Development of a Technological Tool to Improve Listening and Speaking Skills of Colombian Maritime Authority Members

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ABSTRACT

Due to the risks of accidents caused by the ambiguity and misunderstanding in maritime communications, the International Maritime Organization (IMO) in November 2001, adopted the Standard Maritime Communication Phrases in response of the accidents caused by misunderstandings and mistakes in communications. In Colombia, The Maritime Authority (DIMAR), with the technical support of the (IMO), "contributes to strengthening the national maritime power, the protection of human life at sea, maritime activities promotion, scientific and technological development of the nation". (Maritima, 2019)

Through the oral and written examinations made by crewmembers of the DIMAR naval units, it was found the lack of proficiency to communicate using Maritime English. In the case, foreign flag vessels' crewmembers require the help from Colombian Maritime Authority at sea; the usage of a correct maritime English can be relevant in the prevention of accidents and risky situations such as collision, flooding, fires etcetera. Therefore, it is important to find adequate tools that help to increase their English language communications competences. As a result, the development of a pedagogical tool with the use of "YouTube" web 2.0 website, offers them the opportunity to study whatever place they are, increasing their competences and then, reducing the risk of accidents caused by human mistakes at sea.

CONTENTS

CHAPTER I

INTRODUCTION

Maritime trade and transport industry have been recognized as the most important involving people and merchandise. That means many seafarers sailing around the world from many different countries talking many different languages which represents a risk for the crews caused by misunderstanding in communications.

This is why the International Maritime Organization (IMO), in 2001 after many conventions and amendments, adopted the Standard Maritime Communication Phrases (SMCP) in response to many accidents caused by misunderstandings and mistakes in this specific language and Colombia as part of the IMO, through the Maritime authority (DIMAR) ensures safe of human life at sea and maritime pollution as the main goal of the international organization.

This works proposes a pedagogical tool with the use of “YouTube” web 2.0 website, based on the International Maritime Organization model course 3.17 and the SMCP in order to improve listening and speaking skills of Colombian Maritime Authority members, considering that during more than eighteen years has been observed a low level of proficiency in listening and speaking using the English language for the interaction with foreign flag state vessels crossing around the naval operations areas. The tool aims to motivate the crews to study the English language specifically the maritime English and improve their communication competences. Hence, minimizing the risk of accidents caused by misunderstandings.

PROBLEM STATEMENT

The International Maritime Organization (IMO) states that around 80 % of accidents at sea are caused by human errors. 30% of these accidents are related to linguistic and/or communication mistakes. Many of them involve the loss of human lives. (Vangehuchten, 2015). Therefore, a precise and safe usage of communication at sea to prevent fatal accidents caused by human mistakes should be priority for people involved in the maritime industry.

"many marine accidents were caused by seafarers simply not being able to understand each other, the IMO established English as the international language of the sea" (Tony, 2009, pág. 10)

One of the tasks that the crewmembers must to do onboard is the "guard duty" service also called as shifts that guaranty the safety of the vessel and crew at sea and the successful of the naval operations. In most of the cases, the communications must be controlled by the Maritime Authority. Then, it is necessary to establish English as the standard language, following the protocols according to the Maritime Organization regulations. IMO, resolution A918/IMO-2001, adopts the Standard Marine Communication Phrases (SMCP) as a more comprehensive standardized safety language. Correspondingly, SOLAS Convention of 2004 proposed:

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 onboard between

> the pilot and bridge watchkeeping personnel unless those directly involved in the communication speak a common language other than English. (Organization, 2004, pág. 366)

Correspondingly, Colombian maritime authority and navy ships' crewmembers are instructed in specific institutions such as Surface School located in to the "ARC Bolivar" Cartagena Navy Base or the Fleet training center (CEF) in "Bahia Malaga" Pacific Navy Base that aim to reinforce their skills on board the naval units. When the personal are transferred to the naval units after the training stage in the Navy schools, it is difficult for them to attend ordinary classes in other training institutions due to the time available and work conditions.

In this context, the need to look for adequate and effective solutions is evident. This is why, through the oral and written exams presented by crewmembers of the Colombian Maritime Authority units located in Cartagena Colombian Navy base, it was evidenced the lack of proficiency to communicate properly in Maritime English Language with foreign flag vessels (Oral and written exams 2017-2018). Therefore, it is very important to find adequate tools, helping the crews to increase their English language communications competences.

The development of a pedagogical tool with the use of "YouTube" web 2.0 website can offer them the opportunity to study whatever place the ship is located accomplishing naval operations. Even if there is not access to an internet connection, the videos can be saved beforehand, allow them to watch the material as many times they need to acquire the knowledge and competences.

Given the above, this question arises: How to propose a pedagogical tool with the use of “YouTube” web 2.0 website, based on the International Maritime Organization Standard Maritime Communication Phrases and IMO model course 3.17, that can improve listening and speaking skills of Colombian Maritime Authority members?

JUSTIFICATION

Colombian navy is an institution that

> Contributes with the defense of the Nation through the effective use of flexible naval power in the maritime, river and land spaces under its responsibility, in order to fulfill the constitutional role and participate in the development of sea power and the protection of the interests of Colombians. (NACIONAL, 2019)

One of the Colombian navy's purposes through the Education Strategic Plan 2012 – 2030 is the

> "Strengthen the learning of languages other than mother tongue, in order to facilitate access to information, the incorporation of cutting-edge knowledge and global integration, through the assimilation of cultural diversity and the development of complex thinking" (COLOMBIA, 2016, pág. 31)

In the same way, Colombian Maritime Authority is an organization that it is part of Colombian Navy and "Contributes to strengthening the national maritime power, ensuring maritime comprehensive security, protection of human life at sea, Colombian maritime activities promotion and scientific and technological development of the nation" (Maritima, 2019). In this way, accomplishing with the conventions, agreements and recommendations that IMO suggests in the way of promoting the maritime safety and the prevention of maritime pollution.

In one of the IMO conventions called the Standards of training, certification and, watchkeeping (STCW), the organization establishes the use of the English language in the maritime field. Thus, the ability to communicate effectively in maritime English is the

unique way of communication at sea to avoid the ambiguity that can causes accidents that involve the loss of human life and natural disasters unless the personal involved can speak another common language. Therefore, the correct use of Maritime English on board of the vessels, no matter the nationality, is fundamental to prevent accidents caused by communication mistakes. Under the Manila 2010 conference of parties to the international convention on standards of training, certification and watchkeeping for seafarers' amendments to the STCW, several requirements directly refer to or imply competence and proficiency in Maritime English such as the following paragraphs described in this document:

- "Effective communication" (IMO, 2010, pág. 35).
- Adequate knowledge of the English language to enable the officer to use charts and other nautical publications, to understand meteorological information and messages concerning ship's safety and operation, to communicate with other ships, coast stations and VTS centers and to perform the officer's duties also with a multilingual crew, including the ability to use and understand the IMO Standard Marine Communication Phrases To communicate with other ships. (IMO, 2010, pág. 40)
- "Ability to establish and maintain effective communications during loading and unloading" (IMO, 2010, pág. 42)
- "Ability to understand and interpret a synoptic chart and to forecast area weather, taking into account local weather conditions and information received by weather fax" (IMO, 2010, pág. 53)

- "Steer the ship and also comply with helm orders in the English language" (IMO, 2010, pág. 76)

- "Adequate knowledge of the English language to enable the officer to use engineering publications and to perform engineering duties" (IMO, 2010, pág. 87)

- "English language messages relevant to the safety of the ship, security and persons on board and protection of the marine environment are correctly handled" (IMO, 2010, pág. 136)

- "Ability to provide relevant information to passengers and other personnel during an emergency situation" (IMO, 2010, pág. 179)

Some of the examples from SMCP of how the maritime communication on board must be established are the following:

1. In the case of imminent danger: "MAYDAY- MAYDAY- MAYDAY. This is Motor vessel "Spirit" I collided with an unknown object in position Latitude 35º22.12 minutes North Longitude 075º38.24 minutes west. I require immediate assistance; this is a critical condition. I have a serious list for my port side"

2. When a unit needs to establish communication in a routine operation: "Motor vessel Spirit, this is Colombian Maritime authority. Vessel traffic service control station calling you channel 16"

3. When a vessel needs to inform the maneuver intention: "Information: We are approaching to you, bearing 235, two miles away from your position. Request: Please rig the accommodation ladder for your starboard side, 1 meter above the water"

These examples show just some of the uncountable real situations that happen every day in different operations and conditions. Nevertheless, the lack of competences to establish good communication and the misunderstanding in multicultural crews on board the vessels increases the risks of accidents.

According to the magazine from the World Maritime University (2016) “Shipping has always been and continues to be a global industry and is today the most globalized of all industries, responsible for carrying 90 percent of world trade. (pág. 5). Therefore, it is very important that emerging educational programs can help with developing people’s skills involved in these scenarios. Consequently, all over the world, different institutions aim to accomplish the requirements of the IMO. One of the most recognized institutions is the “World Maritime University” located in Malmö Sweden that offers the program “English and Study Skills Program” focused on the development of these specific English language skills for seafarers.

Maritime English and Study Skills Program (ESSP). The ESSP is designed to enhance English language competences (…) the ESSP students are external students, who come to Malmö for this unique program that prepares them for both study and professional life in the maritime field. (University, 2016, pág. 9)

As well as the World Maritime University, one of these recognized organizations is the European Commission’s Leonardo da Vinci program that in 2007 financed a project called the Language Competence Certification Tools for the Vocations (LCCTV) in which developed the course book: English for Mariners.

The material is arranged in two courses, each at a different level: level 1 is Pre-

> Intermediate (CEFR-a2 / IELTS 3 and below) and level 2 is Intermediate (CEFR-b2 / IELTS 5). Both levels are concerned with the language used when mooring, belaying, stowing, measuring, piloting, naming hull and deck parts, describing sea and weather conditions, making measurements and doing the mathematics required for navigation (Tony, 2009, pág. 10)

Colombia, willing to fulfil the international agreements, through the Maritime Authority approves the circular No. 29201403594 MD-DIMAR-SUBMERC-Jun/2014 in accordance with the training centers approved locally. The formation of these Maritime education and training institutions (MET) can help to cover the demands that our country has for having well-prepared crewmembers to face the challenges that the maritime industry and sea demand. Some of these training centers offer the IMO Model course 3.17, which is the main guide that the International Maritime Organization provides as the standards for communications at sea.

However, the observation and the results of the diagnostic test presented by Colombian Maritime Authority members in Cartagena navy base shows the importance to find new alternatives that can help them to improve their skills in maritime communications using the (SMCP) onboard the DIMAR units. Thus, improving the skills that can prevent the loss of human life at sea and fatal accidents caused by the misunderstanding in maritime communications.

OBJECTIVES

General Objective

To propose a pedagogical tool with the use of "YouTube" web 2.0 website, based on the International Maritime Organization model course 3.17, in order to improve listening and speaking skills of Colombian Maritime Authority members.

Specific Objectives

1. To identify the level of technical maritime English of the Colombian Maritime Authority members based on the IMO model course 3.17 as a standard of maritime communications.
2. To recognize the impact of using web 2.0 technology in the learning process of English as a foreign language.
3. To design the content of the pedagogical tool with the use of "YouTube" web 2.0 website that improves the listening and speaking skills of Colombian Maritime Authority members, using the Standard Marine Communication Phrases SMCP.
4. To socialize the pedagogical tool with the Colombian Maritime Authority members.

THEORETICAL FRAMEWORK

In 1914, two years after the Titanic disaster in which 1,517 people died; more than two-thirds of her 2,207 passengers and crew (Frey, 2009, pág. 2), maritime nations adopted the "International Convention for the Safety of Life at Sea" (SOLAS) as a measure that guaranteed that in the event of accidents or dangerous situations at sea, ship's passengers and crew members have high chances to survive. Aspects such as the improvement in vessel's design and building, fire protection systems, lifesaving appliances, navigation aids, electronic devices, rescue plans, communication systems and so on, had been taken in consideration as part of the important elements to discuss. After this treaty of safety of life at sea, it was established in 1948 as part of the United Nations, the International Maritime Organization. (IMO) which is

"the global standard-setting authority for the safety, security and environmental performance of international shipping. Its main role is to create a regulatory framework for the shipping industry that is fair and effective, universally adopted and universally implemented" (IMO, Introduction to IMO, 2019)

One of the IMO conventions is the Standards of Training, Certification and, Watchkeeping for Seafarers (STCW) developed in 1978. Its main purpose is the statement of common agreements regarding international standards of training, certification, and watchkeeping for the maritime field. That means the regulations and standards of education, training and guard duty responsibilities that must be accomplished by all the people who are involved in maritime activities. One of these requirements is the ability to

use and understand the IMO Standard Marine Communication Phrases SMCP as a request in the case someone wants to be part of the maritime industry.

Research Paradigm

In language learning, there is a wide range of alternatives and tools depending on the needs of every single student. One of these alternatives is the use of technology that has become one of the most important and effective ways to share information for the last two decades. Some of them are blogs, web pages, applications, E-mails, video conferences and so on. Therefore, classical methods of education must look for alternatives that can support students learning, keeping in mind that people nowadays spent more time using technological devices for learning instead of the traditional ways. One of the most recently used has been the YouTube video clips through the "Web 2.0" technology that allows self-learning considering the own pace and time available in every singular user. According to (MOHAMMED MOHAMMED AHMED EBIED), Web 2.0 basically refers to the transition from static HTML Web pages to a dynamic Web that is more organized and based on serving Web applications. (pág. 620).

. With this technology, students can find different and very useful material depending on the learner's wishes and needs. In addition, students can review and watch the videos as many times they need. Furthermore, create a learning community, comment and show their points of view.

It is also important to consider that, as well as technology, the learning paradigms are changing the perspectives in how it is been focused and addressed education today. Information is becoming a product that belongs to everybody and not only and exclusively

element from the elite. Thanks to technology, information is spread everywhere, and its access is closer and more democratic. The equality in its access brings opportunities and opens doors for everybody. Therefore, one of the most useful tools that promotes equality is called YouTube video-sharing technology.

To illustrate and demonstrate its benefits, the next are two clear results of how the use of YouTube can increases the English learning acquisition, based on the research made by Mohammed Mohammed Ahmed Ebied, Samir Ahmed Al-Sayed Kahouf And Shimaa Ahmed Abdel Rahman from Najran University in a two groups of students from different educational institutions. The first case study shows the Impact of using YouTube in EFL classroom on enhancing EFL students' learning from the “Elementary School Teacher of English”. The second one is the case study that shows the benefits in EFL students when they are exposed to YouTube video clips during reading activities on the development of vocabulary comprehension, in the preparatory year intensive English course at King Abdul-Aziz University.

Case Study 1

Huda Omar Alwehaibi, Ph.D., Assistant Professor of Curriculum and English Language Methodology and the Dean of the Community College at Princess Noura Bint Abdulrahman University, Riyadh, Saudi Arabia, shows The Impact of Using YouTube In EFL classroom on enhancing EFL students' content learning from the “Elementary School Teacher of English”. There were two groups of EFL second-year college students at the Department of Curriculum and Instruction in the Faculty of Education at Princess Noura

University in Riyadh, Saudi Arabia were randomly selected, and both studied the theoretical content of the course “Observation in Schools 2”.

In the experimental group, students studied through YouTube videos and added the discussion of PowerPoint presentation. Students of the control group were using the same content through the usual lecture-based method. The statistical analysis of the information collected after the test evidenced that YouTube had a significant positive effect on EFL students in the theoretical content of the course “Observation in School 2”. This result supports different aspects during the data analysis and reveals the outstanding impact of YouTube in the improvement of students’ learning.

This study could evidence that YouTube improves the learning process in different forms. Moreover, its versatility and dynamism catch the students’ attention and concentration, which causes motivation for watching, reading, and writing and then, create the space for discussion and agreement.

Case Study 2

Another study shows the benefits in EFL students when they are exposed to YouTube video clips during reading activities on the development of vocabulary comprehension and recognition in the preparatory year intensive English course at King Abdul-Aziz University, Saudi Arabia. In this case, 100 Saudi female intermediate level students aged between 18-20 years old participated in the study. In the experimental group, students studied the target vocabulary in a multimedia environment, using YouTube videos. On the other hand, students from the control group studied the new vocabulary by following a traditional method using only pictures.

This study utilized pre-tests and post-tests for both experimental and controlled group plus two questionnaires in the experimental group about the students' perception using YouTube. The pre-test shows that the students were similar in their knowledge of the target before the study. The students were randomly assigned into two groups: the experimental group watched the YouTube clips during the reading activities and the control group was not exposed to the videos.

The result evinces that incorporating YouTube videos into the syllabus, had a significant impact on the level of recognition and understanding of the target vocabulary, as it was shown in the results. They indicate that the post-test scores of the students in the experimental group ($M= 46.5$, $SD= 8.6$) were significantly higher ($t(98) = 7.515$, $p< 0.05$) compared to the scores of the students in the control group ($M= 31.3$, $SD= 9.2$).

As it was shown in both case studies, YouTube had a significantly positive impact on enhancing English students' learning. Thus, the two cases evidence that when YouTube is used in an academic purpose can cause an effective impact on knowledge acquisition. Then, it should be considered as effective support for instructional design.

In this way, (Kitchenham, 2011) say "wide revolution in social media and technological advances are highly relevant in educational contexts, where devices such as iPhones and iPads as well as Android devices offer a series of platforms alongside traditional ICT to assist the process of learning"

English Learning Skills

According to Howatt and Dakin (1974),

"listening is the ability to identify and understand what others are saying. This process involves understanding a speaker's accent or pronunciation, the speaker's grammar and vocabulary, and comprehension of meaning" (Islam, 2012, pág. 206)

This is an important skill in the maritime context, considering that on board the merchant vessels normally the crewmembers come from different countries and that makes the communication difficult because of the accents that everyone has. Also, the difficulty to understand a conversation via radio-communications systems due to the squelch, interferences, the accent of the speaker, English level or in the case of critical conditions where the time to give an instruction and the time for reacting accordingly to the instruction is limited. One example can be when the vessel is crossing a restricted area like a canal surrounded by rocks; the helmsman is listening the orders from the captain or the pilot and in this case, there is no time for mistakes and misunderstanding in the communications because of the heavy risk of grounding, that can cause a serious flooding and then, the vessel's sinking. Therefore, the use of technology tool like (YouTube web 2.0) can be useful to enhance the listening skill and may give the trainee visual and voice inputs, making faster the development of the learning process.

"Reading is the process of understanding a written message through a code. It is an important input skill, which depends on the vocabulary and background knowledge of the learner in the second language" (Constantinescu, 2007)

. The use of technology can catch the student's interest due to the easy way and immediate access to the information that increases their vocabulary and comprehension.

As well as the listening and reading skills, speaking is very important in maritime industry context considering that communication only is possible when both speaker and listener can understand what they are talking about.

"Speaking does not cover just knowing the linguistic feature; linguistic feature of the message expanding oral communication requires more than memorized vocabulary and grammatical comprehension" (Ali Derakhshan, 2016, pág. 178)

Communication mistakes can increase the risks of fatal accidents in the different cases such as in the external communications between ship to shore and ship to ship, the lack of knowledge to understand precise instructions, during stressed situations like flooding or fire emergencies. It evinces the importance of precise and clear communication.

Research Approach

Learning English for a specific purpose (ESP) is a branch of the English language teaching that has developed its approaches, materials, and methodology.

ESP covers "the expansion of demand for English to suit specific needs of a profession, 2) developments in the field of linguistics (attention shifted from defining formal language features to discovering the ways in which language is used in real communication, causing the need for the development of English courses for specific group of learners), and 3) educational psychology (learner's needs and interests have an influence on their motivation and effectiveness of their learning). (Bojović)

Moreover, not only it is necessary for the learning of this language to get a job onboard of the Maritime industry, but also having the competence and the skills to avoid misunderstandings that could cause fatal accidents. Thus, it is important to consider reflections of human thoughts and the understanding of different English contexts that a seafarer would face in his or her daily routines. Some examples are the cases of writing and reading information related to weather conditions, managing fire emergencies or distress situations in which the crew and passengers are involved, checklists procedures before departure maneuvers, listening and speaking through radio communication systems with the control stations and so on.

"Language-Centred", "Skills-Centred" and "Learning-Centred" are the approaches to design ESP materials. Nevertheless, any procedure must have flexibility, feedback channels and error tolerance regarding the response of the differences that humans have in the learning process. The design of a tool using technology cannot focus only on the approaches exposed but must also consider any of them because they can bring significant help in some specific cases. For example, the "Language-Centred Approach" fits correctly considering that on board of the vessels it is important to learn specific terminology, standard normalized phrases or speech protocols (surface performance).

"The language-centred analysis of target situation data is only at the surface level. It reveals very little about the competence that underlies the performance" (Waters, 2009)

In this case, it is not required to be eloquent or charismatic. It is only useful to memorized and follow the protocols. We can support the learning of important speech patterns with the use of audio-lingual or direct methods for frequent repetitions or drills as it is possible with YouTube videos. However, if a crewmember needs to talk with other

colleagues, passengers, company agents or even solve a different and unexpected situation, it is important to use the language according to the context. In this scenario, the meaning is more important than simple information. According to the cognitive theory of learning stated by Noam Chomsky, in which he is questioning: “How from a finite range of experience, the human mind is able to cope with an infinitive range of possible situations?” we should consider the “Skill Centred Approach” important. It proposes: “learner as a user of language rather than as a learner of language”. On the other hand, the “Learning Centred Approach” says: “We must look beyond the competence that enables someone to perform, because what we want to discover is not the competence itself, but how someone acquires that competence”. It means that the plan must consider that new methods emphasize on eclectic learning.

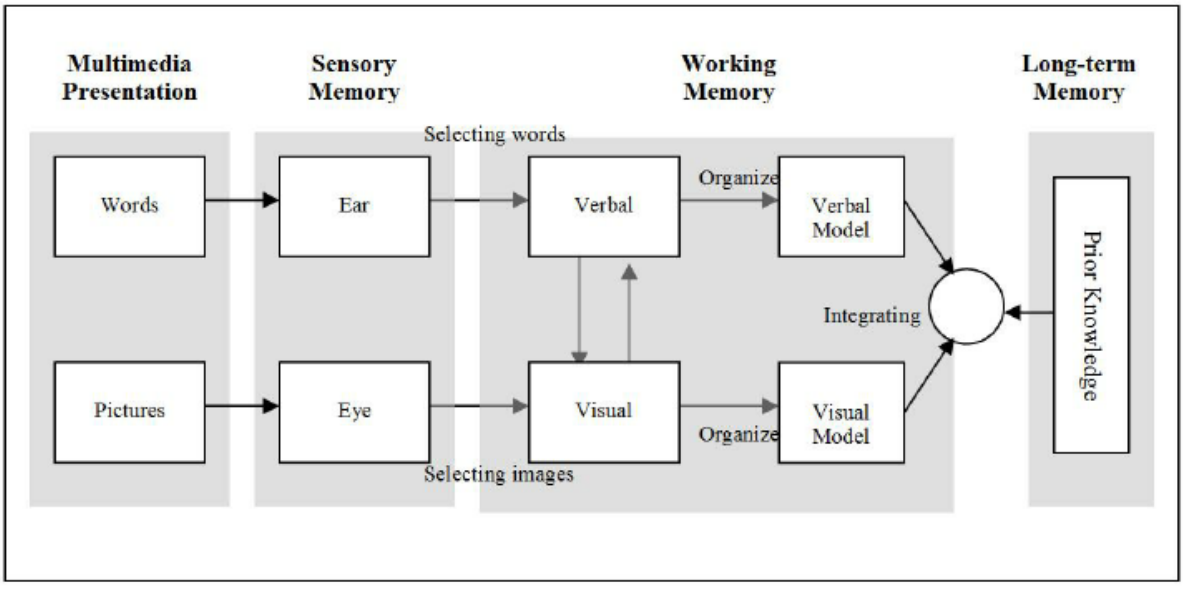
Moreover, in relation with the English for specific purpose (ESP) approaches and considering the importance of keeping open doors for new theories and paradigms in the way of how humans learn, it’s very important the development of the pedagogical tool with the use of “YouTube” web 2.0 having the support of the Cognitive Theory of Multimedia Learning (CTML) for the reason that this theory is interested in the cognitive process of how people built meaningful learning based on the idea that

“learners attempt to build meaningful connections between words and pictures and then, learn more deeply than they could have with words or pictures alone” (mayer)

According to the theory, Richard E. Mayer proposes the effectiveness of words and pictures at the same time in the process of learning as the most effective way than the images or words separately. Mayer argues that humans pose separate information processing channels that means the eyes and the ears and their limitations by themselves as

separate organs to retain information in the working memory, reflecting portions of the animated or static material. This information has to be structured; otherwise, the learner can get confused.

Mayer argues three stages in his theory essential for active learning: Selective relevant material, organizing relevant material and integrating the relevant material with the prior knowledge. Selective relevant material is the stage when the learner pays attention to the relevant words and pictures. This is when the material goes into the working memory. Organizing selective material is the stage of building structural relation between the words and pictures and Integrating selective material with prior knowledge is the stage when the incoming material is integrated with the existing knowledge in the long-term memory. The use of videos is greatly effective especially for introductory courses and can facilitate difficult concepts, as well as the meaningful learning from words and pictures when the learner engages in five cognitive processes shows in the following figure:



Taken from Riniah Kabooha, Tariq Elyas, The impact of using YouTube videos on learning

vocabulary in Saudi EFL classroom, 2016

METHODOLOGY

The action-research

This type of investigation focuses on solving problems. It works in scientific knowledge as well as in the development of the competences of the participants of the investigation. (Ferrance, 2000) “action research specifically refers to a disciplined inquiry done by a teacher with the intent that the research will inform and change his or her practices in the future.” (pág. 1)

In this case, it means that the investigation focusses on solving the problems that arise during the different types of maritime operations when the crews need to establish and effective communication in English with a foreign flag state vessel and then, improving their competences for the successful development of naval operations.

Stages of Action Research

Observation

Informal observations were carried out aboard DIMAR naval units during the last 8 years, accomplishing naval operations, and 11 years aboard Colombian Navy war ships where the crews have faced innumerable situations in which it is necessary to establish communications with foreign-flag ships using the English language as the only means. In this context, it was possible to see the failure of some crews concerning the domain of this language, which increases the difficulty of solving problems that appear during the different types of maritime operations. Therefore, it arises the need to develop a tool that helps the crew members to improve their skills in the use of the English language, specifically Technical Maritime English in a practical and accessible way. The main aim is to strengthen the capacities of the crews for the successful development of naval operations, and therefore the image of the institution.

In view of the above, diagnostic tests (2017-2018) were carried out with the intention of identifying the flaws in the use of the language. In order to assure the validity and reliability of the test, the structures of the Basic English courses of the UNAD were used as a means of consulting and support with the purpose of identifying competences in the management of the English language in general. Thus, the model course IMO 3.17 and the standard phrases SMCP were used as the frame of the standards that the organization suggests for the development of maritime activities that guarantee the safety of human life at sea and the prevention of marine pollution as the flag to follow. The result of the tests really proves that indeed there is a flaw in the English language in general and in the domain of technical maritime English, which entails the emergence of the need to develop the pedagogical tool.

Planning

This stage is fundamentally based on addressing the recommendations that the OMI publishes in relation to the protection of human life at sea. Therefore, Colombia, as a member of the organization, uses the technical support through DIMAR to establish the regulations that regulate the development of all types of maritime activity in the Colombian territory. In this sense, the publications concerning the improvement of the skills of the maritime technical English at an international level, such as the model course IMO 3.17 and the standard phrases SMCP are the guidelines for the development of the pedagogical tool. This is how, thanks to the observation and analysis for more than 18 years, it was considered necessary to adjust this course to the specific needs of the crews in the Colombian maritime context and considering the role they play as a maritime authority. The designing of videos follows the Standard Maritime Communications Phrases for the

external communications, described in the part A of the IMO Resolution A.918(22) Adopted on 29 November 2001 (INTERNATIONAL MARITIME ORGANIZATION, 2002)

Action

Showing the pedagogical tool and explaining its usefulness to the crewmembers of the Colombian Maritime Authority units located in Cartagena Colombian Navy base and Santa Marta Maritime Authority is a relevant step for this research. The aim is to give a theoretical and practical explanation of how the learners can consult it easily, depending on the type of situation in which they prefer to go deep. Thus, the population who participate as the object of study will be rewarded by having access to the pedagogical tool.

Reflection

As it was described before, after the observation and analysis of the team groups of the different Navy and DIMAR units, specifically those who are in charge of bridge watchkeeping that in some situations have to interact directly with vessels crossing along the naval operation areas at sea, in the case these vessels need some information from the naval units such as information related to safe navigation or instructions, making the procedures clear and safe in any case required, avoiding accidents and misunderstandings. This is how facing these cases were evidenced by the lack of interaction of most of the people accomplishing this role and the necessity of having someone in the bridge who could solve the problems using maritime English. Many of them after these difficult and tense situations started discussing the importance of having the proficiency to speak and understand the English language using a VHF radio for the interaction with another vessel

passing by. Then, arouse the question of how to acquire this proficiency when you live most of the time sailing onboard the naval ships without an internet connection available to study using an E-learning environment during these long periods at sea. Some of the members found it very important and they used different alternatives to study general English supporting the learning with interactive courses, music, English books, movies, among others; but nobody could find some specific material that supports the specific maritime English for their case. Then the questions of how to find some interactive material related to maritime English started to be a need. Although works and even the standard maritime communication phrases already existed, these materials did not help the crews to acquire the maritime English practically and easily because this is only a paper that did not motivate the Self-learning.

The observation was based in the real situations during eight hours per day. These eight hours were divide in two periods of four, which is the time how the shifts of guard duty are arrange on board, accomplishing the standards of training certification and watchkeeping (STCW) convention. The personal was randomly selected as it was mentioned before but only with people in charge of the guard duty at the bridge and the personal from the vessel control traffic stations.

According to that, the English level evaluation was supported with the basic UNAD English courses material and the standardized maritime communication phrases from IMO.

Reflection will be done based on the level of acceptance from the popul*ation.*

DIAGNOSIS

To achieve the main objective first, it is important to know the crewmembers' English level that evidences their skills using general and technical maritime English. Because of that, a diagnostic test was developed. It consisted of two parts. The first part was based on section one of the International Maritime Organization model course 3.17 that contains the General Maritime English (GME) as it is described in the structure of this course. The GME means that the first stage is not related to the word "general" but metaphorically "marinated" English.

"The overall purpose of GME instruction is to teach the language for the language's sake through the application, for example, of maritime scenarios. The GME is designed for trainees who have an elementary and lower intermediate or intermediate level of English" (IMO, Course model 3.17 maritime english, 2009)

Therefore, this first part of the test consists of ten maritime technical words that any crewmember should know as basic words that can be found in any daily situation or event on board as the following: Portside, fire, life jacket, buoy, pilot ladder, bridge, onboard, etcetera.

The second part of the test has five questions that measure the understanding of basic English level, used in any type of basic conversations and consist of three questions related to the present simple knowledge and two related to the present continuous that are two basic forms of the English language.

The participants of this test were randomly selected from the Colombian Maritime naval units located in Cartagena de Indias navy base and they were previously interviewed in order to know how they consider their maritime English level in the scale from 1 to 10 where 10 represents 100%. In the same way, the final and highest score of the written test was ten points that represented 100%.

Test results:

After choosing 22 participants randomly selected from the Maritime Authority as a sample, the results of the test evidenced the following:

PARTICIPANTS	**MARITIME ENG SCORE**	**GENERAL ENG SCORE**	**TOTAL SCORE**	**%**
1	5.0/10	5.0/5.0	7.8	78%
2	1.0/10	3.0/50	4.0	40%
3	2.0/9.0	2.0/5.0	3.0	30%
4	6.0/10	0.0/5.0	3.0	30%
5	2.0/10	0.0/5.0	1.0	10%
6	0.0/10	3.0/50	3.5	35%
7	0.0/10	0.0/5.0	0	0%
8	1.0/10	2.0/5.0	1.5	15%
9	2.0/10	0.0/5.0	1.0	10%

10	0.0/10	0.0/5.0	0	0%
11	0.0/10	0.0/5.0	0	0%
12	0.0/10	0.0/5.0	0	0%
13	2.0/10	2.0/5.0	3.0	30%
14	5.0/10	0.0/5.0	2.5	25%
15	1.0/10	3.0/5.0	3.5	35%
16	6.0/10	5.0/5.0	7.0	70%
17	3.0/10	3.0/5.0	4.5	45%
GENERAL AVERAGE			**2,66**	

PEDAGOGICAL PROPOSAL

The present project objective is to propose a pedagogical tool with the use of "YouTube" web 2.0 website based on the International Maritime Organization model course 3.17 to improve listening and speaking skills of Colombian Maritime Authority members.

The development of the technological tool with the use of "YouTube" web 2.0 website was created to improve the listening and speaking skills of Colombian Maritime Authority members, using the Standard Marine Communication Phrases SMCP as part of the model course 3.17. Thus, following the standards established by the International Maritime Organization (IMO). The set of videos were produced having in consideration the recommendations that the IMO propose for the development of this particular course for a specific purpose.

"Educational systems and the cultural backgrounds of trainees in maritime subjects vary considerably from country to country and the IMO 3.17 course is intended to provide guidance to assist the countries in developing their own training programs to achieve the standards of competency for the English language set out in the STCW convention, 1979, as amended." (IMO, Course model 3.17 maritime english, 2009)

Video description:

The videos were made using the Standard Maritime Communications Phrases for the external communications, described in the part A of the IMO Resolution A.918(22) Adopted on 29 November 2001 (Agenda item 9) considering the importance of this part of

the publication in the case the Colombian Maritime Authority have to face situations and events as in the following list of the publication:

GENERAL

1 Procedure

2 Spelling

3 Message markers

4 Responses

5 Distress / urgency / safety signals

6 Standard organizational phrases

7 Corrections

8 Readiness

9 Repetition

10 Numbers

11 Positions

12 Bearings

13 Courses

14 Distances

15 Speed

16 Time

17 Geographical names

18 Ambiguous words

GLOSSARY

1 General terms

2 VTS special terms

IMO STANDARD MARINE COMMUNICATION PHRASES: PART A

A1 EXTERNAL COMMUNICATION PHRASES

A1/1 Distress traffic

A1/1.1 Distress communications

.1 Fire, explosion

.2 Flooding

.3 Collision

.4 Grounding

.5 List, danger of capsizing

.6 Sinking

.7 Disabled and adrift

.8-Armed attack / piracy

.9 Undesignated distress

.10 Abandoning vessel

.11 Person overboard

A1/1.2 Search and Rescue communications

.1 SAR communications (specifying or supplementary to A1/1.1)

.2 Acknowledgement and / or relay of SAR messages

.3 Performing / coordinating SAR operations

.4 Finishing with SAR operations

A1/1.3 Requesting Medical Assistance

A1/2 Urgency traffic

Safety of a vessel (other than distress)

.1 Technical failure

.2 Cargo

.3 Ice damage

A1/3 Safety Communications

A1/3.1 Meteorological and hydrological conditions

.1 Winds, storms, tropical storms; sea state

.2 Restricted visibility

.3 Ice

.4 Abnormal tides

A1/3.2 Navigational warnings involving

.1 Land- or seamarks

.2 Drifting objects

.3 Electronic navigational aids

.4 Sea bottom characteristics, wrecks

.5 Miscellaneous

5.1 Cable, pipe and seismic / hydrographic operations

5.2 Diving operations, tows, dredging operations

5.3 Tanker transshipment

5.4 Off-shore installations, rig moves

5.5 Defective locks or bridges

5.6 Military operations

5.7 Fishery

A1/3.3 Environmental protection communications

A1/4 Pilotage

A1/4.1 Pilot request

A1/4.2 Embarking / disembarking pilot

A1/4.3 Tug request

A1/5 Specials

A1/5.1 Helicopter operations

A1/5.2 Ice-breaker operations

.1 Ice-breaker request

.2 Ice-breaker assistance for convoy

.3 Ice-breaker assistance in close-coupled towing

A1/6 Vessel Traffic Service (VTS) Standard Phrases

A1/6.1 Phrases for acquiring and providing data for a traffic image

.1 Acquiring and providing routine traffic data

.2 Acquiring and providing distress traffic data

A1/6.2 Phrases for providing VTS services

.1 Information service

1.1 Navigational warnings

1.2 Navigational information

1.3 Traffic information

1.4 Route information

1.5 Hydrographic information

1.6 Electronic navigational aids information

1.7 Meteorological warnings

1.8 Meteorological information

1.9 Meteorological questions and answers

.2 Navigational assistance service

2.1 Request and identification

2.2 Position

2.3 Course

.3 Traffic organization service

3.1 Clearance, forward planning

3.2 Anchoring

3.3 Arrival, berthing and departure

3.4 Enforcement

3.5 Avoiding dangerous situations, providing safe movements

3.6 Canal and lock operations

A1/6.3 Handing over to another VTS

A1/6.4 Phrases for communication with emergency services and allied services

.1 Emergency services (SAR, firefighting, pollution fighting)

.2 Tug services

.3 Pilot request

.4 Embarking / disembarking pilot.

The (IMO, Course model 3.17) proposes "It is not the intention of the model course program to present instructors with a rigid teaching package which they are expected to follow blindly (…) Because educational system and the cultural backgrounds of trainees in maritime subjects vary considerably from country to country" (Pag. 1)

Therefore, some of the cases from the list have not been taken in consideration due to the focus given to the cases that have high chances to be used in the Colombian Maritime Authority context.

Structure of the videos:

Considering the limitations that Colombian Maritime Authority members can have due to the work conditions, the students can choose the topics they need to emphasis, depending on each case because not all of the trainees have the same English level. Then, motivating the self-learning using the Information and communication technologies, particularly the You-tube platform. The topics are organized in a set of eighteen videos, covering the most possible cases that can occur in Colombian maritime context between foreign flag vessels and Colombian Maritime Authority in the case the Spanish languages cannot be used. Each one of the videos has pictures that illustrate the scenarios, English subtitles of the audios and Spanish translation. Thus, supporting the Cognitive Theory of Multimedia Learning (CTML), and the ESP approaches.

Each video represents the possible situation as in the following Syllabus proposal.

VIDEO	CASE	VIDEO CONTENT	VIDEO LINK
Video N°1 Procedimientos de llamada	Radio calling procedure: In this video, the student can recognize and understand the radio calling procedure in the case a vessel is asking for a radio test to start a conversation.	Verb To-Be Simple present Present continuous Irregular verbs Go, read. Numbers Adjectives Bad, Poor, Fair, Good, Excellent	https://www.youtube.com/watch?v=NRbY9SNEIic
Video N°2 Llamada e instrucción a buque desconocido	Calling and giving instructions: In this video, the student can recognize and understand the procedure to give instructions in Authority representation.	Geographical positions in latitude and longitude, distance, bearings, cardinal points, navigation instruments, the use of message marker “Instruction”	https://www.youtube.com/watch?v=014QmUsnwsU&t=2s
Video N°3	The calling of a vessel in an	The use of “Mayday”	https://www.

Llamada de buque en emergencia pidiendo auxilio	emergency using the “an” distress signal	distress signal in a flooding emergency, How to use the international signal code to spell words or vessel´s call sings, the verb “to have”, how to use the universal time, the protocol to transmit a Mayday Relay to the stations in the vicinity from a control station.	youtube.com /watch?v=Ny jq4wsaaCE
Video N°4 Llamada de buque con mensaje urgente	The calling of a vessel announcing an urgency message	The use of the signal “Pan-Pan” in urgent situations, the use of message marker “Information”	https://www. youtube.com /watch?v=7v CO6PFXoQ w&t=1s
Video N°5 Llamada de buque con	The calling of a vessel with fire on board	How to use the SMCP in the case of fire, how the authority receives	https://www. youtube.com /watch?v=fm

incendio a bordo		the “Mayday” message, how the authority proceeds following the protocol.	qmSz2eDf4
Video N°6 Terminología	Terminology	The recognition of the most important places of a vessel, types of vessels and some arrangements for boarding maneuvers.	https://www.youtube.com/watch?v=RUMQ2N0b44g
Video N°7 Llamada de buque colisionado	The calling of a vessel announcing “Pan-Pan” message for a collision.	The possible situation that a vessel can face after a collision like a leaking, and new technic words.	https://www.youtube.com/watch?v=uF5PNlNfeSs
Video N°8 Llamada de buque encallado	The calling of a vessel to a Vessel Traffic Service after grounding.	The possible situation that a vessel can face after grounding and new technic words.	https://www.youtube.com/watch?v=tc3WNATdFSI
Video N°9 Llamada de	The calling of a vessel in an emergency using the	The possible situation that a vessel can face in	https://www.youtube.com

buque en situación de piratería	"Mayday" distress signal in a piracy case.	a case of piracy, the requirement of military assistance, new vocabulary.	/watch?v=Swa04Xz7wYo&t=3s
Video N°10 Llamada de buque en peligro de naufragar	The calling of a vessel in an emergency for possible sinking	The possible situation that a vessel can face due to the strong weather conditions like in the case of a hurricane warning, new technical vocabulary	https://www.youtube.com/watch?v=wthiOcAXAEo
Video N°11 Verbos irregulares para rutinas y guardia a bordo	The use of irregular and regular verbs for routines and watchkeeping duties.	A group of the most common verbs and its use in the present, past and participle, new technical vocabulary.	https://www.youtube.com/watch?v=Q0sbxSJa0wk
Video N°12 Vocabulario	Vocabulary	The use of new vocabulary related to the maritime industry.	https://www.youtube.com/watch?v=aZRt4tXK2nI
Video N°13	Life safe appliances	The knowing and recognition of the most	https://www.youtube.com

Elementos de seguridad		important life-safe appliances to be used in different distress situations.	/watch?v=m1mjFEATzl0
Video N°14 Instrumentos de navegación	Navigation instruments	The knowing and recognition of the most important navigation instruments be used in the different naval operations	https://www.youtube.com/watch?v=mTMuAXdso9A
Video N°15 Acrónimos	Acronyms	The knowing and recognition of different acronyms that simplify long terms and how to use them in the different situations.	https://www.youtube.com/watch?v=5PHFFYYCrxI
Video N°16 Llamada de buque en emergencia por hundimiento	Search and Rescue Operations	The knowing of the possible situations and procedures after a vessel sinking, persons overboard and the responsibility of the	https://www.youtube.com/watch?v=sP75cDt6b1M&t=14s

		vessels in the vicinity of the accident	
Video N°17 Vocabulario de meteorología	Meteorology terminology	In this video, the student can acquire new vocabulary related to meteorological conditions in the case a VTS transmits a meteorological report to the nearby vessels	https://www.youtube.com/watch?v=CX751m7WJMs
Video N°18 Situaciones en canal de acceso	Situations during maneuvers in the fairways	In this video, the students can find different possible situations that a Control station can face during the arriving and departure of vessels and their maneuvers while transiting a canal, as well as the possible meteorological conditions that can	https://www.youtube.com/watch?v=G7X9LA3zLFQ

		affect the normal operation such as low visibility or the failure in a navigation aid.	

Sharing of the pedagogical tool:

After the production of the videos described in the document, covering the most relevant aspects that can help to improve the English communication skills of Colombian Maritime Authority members by means of technology, and after the uploading of the videos on You-Tube platform, had to be planed a meeting with the maritime authority members from Santa Marta city, including the vessel traffic station operators group. Then, it was showed the general description of the project, covering the most relevant aspects. Then, giving them an overview of how to use this material and the strategies to optimize maritime English learning particularly listening and speaking.

Anyone of the participants had the chance to watch all over the videos and also the explanation of how they can use them and how are the best ways to understand and to learn maritime English in order to solve the problem statement. Some of them also suggested some changes to the content like more information about the most common situations that they face frequently in Santa Marta Vessel Control Station such us the interaction with ships asking for anchorage zone and piracy events during anchorage time. Having in considerations these scenarios, the videos where modified attending their recommendations.

After the description was completed, the personnel filled out a survey which consisted of 5 questions with the intention to make a description of the personal perception and the usefulness of the technological tool. The questions were the following:

1. Do you consider that the development of the technological tool for the learning of maritime English improves the communication skills of the DIMAR personnel?

2. Do you think that the use of new information and communication technologies can be useful in teaching and learning processes, for cases where face-to-face learning is not possible?

3. Do you use the " You-Tube " platform as a tool of learning?

4. Do you think that learning maritime English through videos can help to reduce accidents caused by linguistic errors in communication?

5. Personal appreciation

RESULTS

After sharing the videos and analyzing the information collected in the survey, could be evidenced the acceptance of the videos proposal for all the participants, considering that a specific didactical tool for the learning of what they really need to learn did not exist before in DIMAR as a particular and specific context. Moreover, could be evidenced the gratitude expressed for the group and the interest to start practicing maritime English using the videos because as they said, this is the only way they have to acquire the competences for the precise interaction with foreign flag vessels when the communication only is possible using the English language. Moreover, for this particular group the learning of a high level of English should be mandatory because of the high level of responsibility in the cases they have to give clear instructions and to understand the vessels intentions when they are crossing through the canals or fairways, where the traffic of many vessels sometimes can be very dangerous for collisions. This job can be compared with the airplanes traffic controllers where accurate communication cannot be underestimated because of the high risks of accidents.

Analysis of the answers:

The next is the result of what it was founded in the survey after reading and analyzing the participants' opinions about the project:

1. Do you consider that the development of the technological tool for the learning of maritime English improves the communication skills of the DIMAR personnel? In this question was evidenced that all the participants found important the development of the

technological tool because of the easy, practical and clear way to explain the different possible situations that personnel can face on board the DIMAR naval units or in the vessel control stations. They expressed that is more interesting the learning process when they can see images at the same time, they heard the audio and read the text.

2. Do you think that the use of new information and communication technologies can be useful in teaching and learning processes, for the cases where face-to-face learning is not possible? Answering this question, all the participants agreed using technology for virtual learning processes because of limitations in time and space if they want to attend face to face classes. They also considered the learning supported by technology as the best option they already have to improve their skills in maritime English.

3. Do you use the "You-Tube" platform as a tool of learning? The answers evidence that all the participants use the " You-Tube " platform as a tool of learning because of the easy way to get the information and also because of the feedback they have in the experience that other viewers have with the different " You-Tube " video tutorials.

4. Do you think that learning of maritime English through videos can help to reduce accidents caused by linguistic errors in communication? In this question, all the participants said yes because of the effectiveness when they need to correct their own mistakes in pronunciation and listening as the most important skills in the cases they need to solve problems that involve English language communications.

5. Personal appreciation: Personnel said that this kind of tools can be helpful not only for DIMAR members but also for Navy naval units because they also have to face this type of situations where the English language is the only way to have effective

communication. Moreover, they said this is an excellent tool that makes easy the learning process having in account the limitation in didactical virtual material and the lack of time they have to attend face to face classes. In the same way, fostering the acquisition of new knowledge, improving the competences to solve the daily situations that the personnel could face in the maritime context.

DISCUSSION

It is evident that the development of a pedagogical tool with the use of "YouTube" web 2.0 to improve listening and speaking skills of Colombian Maritime Authority members, really helps to solve the problem that crews have aboard the units to establish a precise and effective communication with the foreign flag vessels in the cases they need to interact with them mostly using a VHF radio. Besides, the low proficiency level the personnel has in general and "marinated" English, to face the real situations at sea was proved thanks to the diagnostic test. The pedagogical tool could show the high motivation the group had when they saw a new way to improve their skills with the use of technology since it is easy to watch the videos through a smartphone as a device that today everybody has. Videos can offer the students a wide range of possible situations, therefore, they choose whatever they want depending on their interest and needs. It is well known that learning a language not only depends on the outside input the student use such as techniques, methods, approaches, materials and so on, but also this cognitive process is highly influenced by the motivation and the self-learning time they use to achieve the goal. It is also important to know that this is the first stage of scientific research that follows to find an alternative that can give the DIMAR members a practical and successful way to improve their English language skills in Colombian maritime context. Therefore, this research cannot show new results employing another diagnostic test that evidences the acquisition of maritime English knowledge after a certain amount of time using the tool. Besides, due to the limitations, unfortunately, the diagnostic test could be used with more DIMAR participants or even with Colombian Navy warships members that are facing practically the same issue. Therefore, it's important to consider this research as the first step

of an interesting and important field of investigation that can contribute with the safety of human life for those who work at sea.

Although the research was supported with one of the most used platforms for the sharing of information, it's also important recognized that this technological tool has its limitations such as the lack of having synchronic feedback with the users to observe and evaluate their progress. Therefore, thinking about the improvement of the tool, the use of a more advanced and interactive platform has to be open for future changes with the aim of effective learning and use.

CONCLUSION

After many years of observation onboard Colombian Navy and DIMAR ships, was successfully evidenced the low level of proficiency that most of the crew members have for the interaction with foreign flag vessels using the English language; Specifically, the use of Maritime English that was implemented by the International Maritime Organization after recognizing the importance of having a common and standardized language for the use of all the seafarers around the world. Then, Colombia as part of the Maritime organizations has to seek strategies with the purpose of complying with the international maritime treaties,

Based on the results shown in the survey about the perception and the usefulness of the technological tool could be evidenced the acceptance and the motivation the DIMAR members have to use the material to improve their listening and speaking skills for the usage of the specific maritime English. However, the way of how people are learning nowadays, is going more and more in the way of using technology and specifically the use of smartphones to share information faster than ever before. The work not only tries to improve the maritime communication skills using the English language but also is a tool that can reduce the cases of accidents caused by communication mistakes that involve the human life and the risk of maritime pollution, been these the main goals of the International Maritime Organization.

About the videos, the material was carefully selected with the purpose of covering the most important cases that during more than 18 years of experiences were possible to identify. Then, after this analysis of the cases, could be summarized and organized giving the students the chance to choose whatever video they need to dig in to.

Living in a competitive world doesn’t get chances for incompetent people.

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ANNEXES

Santa Marta Vessel Traffic station personal attending the presentation of the technological tool

Screenshots videos on YouTube

YouTube CO

Buscar

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