The MarTEL Project

Developing Standards for Communication at Sea

Professor Dr Reza Ziarati FMarEST, FIMechE, FIET, CEng
Captain Himadri Lahiry MIMar(Tech), FRMetS.

The Scandinavian Star disaster sets a good example as to how communication plays a major role or a contributory factor in causing an accident. The ferry was sailing from Oslo to Norway on 7th April 1990. The crew (99) was multinational and most of the passengers (383) were from Norway. Two fires broke out. The first one was quickly extinguished but the second one spread rapidly and went out of control. The result is 158 deaths.

Many in the crew did not speak or understand Norwegian or English so they were not able to help the passengers to evacuate the ferry (Robinson, 1999). After Scandinavian Star disaster two initiatives were initiated at IMO, viz:

- MSC/Circ 673: "On board Communications for Passenger Care" leading to the preparation of a corpus of English Phrases specific for passenger vessels.
- MSC/Circ 794: "IMO Standard Marine Communication Phrases" = (Scandinavian Star case is considered as the origin of the Standard Maritime Communication Phrases - SMCP)

The poor safety organization on board coupled with the inability of the officers to communicate with all of the crew and the inability of the crew to communicate with the passengers were noted to have exacerbated the loss of life.

Scandinavian Star disaster is just one of many examples which reveal the alarming fact that over 40% of accidents at sea are caused by poor communication. A large number of research studies have been carried out in recent years which have proven that the lack of standards in maritime English must be addressed (Ziarati, 2008 – IMLA 08, Albayrak, 2008 – IMLA 08, Ziarati et al, 2009 – Bridge 09). The case study of grounding of FINNREEL RoRo Cargo (IMO, 2005b), stranding of 'City of Sunderland' a vehicle carrier (IMO, 2005c) and many more disasters could have been avoided and many lives saved if standards were available for communication at sea. The MarTEL project believes it can provide the solution to this problem. MarTEL offers a new and innovative approach to the Maritime English Language of mariners and port workers across the European Union. Through an interactive online learning platform, MarTEL will create and test a set of accepted standards of Maritime English Language for merchant seafarers whose first language is not English.

MarTEL is at the head of contemporary research in the field. It has been developed by a consortium of highly experienced European partners; each from a different but significant background that meets the requirements of the project perfectly. The consortium includes maritime universities and training institutions as well as private companies which have specific experience or expertise in the project's area. The project is supported by the European Union, which has funded the development and research of MarTEL since 2007.

The project has received recognition from the EU because it meets several criteria for future development within the union. It both encourages and advances the cause of lifelong learning among adult European learners and promotes the development of linguistic diversity and closer cohesion in Europe. MarTEL also furthers the growth of European and international safety at sea, which justifies the Projects inclusion within the EU's Leonardo da Vinci Programme.

At first maritime English may not seem to be of great importance; however the issue takes on greater significance when one considers the fact that the 75% of seafarers presently employed aboard merchant ships or at work in most European Ports do not come from European Union countries and have been educated at institutions outside of the Union. Therefore they are not fluent or even able to speak English at all. Because merchant shipping is an international industry and accurate communication is vital, it is widely accepted that English is the language of the sea. Therefore a seafarer's ability to communicate to a high standard of English is essential. For this reason the MarTEL Project was first initiated. Furthermore the staggeringly high number of accidents being caused or in some way related to poor levels of maritime English aboard merchant vessels or in ports has been of increasing concern to seafarers, ship owners/operators and maritime education and training (MET) institutions alike. The problem acquired greater significance upon the publication of official International Maritime Organisation (IMO) statistics, stating clearly that 80% of accidents at sea are caused by human error, nearly half of which are attributed to communications failures among the crew.

It has also been proven that there is a distinct lack of standards for the certification of maritime English at international, European and even national levels. Although there are some maritime English model courses such as the IMO's SMCP (Standard Maritime Communication Phrases, 2001), they are not certified and only provide basic maritime English at an elementary level. Consequently the MarTEL consortium has endeavoured to produce, a set of Maritime English standards (based upon SMCP etc) and a system of online testing of the Maritime English language standards created. This is expected to be incorporated and accepted by a number of MET institutions and accreditation bodies (inc. EdExcel) across the European Union at the start of 2010. The core aim of the project intends to produce a series of maritime English language standards at three different levels, which will then be tested via an online platform. These levels consist of:

- The **Foundation standard,** which will include tests at three levels of proficiency: Elementary, Intermediate and Advanced. All levels will contain active skills, such as Speaking, Comprehension and Writing. The content will be based on active learning and on maritime terminology and usage with little emphasis on grammar.
- The **Officer standard**, which will be based on TOEFL 550 standards but with content based primarily on Navigation English and Marine Engineering English. These tests will focus on all skills, with less prominence given to grammar.
- The **Senior Officer's standard**, which will be equivalent to TOEFL 600 and aimed at the senior officers in charge of vessels over 3000 GRT. The standard will include a section on language requirements for these vessels. All standards for Officer and Senior Officer Levels will give varying levels of importance to different skills and proficiency requirements at various ranks and duties. For example, a Chief Engineer

should be competent on comprehension (especially reading) and writing but a more moderate level of speaking may be tolerated.

The impact of the MarTEL project is expected to be significant and wide ranging. Of course there are the obvious benefits to life. Put simply, MarTEL will save lives at sea. All too often an accident at sea leads to the deaths of seafarers. These are considered industrial accidents and are rarely reported in the international or even national press, and owing to the global nature of merchant shipping these deaths often go unnoticed by the wider world.

MarTEL is also expected to reduce waste in merchant shipping equipment and cargo. Although deaths do occur, the accidents often occur nearer land or in port which, although less life threatening still results in the loss of an expensive cargo. Take for example the recent cases of cargo being lost from carrier ships around the UK alone, which although not caused by failures in maritime English, easily could have been. This type of accident causes a host of problems including the loss of the ship, and cargo, all of which leads inescapably towards the increase of shipping insurance.

Finally MarTEL is expected to have an indirect environmental impact. If safety standards are improved as a consequence of better communication skills it follows that greater safety at sea will lead to fewer environmental disasters like that of the oil tanker Prestige. In November 2002 the Liberian tanker, Prestige, broke up and sank with 77,000 tons of oil on board, just 120 miles off the Spanish coast. Several hours before the first distress call, in an exchange between the Prestige and the Cape Finisterre station, communication was calm and clear and used SMCP. However after the first mayday call communication procedures broke down and the SMCP were abandoned, consequently the emergency situation was badly handled by the ship's crew. The resultant oil spill left thousands of fishermen out of work, and contaminated more than 100 beaches and caused untold damage to the environment which may have been reduced had proper communications been followed throughout.

The MarTEL project aims to address poor communication at sea through in-depth training of mariners to a high standard. To enhance MarTEL's potential each stage of the Project has followed a process of evaluation and phase testing of the standards and their accompanying online testing facility. The Phase One of the project for example is designed to introduce English language ability in learners who have had the underpinning knowledge of nationally recognised high school diploma or equivalent for their entry to maritime vocational training in recognised training institutions. The unit is based on the English Core Section 1 and 2, the minimum standards set by IMO in their Maritime English Model Course 3.17 (2000). It also covers the common European Framework of Reference for Languages.

The unit material in Phase One is not specific to any particular country or high school curriculum but assumes a commonality in key subject areas such as: General Science, General Knowledge, Geography and Mathematics and introduction of some elements of maritime English in a non-vocational format based on assumptions of commonality of high school curricula that are part of future naval officer training. The main approach is intended mainly for the preparatory classes for the entry to the maritime training institution and it employs a modern approach to all learners who have been educating at different schools.

The pre requisite of this unit is that the learners will have sufficient English knowledge at the outset to understand and progress through the learning. The sample tests in Phase One are aimed to assess the language proficiency level of a candidate, wishing to enter a MET institute/centre. The test served as a benchmark to establish the overall quality of the MarTEL Project. The explanation of grammatical rules is kept at the minimum,

In fact the results process benefits the MarTEL Project in a far more important sense in that it has also offered a useful addition to the evaluation of the project as a whole and presented a number of improvements that can be made to the end product. The evaluation process was headed by a MarTEL task group and sought to run the MarTEL Phase One test under controlled conditions with real cadets at a MET institution in Poland. The findings were encouraging and showed the true extent of the MarTEL Project's potential in advancing the cause of maritime English language teaching and safety at sea. The testing process actually highlighted the strengths of the methods for teaching maritime English, in that the testing was relatively easy to complete and the results favourable, with only a few minor areas for improvement (largely centring upon the phrasing of questions).

The Phase Two of the MarTEL project of both for Deck officers and Engineers follow on from Phase One of MarTEL Maritime English. The units are designed to determine the ability of seafarers to speak and understand English in a Maritime environment. They are intended as standard units for graduates of Maritime Education and Training institutions to teach Maritime English to ocean going Watch Officers and Engineers. On successful completion of these units, the learners will be able to communicate, comprehend and use English language in their Maritime profession in a multi-lingual environment. The yardstick for assessment of these units are considered as required by the International Standard of Training Certification and Watch-keeping (STCW) convention to provide a single standard instrument that gives bench-mark for training, assessment and assisting learners to attain the required operation level and ensures that the entire maritime industry is operating from the same minimum standard.

These units rely heavily on the use of International Maritime Organisation's (IMO) Standard Maritime Communication Phrases (SMCP) and maritime professional knowledge to be able to effectively carry out the job at sea and in port.

MarTEL is presently undergoing the final stages of development. It has completed its evaluation and is set to enter pilot programmes in a number of MET universities and institutions across Europe in the next three months. The final developments include the testing of the last stage of the Phase Three tests, which focus on the development of senior officer (Captain and Chief Engineer) levels of Maritime English language competency. Once this has been completed it will enable the consortium to move on to pilot testing all phases of MarTEL in real-life classrooms across the EU.

It is hoped that MarTEL will be ready for delivery and pilot use by the end of the third quarter of 2009 and will be ready for presentation to international accrediting and awarding bodies, first in Europe and (in the longer-term) on a global basis. The TUDEV Institute of Maritime Studies in Turkey has been chosen as the first port of call for actual testing of MarTEL for three reasons. First they are a key partner in the consortium developing MarTEL and therefore enjoy a unique and detailed understanding of the project and the way in

which it can be best implemented. The second reason is their vast experience in implementing other new maritime standards and courses, within their existing framework of MET curricula. Finally TUDEV is a good environment to house MarTEL because it has contacts in the Maritime sector, including awarding bodies and merchant shipping providers, thus ensuring that MarTEL can advance quickly beyond TUDEV to other MET institutions. After successful pilot testing in Turkey, tentative plans have already been made to implement MarTEL in other MET institutions within the consortium, such as Norway and Poland.

The continual development and implementation of the MarTEL Project is therefore well on track for its scheduled completion and piloting in Turkey. The MarTEL Partnership is convinced by early testing and the interest already being shown by European MET providers of the long-term value of the MarTEL project. This will therefore be an eventful year for the advance of maritime English language consequently increasing safety at sea for European seafarers. For more information and regular up-dates on the MarTEL Project, please visit http://www.maritime-tests.org/