, Romanic, Slavic). Thus a Dutch speaker, for example, will find some elements of Swedish familiar, and vice versa. These elements may include language group vocabulary, spelling and pronunciation and syntactic structures, amongst others. Grzega (2005) refers to Haugen, who coined the term "semi communication", whereby a speaker of, for example, a Scandinavian language (Danish, Swedish, Norwegian) "*uses his/her mother tongue and the respective hearer tries to understand through his/her passive command of the speaker's (frequently genetically related) language. This passive command is also termed* receptive multilingualism" (Grzega, 2005: 2).

In today's global village it is often the case, however, that participants in a communicative event, be it social or work-related, speak languages which are unrelated; in other words they come from different language families. In such situations any attempt to make, for example, lexical associations would be in vain. The interlocutor would be reduced to searching for "*internationalisms*"[2] which he or she may recognise. This would not be enough, however, to render the communicative interaction successful. This is when English steps into the breach and proves its worth as a decoding aid for target languages. English, for the time being, has come to be ranked as the most prominent second language in the world. Certainly amongst young people, there is an ever-increasing desire and need to use English as a means of communicating with peers who speak a different language. The ability to communicate using English as a "bridge language" is a common phenomenon of the 21st century. Thus, capitalising on people's general knowledge of English and highlighting its use in "bridging" the linguistic gap have come to prove valuable tools in the acquisition of intercomprehension competences.

The IC approach is not only used for the development of receptive skills within languages of the same family – Romance, Germanic and Slavonic languages – but also for negotiating borders between language families.

2. Rationale: IC and the maritime community

The need for IC development and its institutional inclusion has been recognised by the European Commission. The Communication from the Commission to the European Parliament's Council, the European Economic and Social Committee and the Committee of the Regions, "Multilingualism: an asset for Europe and a shared commitment" (2008: 10) states that "*the value of passive language knowledge should be further explored, and appropriate language learning methods enhanced to allow understanding*

[2] *Examples of so-called "internationalisations" are jeans, lunch, manager, football, stopping (Grzega, 2005: 3)*

and basic communication across different languages." However the concrete applications of IC in the institutional contexts of language learning are still very few[3].

Maritime education and training (MET) institutions and naval academies may be one of the most receptive formal contexts for the implementation of IC in language courses. Prospective seafarers entering the Merchant Marine or the Navy are highly motivated to communicate across language and cultural borders and several of the partner institutions have already found that interest in IC language training is spontaneous. Seafarers are, of course, required to conduct their professional tasks in English, the *lingua franca* of the sea. The acquisition of Maritime English is thus of key importance in MET and naval academies and those cadets who hope to succeed at high level (officers, captains, commanders) must master English in the context of their duties. For many seafarers learning English to the high level demanded by the Merchant Marine and Navy can be a daunting task. In addition today's multi-ethnic, multilingual crews provoke cultural and linguistic barriers, complicating and hindering communication. In both a professional and social context on board the seafarer needs to be able to display strong linguistic skills.

3. INTERMAR (EU Key Activity 2 (KA2) multilateral project)

INTERMAR is a EU Key Activity 2 (KA2) multilateral project that aims to create a community of maritime and naval institutions that share an IC (intercomprehension) approach to foreign languages.

Theproject co-ordinators are led by Centro Regional das Beiras – Universidade Católica Portuguesa (Prof. Filomena Capucho), and the consortium consists of 18 partners, including 8 maritime or naval academies[4]. The partners will create IC and Maritime English modules for formal blended courses. By enhancing maritime students' awareness of IC, the tailored modules encourage the learner to acquire the strategies needed for the understanding of texts and utterances of any new language they might encounter. Future maritime professionals thus add to their range of skills for coping with today's multi-ethic, multilingual crews.

Through a process of blended learning and IC methods the course created by the INTERMAR project aims to encourage cadets to develop interpretative processes to cope with foreign languages, as well as equipping them with additional skills to learn Maritime English.

The course will comprise six modules. One entire module within the project is dedicated to Maritime English and its role within intercomprehension learning processes; another deals with intercultural awareness. The other modules include the role of (Maritime) English as a "bridging" language. The six modules are as follows:

Icebreaker

Baltic Languages

Germanic Languages

[3] *Parts of thistext are taken from the EAC/EA Lifelong Learning Programme Application Form (2011) whichprovides a detaileddescription of the INTERMAR project.*

[4] *Åland University of Applied Sciences, Finland; AntwerpMaritime Academy, Belgium; EscolaNaval, Lisbon, Portugal; ÉcoleNavale – ENGEP, Brest, France; EscuelaNavalMilitar de Marin, Pontevedra, Spain; LithuanianMaritime Academy, Lithuania; Maritime Academy of Latvia (MAL), Latvia; "Mircea cel Batran" Naval Academy, Constanta, Rumania.*

Romance Languages

Intercultural Awareness

IC & Maritime English

The project runs from November 2011 to October 2013. The main target group of INTERMAR is composed of adult learners who follow initial or in-service training in MET institutions or naval academies in selected European countries[5]. The partner MET and naval institutions have committed to running 60-hour blended courses (face-to-face and e-learning contexts) both in Maritime English and in IC, using at least 4 of the 6 modules, according to each partner institution's specific needs. In each MET/naval academy the learners will be selected according to specific criteria to be defined by each institution and, in the case of initial training, 3 ECTS will be attributed to the courses. The course will therefore be granted full institutional recognition. The course, once completed, will remain freely available and downloadable from the project webpage[6] for at least 5 years after the end of the project.

The synergies that will be created by INTERMAR will allow IC to integrate in MET and naval maritime education within Europe, enabling the development of plurilingual competences within the maritime community.

4. WORKSHOP OUTLINE

The workshop will offer a brief overview of the INTERMAR project before going on to preview some of the materials created for the INTERMAR modules. Participants will be offered the chance to take part in IC activities. Time will be allocated to structured discussion on the potential benefits of using IC in maritime academies.

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Basic Aspects of Maritime Terminology Management

Abstract

The idea for the following workshop is based on some of the results and experiences acquired in the course of a year long project entitled MARITERM. The aim of the project was to compile a database of Croatian maritime terminology by applying fundamental principles of terminology management. The goal of this workshop is to apply these terminological principles to English maritime terminology and to demonstrate, through a set of specially designed activities, the phases in the process of terminology management, ranging from the term selection and concept representation to the term description. Hopefully, these activities will provide a brief insight into the terminological work and highlight some of the difficulties associated with it.

Keywords: maritime terminology, terminology management, term selection, concept representation, term description, maritime terminology database

1. Introduction

This paper-workshop is designed with a view to giving easy access to the some of the basic aspects of terminology work and to providing a brief guide and demonstration to the steps that must be taken to find, select and define a specialized term and to include it in the corresponding database. In this case, the terminology being investigated is from the maritime field, while the theory behind its management is the summary of the following works: *Handbook of Terminology* (Pavel, Nolet 2001) and *Handbook of Terminology Management*, vol. 1 (Wright, Budin 1997).

The second chapter offers the definition of terminology and terminology management, followed by the presentation of essential terminology activities (chapter 3) and essential tools for doing terminology work (chapter 4). Chapter 5 deals with basic principles of terminology research, while chapter 6 gives an outline of the MARITERM project. Chapter 7 presents the workshop activities for practicing terminology work using examples from maritime terminology, while chapter 8 offers final remarks.

2. Defining Terminology and Terminology Management

The term terminology can be described in two ways. One definition states that terminology is “the set of special words belonging to a science, an art, an author, or a social entity” (Pavel, Nolet 2001: xvii), while the other, more restrictive definition, refers to the terminology as “the language discipline dedicated to the scientific study of the concepts and terms used in specialized languages” (Ibid: xvii). Specialized language, as opposed to general or common language used in everyday life, is associated with a particular field of knowledge and is used to facilitate communication in that field based on a vocabulary and

language use specific to that field. In other words, terminology is a means of communication in specialized languages.

Terminology is also a part of applied linguistics, «a science that includes work in specialized lexicography, specialized translation, technical writing, and language teaching. In fact, these four professional applications of linguistics are closely related: specialized translation requires mastery of specialized bilingual or multilingual terminologies; technical writing consists of using these terminologies in monolingual discourse; [while] the teaching of specialized languages focuses on their acquisition by the student» (Ibid: xvii).

The simplest way to define terminology management is to say that it is "any deliberate manipulation of terminological information" (Wright, Budin 1997: 1). This concept covers "practical terminology management as it has been carried out by countless specialists in their field over centuries in order to fill their constant need for precise unambiguous language in the form of both the concepts they create and with which they think, as well as the corresponding terms they use to communicate with each other" (Wright, Budin 1997: 2); the systematic recording and retrieval of such information for various purposes.

3. Essential Terminology Activities

Doing terminology work requires the following skills:

- the ability to identify the terms that designate the concepts that belong to a subject field
- the ability to confirm the usage of the terms in pertinent reference documents
- the ability to describe concepts concisely
- the ability to distinguish correct usage from improper usage
- the ability to recommend or to discourage certain usages with a view to facilitating unambiguous communication (Pavel, Nolet 2001: xviii)

Terminologist may encounter several challenges while doing the terminology work. Some are associated with communication between two language communities, i.e. two different languages. For instance, when specialized knowledge is transferred between language communities, the limits of concepts are not always identical in a given pair of languages. "In comparative terminology, the process of term identification reveals any discrepancies, as proper designations may not be found in one of the languages. In such cases, the terminologist's role is to describe the gaps and propose designations to fill them. In order for the proposed term to be acceptable and valid, it must be based on sound knowledge of the target language's rules of lexical formation, must be harmoniously integrated into the existing set of terminology, and must be clearly presented as the terminologist's proposal" (Pavel, Nolet 2001: xviii).

Other challenges that arise are associated with monolingual terminology work. For instance, the appearance of a new concept may lead to production of synonymous terms. "In such cases, the terminologist's role is to identify these terms and prepare single-concept terminology case files with a view to standardizing usage. Parallel or conflicting usage is often studied by terminology standardization boards or terminology approval boards which issue official language notices that inform the user community of the preferred terms. These boards generally work within a company or a professional association at the national or international level, and are almost always composed of terminologists and subject-field specialists" (Ibid: xviii).

If one is to understand the concept and use the related terminology properly[1], he/she can find all the relevant information in the form of a terminology standardization file, which includes textual segments called textual supports[2] in the form of a definition, which provides the semantic properties that distinguish one concept from all others; a context, i.e. quoted text that illustrates the definition; samples of usage and phrases/idioms that show how the terms are used; notes or observations providing further information regarding usage of the terms in discourse; and references indicating the sources of the textual supports.

Once all the relevant pieces of information are assembled, they are analyzed, improved, structured, and brought together into a terminology record[3]. The principal segments of the record include the subject field to which the concept belongs, the languages dealt with, the terms, their usage labels and their textual supports. Nowadays, the development of data banks and the Internet has facilitated the collection of terminology records into electronic files that are accessible on-line or off-line for discussion by users or for content management by authorized terminologists.

4. Essential Tools for doing Terminology Work

Terminological activities, such as for example, term identification[4] and extraction can be done in an old-fashioned way by hand. However, computers have significantly facilitated terminological work in terms of speed, searchability, accessibility and quality. The main work tools for terminologists include the following:

- printed texts or ones in the electronic form
- OCR (optical character recognition) for scanning
- software for term extraction[5], recording information on a concept and management of large sets of terminological data
- concordancers (borrowed from the field of corpus linguistics); software that counts and lists the occurrences of a given term, together with its co-occurrents, in the text corpus compiled for vocabulary research.
- text-alignment tools; software that allows comparison of parallel texts (often a source-language text and its translation) by displaying them side by side based on correspondences established between text units (e.g. paragraphs, sentences, words).
- desktop-publishing and electronic-publishing[6] applications.

5. Principles of Terminology Research

The primary principle of terminology is that terms belong to areas of activity structured into classification systems for specialized knowledge. Each specialized area has such a system, which must be manifested in terminology collection. Therefore, in subject-field classifications, sets of terminology are organized into broad subject fields or classes, which are then divided further into subject fields and subfields.

[1] The proper usage in this case implies using preferred terms, synonyms, spelling variants, syntactic variants and abbreviations.
[2] A statement that provides the user of a terminological product with information about a specialized concept or about the usage of the terms designating the concept. (Pavel, Nolet 2001: 120)
[3] A medium for recording, in a structured set of fields, the terminological data for a specialized concept. (Pavel, Nolet 2001: 119)
[4] The part of term extraction that involves the recognition and selection of designations.
[5] The careful reading (or scanning) of a corpus and selection of terms, normally with contexts, for inclusion in terminology records.
[6] The production of documents using computerized means such as word-processing and desktop-publishing software, and the distribution of the documents in a format, including hypertext, that is accessible by computer.

The terminologist must also be familiar with up-to-date developments in knowledge in a specific field in order to reflect properly the new developments and their effect on communication. This can be done by carefully reading specialized documents, consulting experts and keeping track of relevant topics in the field.

After establishing subject-field classification and assembling relevant documents, one must be fully acquainted with the rules for recording terminological data.

The terminologist recording data for a specific specialized subject field must ensure that the data provided is coherent, contemporary and meets quality standards and that s/he is the master of the rules concerning the presentation of the terminological data in order to apply them correctly while creating terminology records. When it comes to the data selected and presented in terminology records, it must inform the user about the subject field(s) of the concept, the languages in which the concept is described, the terms that designate the concept in each of these languages, the definition of the concept and the sources that this information has been extracted from.

Terminology work also requires an excellent knowledge of the linguistic system of the language(s) being studied, and of preferred usage in a specialized language. “Knowledge of the rules for lexical term formation, of grammatical rules and of the stylistic characteristics of different levels of language helps the terminologist evaluate the linguistic quality of specialized documents and prepare records that respect quality-assurance criteria.” (Pavel, Nolet 2001: 14)

Another important element in terminology research is the structuring of knowledge. The knowledge structure of a subject field is a result of terminological analysis with a view to understanding and describing the concepts marked by terminology units. In terminology work, the knowledge acquired in a given subject field is structured according to the hierarchical and associative relationships between the concepts that compose the subject field. Hierarchical relationships include relationships between a generic concept and related specific concepts, and partitive relationships between a whole and its parts. In associative relationships, concepts are linked spatially or temporally. These relationships include the following types: producer-product, action-result, action-tool, container-contents and cause-effect.

Representation of concept relationships in concept systems enables terminologists to identify the essential semantic features of the concepts (required for their definition) and their supplementary characteristics (for illustration) and also to establish the textual match, i.e. find the appropriate and authentic example of usage.

5.1 Identifying and Defining Terminological Units

The terminology unit is the name or designation of a concept in a concept system. Terminologists actually record a range of different kinds of terminological units in the process of terminology management. Terms may occur as single word and as compound and multiword terms. “The choice of an either single-word or a multiword term depends on language-specific conventions. In some cases, a single word exists in one language, where another requires a multiword term (Wright, Budin 1997: 14). Single word terms may also include abbreviations, while the multiword terms may refer to noun phrases, set phrases, collocations and even standard texts (chunks of text that recur under specific circumstances, such as the preamble to a contract) (Wright, Budin 1997).

“A term or terminology unit in a specialized language is distinguished from a word in general language by its single-meaning relationship with the specialized concept that it designates (called monosemy)

and by the stability of the relationship between form and content in texts dealing with this concept (called lexicalization). The status of the term is revealed by its frequency of use and its relatively fixed contextual surroundings (its co-occurrents), and by typographical enhancements (italics, boldface print, quotation marks, etc.). A final indicator is its rather limited set of morphological and lexical structures: noun (simple, derived, or compound), verb, adjective, noun phrase, verb phrase, or adjective phrase." (Pavel, Nolet 2001: 19)

Another important thing one has to bear in mind while identifying and defining terms is that all of the terms that designate a concept are in a monosemous relationship with this concept in a specialized language, i.e. each term designates only one concept. This is also stipulated in ISO 704:2009 (Terminology work - Principles and methods), which establishes the basic principles and methods for preparing and compiling terminologies both inside and outside the framework of standardization, and describes the links between objects, concepts, and their terminological representations. Monosemous relationship between terms and concepts entails the single-concept principle, according to which the terminologist must deal with one concept at a time.[7]

Once the term has been identified (or created), it has to be defined. The notion of the terminological definition implies a concise description of the determining characteristics of a concept, presented in lexicographical form. The definition must provide the meaning of the term, rather than deal with questions of the term's usage (Sager 2000). Thus, "it differs in function from linguistic observations of the type 'Term used in X to designate Y'. The terminological definition is the most important application of the single-concept principle and the main means of establishing a textual match" (Pavel, Nolet 2001).

According to Sager's theory (2000), a terminological definition is the explanation of the specialized meaning of a concept, its essential characteristics and its classification within a specialized subject field, which can be documented in a variety of sources. It is a brief statement that provides a clear understanding of the meaning of a specialized term. It begins with a word identifying the broader class (*genus*) to which the concept belongs, and then specifies essential or delimiting features that clearly separate this concept from related concepts in that class.
The delimiting features may include (Pavel, Nolet 2001: 24): intrinsic characteristics, such as the concept's nature, its material, or the topic it deals with, extrinsic characteristics, such as its function or manner of operation, its origin, its destination, or its referent.

Various methods of formulating the definition can be used:

- definition by genus and difference (*genus proximum et differentia specifica*), also known as analytical definition:

  e.g.
  crane *is a type of machine, generally equipped with a hoist, wire ropes or chains, and sheaves, that can be used both to lift and lower materials and to move them horizontally*

  gantry crane *is a type of crane which lifts objects by a hoist which is fitted in a hoist trolley and can move horizontally on a rail or pair of rails fitted under a beam*

[7] This is the opposite of the principle of polysemy, applied in general language dictionaries in which the lexicographical entry includes a series of meanings, each denoting a different concept

- definition by function:

  e.g.
  winch *is a mechanical device that is used to pull in or let out or otherwise adjust the tension of a rope or wire rope*

- operational definition listing the parts or steps:

  echo sounder *is an electrically operated instrument that emits a sound from vessel's submerged surface and then measures time interval until the* echo *returns from the bottom and records it*

- synonymous definition, using a paraphrase:

  oblong: *elliptical, blunt at each end, having nearly parallel sides, and two to four times as long as broad*. (Pavel, Nolet: 26)

A number of principles must be observed when drafting terminological definitions, including the following:

- predictability: the definition inserts the concept into an concept system
- simplicity: the definition is concise, clear, and no longer than one sentence
- affirmativeness: the definition states what the concept is, rather than what it is not
- non-circularity: the definition does not use words whose definitions refer back to the concept in question
- absence of tautology: the definition is not a paraphrase of the term, but rather a description of the semantic features of the concept. (Pavel, Nolet 2001: 26-27)

Previous paragraphs have offered definitions of terminology and terminology management and dealt with essential terminology activities, tools and principles. The following part of the paper-workshop will be more practical in nature and deal with concrete examples of terminology work in the form of a number or workshop activities, principally associated with the work done on the MARITERM project.

Previous paragraphs have offered definitions of terminology and terminology management and dealt with essential terminology activities, tools and principles. The following part of the paper-workshop will be more practical in nature and deal with concrete examples of terminology work in the form of a number or workshop activities, principally associated with the work done on the MARITERM project.

6. The MARITERM project

The MARITERM project is part of a larger project called STRUNA (a database of *Croatian Special Field Terminology*, http://struna.ihjj.hr/en/about.php[8]). The Development of *Croatian Special Field Terminology* project started in 2007 as part of the initial coordination project launched at the initiative of the Croatian Standard Language Council, and has since been financed by the Croatian Science Foundation.
"Since terminology plays an important part in language development as well as in professional communication, the objective of the program in a broader sense is to lay the foundation for the

[8] STRUNA was officially inaugurated on the web in February 2012. Its aim is to gradually make available to the public the standardized Croatian terminology for all professional domains.

development of national terminology policy, to establish various forms of more structured education in this field, and to intensify long-term cooperation with national and international academic and other institutions dealing with different aspects of terminology work, with the Croatian Standards Institute and with other interested parties" (http://struna.ihjj.hr/en/about.php).

In order to fulfil these aims, principles for terminology selection and standardization as well as methods of terminology management have been established. The terminological database is intended to store and terminographically manage standardized and harmonized Croatian terms from various subject fields and their equivalents in English and, depending on the domain, several other European languages. Experts from eighteen fields have so far joined the program with the aim of standardizing the terminology from their respective subject-fields (including marine engineering and maritime terminology). Terminology and definitions from different professions have been entered into the terminology database by the experts, while the Institute of Croatian Language and Linguistics provided the linguistic and terminographic verification of the terminological work in progress.

By trying to establish standardized terminology for various subject fields, the program aims to gradually improve the circulation of knowledge and information in the Croatian language as well as in the broader multilingual environment.

6.1 Identifying and Defining Terminological Units

The following paragraphs give an outline of the steps that were involved in the terminology work on the MARITERM project.

First step was defining the limits of the subject field and dividing the field into subfields. Thus, the maritime field was divided into the following sub-fields: marine medicine, manning, marine economy, hydrography, oceanography and marine meteorology, collision regulations, ship's design and construction, sea ports, ship structural strains, coastal and ocean-going navigation, NavAids and methods, maritime communication and marine insurance. Marine engineering was intentionally left out because it had already been included into the database in a separate project. Once the subject-field and sub-fields were outlined they were assigned to individual maritime specialists.

Since the primary function of terminology work is the transfer of specialized knowledge and the confirmation of related terminological usage, terminology research is required in order to identify the terms that convey specialized knowledge. In order to ensure that this function is performed successfully, the terminologist must be familiar with the best documents in his or her subject field and evaluate the documents by category. Thus, the next crucial step in the project was to assemble a collection of texts relevant to the subject field and its sub-fields and asses their quality and relevance. The sources eventually used in research and creation of the terminology database encompassed the following texts/documents: marine encyclopaedia, technical and academic manuals, course books, specialized and popularized periodicals, dictionaries and Internet sites of the best content providers in the field. Once the appropriate documents were selected, they were analyzed with the aim of identifying and extracting the most frequent and relevant terms. Some of the documents were obtained in electronic form, some were scanned (with the authors' permission) and converted into searchable documents (using ABBYY FineReader OCR software, http://finereader.abbyy.com/) and the remaining documents in paper form were searched manually. The easiest form of extraction was provided by one of the tools borrowed from the field of corpus linguistics – the concordancer (using WordSmith software, http://www.lexically.net/wordsmith/). All the documents which were available

in electronic form were analyzed with the help of this tool. First of all it generated frequency lists showing the most frequently used terms and by producing concordances, it also provided authentic examples of use.

After extraction of terms relevant to the subject-field or sub field, the selected terms had to be defined according to the following principles established for the project:

Definition:

- must be clear and concise; it should not contain any redundant expressions or repetitions
- must be in the form of a single concise sentence
- must start with a lower case letter and must have no full stop at the end
- must not contain the repetition of the term being defined
- must not be circular
- must not use parentheses for additional explanation
- must not use abbreviations
- must not be the extension of a sentence whose subject is the term being defined
- additional information should be entered into the field termed “notes”

The type of definition that was most frequently employed on the MARITERM project was the analytical one (*genus proximum et differentia specifica*), for instance: X is a type/kind of Y or X is Y which/that ….(e.g: ***garboard strake***> definition: *the* strake *of shell plating adjacent to the keel*).

Once the term was defined, it had to be entered into the appropriate terminology record. A record is usually made up of several fields. Each field contains one particular type of data (or data element). A field may contain several elements: an entry term or main entry, abbreviation of the main entry, usage parameters (such as information on whether the term is admitted or not recommended (in case of synonyms), grammatical features, subordinate and superordinate terms, antonyms, primary subject field and subfields, context (usage sample), visual representation, etc. Thus, the first thing that is entered is the main entry, which is basically the preferred term, expression or official title.

What follows is an example of a shortened terminology record for the term ***diesel engine*** (cro.“*dizelski motor*”) taken from the database of *Croatian Special Field Terminology*:

dizelski motor
definition:
motor u koji se gorivo ubrizgava ubrizgacem u radni cilindar i pali pri temperaturi stlacenoga zraka

context:
Dizelski motor je klipni dvotaktni ili cetverotaktni motor s unutarnjim izgaranjem u kojemu se izgaranje dogadja samozapaljenjem smjese stlacenoga zraka i ubrizganoga goriva.

synonyms

admitted term: dizelski stroj
not-recommended term: dizel-motor

equivalents

english: diesel engine

attachment

Classification

field: strojarstvo
branch: brodsko strojarstvo
project: Hrvatsko brodostrojarsko nazivlje

source

source of definition: Pazanin, A. Brodski motori. 4. izdanje. Zagreb : Skolska knjiga, 1993.
source of context: Tehnicki leksikon : A – Z / glavni urednik Zvonimir Jakobovic. Zagreb : Leksikografski zavod Miroslav Krleza, 2007.

For the purpose of this workshop-paper, the example of the terminology record (shown above) contains only the basic or the most relevant elements that will be required for the workshop activities that follow in the next chapter.

7. Workshop Activities

The following paragraphs contain practical activities concerning the maritime terminology management. The first set is concerned exclusively with definitions, while the second set is designed for practicing the creation of terminology records.

7.1 Tracing definitions back to their corresponding terms

The purpose of the following activity is to show that some definitions are easy to trace back to their terms and that others are not and to raise the discussion as to why this is the case.

7.1.1 Activity 1 (group work): *By looking at the set of maritime terminology definitions below, try to guess which terms they belong to and discuss:*

a) watertight spaces contained between the outside bottom plating, the tank top and the margin plate
b) an anchor moving over the sea bottom involuntarily because it is no longer preventing the movement of the vessel
c) a floorlike surface wholly or partially occupying one level of a hull, superstructure, or deckhouse, generally cambered, and often serving as a member for strengthening the structure of a vessel

7.2 Creating terminology records

7.2.1 Activity 2 (group work): *Supply the required elements (below) in order to create terminology records for the following maritime terms*: **berth**, **single up**, **forward spring**, **bulbous bow**, **true course.**

term:

definition:

context (example of usage):

admitted term:

not-recommened term:

equivalent(s) in other language(s):

8. Conclusion

The aim of this paper-workshop was to present the basic concepts involved in terminology management, ranging from the definition of the terminology itself to presentation of activities, tools and principles essential to terminology work. Theory was based on several relevant texts associated with this topic, while examples and material used in workshop activities were adapted from the material provided in the MARITERM project. The ultimate aim was to raise awareness of how terminological work of this type (creating terminological database of maritime terminology in Croatian and English language) can help to inspire similar projects in other languages that could result in similar databases that could be linked together with a view of improving the flow or exchange of knowledge and information in broader multilingual environment associated with the maritime field.

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