



DEVELOPING MARITIME ENGLISH PREPARATION TEST BY USING FLASH APPLICATION

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Abstract. *This study aimed at developing of teaching maritime English as English for Specific Purpose especially in conducting Maritime English Preparation Test. The purpose of this study is to find out the problems of maritime students' in learning Maritime English and describe how the product will be developed. It is also intended to investigate how effective of MEPT for improving students' achievement for learning maritime English. This study is Research and Development (R and D) and It was adapted from Borg and Gall (1983) and Sugiyono (2009) as the basis of conducting this research. There are Problem arise, Need analysis, Design the concept of Maritime English Preparation Test, Preliminary Test, Expert judgment, product revision, field test and final product of Maritime English Preparation Test by using flash application. The type of the test consisted of some of the aspects such as grammar, pronunciation, listening, vocabularies drilling. I used multiple choice tests as the treatment in order to find out the effectiveness of the product toward the students' achievement. The aspect of the test item has already designed mixed randomly by the computer program. From the result of the research analysis showed that the product was effective to improve students' score for Maritime English Test.*

Keywords: *Maritime English, ESP, Preparation Test*

Abstrak. Penelitian ini bertujuan untuk mengembangkan pengajaran Bahasa Inggris Maritim sebagai Bahasa Inggris untuk Tujuan Khusus khususnya dalam melaksanakan Tes Persiapan Bahasa Inggris Maritim. Tujuan dari penelitian ini adalah untuk mengetahui permasalahan siswa maritim dalam pembelajaran Bahasa Inggris Maritim dan mendeskripsikan bagaimana produk yang akan dikembangkan. Hal ini juga dimaksudkan untuk mengetahui seberapa efektif MEPT dalam meningkatkan prestasi siswa dalam pembelajaran bahasa Inggris maritim. Penelitian ini merupakan penelitian Research and Development (R and D) dan diadaptasi dari Borg and Gall (1983) dan Sugiyono (2009) sebagai landasan dalam melakukan penelitian ini. Terdapat Permasalahan yang muncul, Analisa kebutuhan, Perancangan konsep Maritime English Preparation Test, Preliminary Test, Expert judgement, revisi produk, field test dan produk akhir Maritime English Preparation Test dengan menggunakan aplikasi flash. Jenis tesnya terdiri dari beberapa aspek seperti tata bahasa, pengucapan, pendengaran, dan pengeboran kosakata. Saya menggunakan tes pilihan ganda sebagai perlakuan untuk mengetahui efektivitas produk terhadap prestasi siswa. Aspek soal tes sudah dirancang dicampur secara acak oleh program komputer. Dari hasil analisis penelitian menunjukkan bahwa produk tersebut efektif untuk meningkatkan nilai siswa dalam Tes Bahasa Inggris Maritim

Kata Kunci: Bahasa Inggris Maritim, ESP, Tes Persiapan

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1. INTRODUCTION

The introduction of Maritime Tests of English Language has changed the use of technology especially in Maritime education and training institution. The recruitment process requires MarTEL certification to those who want to apply in an international maritime industries. The MarTEL applies the computer-based test so all students must take the test by using computer network.

English has been set as the language of the sea at an international level and it is used in all situations such as ship-to-ship, ship-to-shore and between maritime personals; however it is not always non-problematic since nowadays ship crews are multi-national instead of being from a single nation. Linguistic, paralinguistic and cultural and discourse formation issues act as a barrier to the safety of the ships at sea (Ziarati, 2006). A careful study identified that 80% of maritime accidents are down to human factors (Demydenko, 2009), of which failure of communication represents one third (Ziarati, 2006). The IMO has also underlined the importance of effective communication in an International Seminar as a crucial issue for Marine Safety. Therefore, it is very necessary to remedy those accidents caused by human factors contributed by communication failures. The problem is not only in the partner countries but worldwide (Loginovsky, 2002).

This is because of the communicative language training set in the context of real-life situations at sea has hardly been part of any curriculum for training merchant navy officers. It is found that English language skills of the ships' crew is at a very low level, resulting in ineffective communication and it has also been identified that ineffective communication is the major cause of the many accidents. This fact along with the cultural diversities of multi-national ship crews creates a major current problem. After sometimes of training they are obliged to take a standardized English test service called the Marlin Test.

Before seamen get ready for their sea project, they must take a kind of international standardized-English test, called Marlin Test. The test is used to prove or authenticate seamen's skills and performances are good enough particularly in Maritime English. Some companies also require their applicants to have Marlin certificate within a recruitment process. The test measures some abilities in English, such as listening, vocabulary, grammar, and different sounds in the form of multiple choices. Wijayanti (2015) stated on her observation that the students' grammar error influenced their score

for every grammar scope, such as in punctuation, capitalization, tense, pronoun, and preposition. So, in this study researcher tried to conduct the use of preposition and tense for the item of the test. The test is conducted in computer-based format where the students will take the test in an offline computer laboratory for around thirty to forty five minutes.

Beside the lack of English materials in the scope of maritime industry, the obligation to take the Marlin Test has become another problem for the maritime students. They often confuse how they can prepare and practice themselves before taking the real test. It is a must for the maritime students to get the Marlin certificate if they want to get accepted in an international shipping company. The use of technology at schools in this case the use of computer based test for Marlin preparation test, are hoped to be one medium for students to learn more active. The use of technology such as computers and the internet inside and outside the class generally motivates students to learn (Evans 2009: 11). This new paradigm will increase the students' autonomy that is hoped to enhance the students' academical achievement. Lee (2011: 87) viewed that teachers has an important role in supporting and motivating students to solve problem, make decision and reviewing their progress. The flexibility of the program will also help the students to prepare themselves better without any space and time limit.

Based on the statements above, a preparation program for the Marlin Test is needed to improve the score of the test. The higher score the maritime students get, the higher chances they will get accepted in an international shipping company. Practice Test preparation program also required to make the learning more flexible and efficient. From the background of the study above, it has been acknowledged that a Maritime English test preparation program has not been developed and segmented well. The source of materials for preparing students in facing the international Marlin Test are also limited in terms of time and place. It also takes a long period of time find out their score toward the Marlin Test that is why we need an efficient program in which the students can directly know their score after they finish the test.

Referring to the background of the study, there are three problems arisen in this study. They were What Maritime English Test application is needed by the students, How

is the Maritime English Preparation Test developed and How effective is the Maritime English Preparation Test towards the maritime students' achievement?

Related to the requirement from International Maritime Organization (IMO) on Maritime English Model Course (MEMC) 3.17, the students in Maritime institution should full fill the competence of English language that contained in Standard Training and Conventional and Watch keeping (STCW) Code. It is order to meet the specific objective of English language. Maritime institutions are expected to create interesting English material in developing their own program to cover the goal.

Because the students of Maritime institution have a variety cultural background from country to country, Maritime institution should find out an approach material and method of the English competence, Blakey (2000). The regulation from Module (2001) stated that Indonesia as one of the countries of the member of IMO must obey the regulation as mentioned on STCW Convention Manila amendment 2010.

One of the regulations of MEC 3.17 (2015) is the use of teaching aid such as video material and computer based. Nizbet (1997) wrote the application of English competence in her book Marlin study Pack. It is one of the materials which consist of books, listening material and Marlin test. Adopting of this kind of test, researcher conduct the study of Maritime English Preparation Test (MEPT). One of the references as previous study on this research is from Setyaningsih (2009) which conducted the study of practicing maritime English vocabulary through wall dictation. Another study was from Abdillah (2013) conducted research about the using web based material for learning for Junior High School students.

This study emphasized on used education and technology theories as the foundation of the theoretical bases. Based on these theories, then the researcher discusses some educational philosophies and education transformation with technology. As stated by Sato (2010) who observed the use of multimedia for learning vocabularies to the EFL students. The researcher started to explain of English for Specific Purposes (ESP) and General English. In this scope, the researcher explained the concepts of maritime English as the part of ESP, Innovations and Technology within.

After that, the researcher defined the subtopic into English for Maritime since the focus of the study is about Maritime English and language assessment because the researcher develop an assessment product. Maritime English is discussed in three things,

the program of MEPT, brief description about maritime institution, and maritime tests of English language. Finally, the researcher discuss about language assessment which is divided into assessment and feedback by using flash computer based, formative tests, and summative tests.

2. THEORETICAL FRAMEWORK

English for Maritime study is a part of English Special Purposes which discuss the materials related to the scope of Maritime Industry as a global language at sea. Ideally, Long in Belcher (2005: 19) suggests, English, or any language, is taught with specific purposes explicitly in mind. The reality, of course, is that the purposes served in language instruction are not always those of the language learners. Commitment to the goal of providing language learning purposes is what those who take an English for Specific Purposes (ESP) approach see as it disgusting it from other approaches to English language teaching as stated by Hyland (202: 78).

English for Specific Purposes (ESP) is as branch of English language teaching and referred as applied ELT as the aims and contents of any ESP course is based on specific needs of the learners. Unlike ESP, English for General Purposes (EGP), where courses are designed based on general needs of the learners. Although in designing courses for both ESP and EGP learners, needs analysis has been a primary focus, both differ in the approach of need analysis. While ESP courses focus more on specific and immediate needs of the learners, EGP courses may not focus on specific needs of the learners as learners at that stage may not be able to specify their contexts of using language.

As one of the competences in learning maritime English, communicative competence in language teaching is needed in this field. Based on the communicative competence in language teaching especially in oral teaching, the instructor should find the strategies to be applied in the oral skill classroom. It was suggested on IMO Model Course 3.17 for Maritime English Module. Canale and Swain's (1980), cited from (Celce Murcia, 2001) adaptation of Hymes theory of communicative competence proposes that the ability to communicate in a language comprises four dimensions:

1. Grammatical competence (including rules of phonology, orthography, vocabulary, word formation, and sentence formation)
2. Sociolinguistic competence (rules for the expression and understanding of appropriate social meanings and grammatical forms in different context)
3. Discourse competence (rules of both cohesion – how sentences elements are tied together via reference, repetition, synonymy, and coherence – how text are constructed)
4. Strategic competence (a repertoire of compensatory strategies that help with a variety of communication difficulties)

Maritime English is vital communication for ensuring safety at sea. A common language enables seafarers of all ranks to deal effectively with emergencies, everyday operations, ship-to-shore communication, and health, safety and security issues.

Education and Technology

Technology is evolving at an astonishing rate. It has dramatically changed the ways we work, learn, interact, and spend our leisure time. Computers and information technologies visibly revolutionized nearly every aspect of daily life, such as how we get our news, how we order goods and services and how we communicate. Kikuchi & Otsuka (2008) stated on their research that the introducing of local-area networked computer systems into the schools and universities have been provided with many chances to help the task. They also argued that the use of computer networking helps learners to accomplish their writing tasks more easily than with pen and paper.

The used Computer Based for assessment is expected to be one of the effective approaches to fill the English competence of maritime students. The form of the test is the application which is made in the interactive flash test. The application is made by wonder share quiz creator program which is installed in computer the language laboratory.

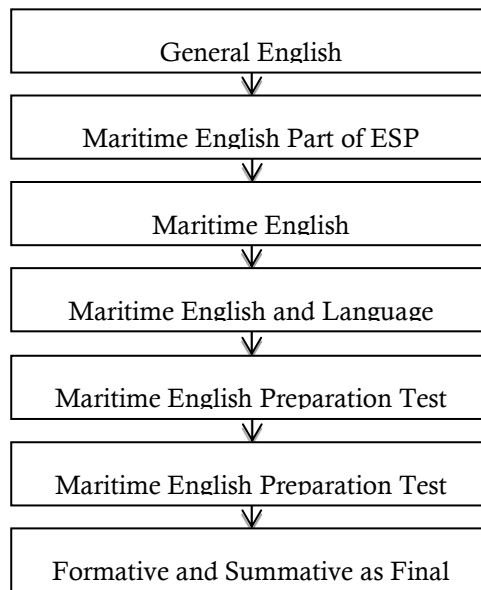
The item of question is multiple choice forms. There are some instructions available for each part of test. The students must understand the instructions to answer the item of questions on the test. There are some of the parts of Maritime English Test as preparation, It consists of 180 question items that is divided into of 20 items of Vocabularies Section, 30 items of Listening Section, 30 items of Odd word, 30 items of Time and number,30

items of different sounds and 40 items of Grammar Section. It is become the questions bank. The system of Wonder quiz as the computer program has chosen the question randomly so the number of question set to perform are 15 questions for each part. Each of the students will get different type of the questions from the questions bank.

The source of the questions are mixing, some of the parts are taken from the material of Marlin Study Pack, and the rest are created and adopted from some of reading text that available in reading text book. All the sources are taken from the material that required by IMO Model course 3.17 and Maritime English Syllabus at STIMART “AMNI” Semarang.

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Picture 1. Theoretical Framework

3. METHODOLOGY

The study of this research used the research and development approach. It aims to find and develop the effectiveness of the product to be applied to solve the problem at school. Based on the result in collecting data, observation and information, the researcher conducted in developing flash computer based materials which consists of English grammar, expressions, short functional texts, daily quizzes, remedial, and enrichment programs intended for the second semester of maritime students. Borg and Gall (1983 : 772) define research and development as a process used to develop and validate educational products.

Then the researcher developed the materials to be used in this program. The researcher choosed the materials coverage for second semester of Marine Engineering Department of Stimart AMNI Semarang based on the regulation which is available in the curriculum IMO MEMC 3.17 and the syllabus of the STIMART AMNI Semarang.

Before the flash application of MEPT was revised and edited it need to be validated in order to get some valuable suggestion in dealing with effectiveness of the product. The validations expressed their suggestions into the list of instrument sheet containing indicators and write some opinion on given spaces. The form of validation was adapted from Adapted and taken from Murcia (2001,p.425), IMO MEMC 3.17 (2015,p. 205).

The points of the validation of the validation sheet were content, vocabulary and structure, classroom activity, suit to the curriculum, suit to students, suit to teacher and design of product. The evaluation scores are 4 (excellent), 3 (good), 2 (adequate), 1 (poor) and 0 (zero). The expert validators are Maritime English teacher experts, Maritime English Teachers and the expert of IT program.

The instruments of this research were observation, questionnaire, the test and documentation instrument. And in analyzing the data, the researcher conducted the activities by taking the observation about the using of MEPT. Then the result were taken, kept and compare to know the improvement the students' score about Maritime English Test. Then result data of the Pre-test had been collected and used as the basic data to conduct the next steps. Next, the researcher recorded the documentation of the MEPT applied in CBT room. And finally researcher gave the post-test to the students.

4. FINDINGS AND DISCUSSIONS

The result of the questions said that most of the available material is in form in book or other material. And the other word said that types of questions are given in a paper based. Since the book available and other material are published and conducted by IMO, So The researcher tried to discuss with the teachers, alumnus, and some of the stake holder in shipping field to meet the material are needed by the students especially in taking the Maritime English Test such as Marlin English test.

The other result of the interview said that most of Maritime English teaching learning process was still dominated by the teachers. It was conducted too for the test type. The test type mostly used paper based and orally drilled. The using of multimedia test item is rarely used. Since the scoring of orally drilled or spoken test seemed subjectively, they suggested to create the type of the Maritime English Test for preparation before the students meet the real test before joining to the shipping company.

Based on the result of the interview from teacher and students, the analysis consists of students' characteristic and students' need of taking the Maritime English Test. From the analysis above, the conclusion that students needed a preparation material to take online Maritime English Test.

Before construct the material, lesson plan was arrange as guidance during Maritime English learning process. The map of interactive materials was arranged which refer to the competences are required from IMO MEMC 3.17. It was important since this is used as the reflection of all the activity during the research. The lesson plan could be seen in appendix 2. While the map of interactive material could be seen below in table 1.

Table 1 Map of Interactive Material

Test item	Objectives	Activities
Grammar	Students are able to: Read and understand the grammar content in the sentences which is available in the test	Student operate their own computer to: Answer the questions are available in the application
Different sound	Read and understand the material about pronunciations which is available in the test	Answer the questions are available in the application
Listening	Listen and understand the audio material about missing words available in the sentences. The listening material about Maritime English	Listen and answer questions or fill the blank by listen to the audio material about Maritime English
Odd words	Read and understand the material about vocabularies and shipping terminology in the sentences which is available in the test	Answer the questions are available in the application
Time and Number	Read and understand the material about time and numbers are used in the sentences which is available in the test. It is focused on the expression from number into letter or written form	Answer the questions are available in the application
Vocabularies	Read and understand the items of Maritime English vocabulary. Understand the instruction of the test application by using computer	Answer the questions are available in the application Read and understand how to operate flash application by reading the instruction since all the questions are provided in multiple choice test

After arranging the lesson plan, It is continued by designing the English computer application used Wondershare Quiz Creator. It was software that could help educator to make quiz which based interactive flash with the automatic form of score that use multimedia online with form SWF or offline with form EXE. This application had some features and different shape of quiz. The educator could make the choice of interactive quiz such as multiple-choice, matching, true-false test, fill in-the-blank, sequence, essay, click on the pictures, etc. This application also supported the use of audio and video form

so the media visualization was more interactive. In this study, researcher conducted the offline test typed in order to fill the need on her students.

As the product has design, then the experts validated the product by filling judgement form. It is in order to know the effectiveness of the product. According to the result of the questionnaire from experts' judgment, this interactive material was judged as a valid product. The result said that from the judgment that most of the judgments categories were chosen, they were good and excellent. It meant that Maritime English Preparation test by using flash application could be used as an interactive material in teaching Maritime English for the second semester of technical students of STIMART AMNI Semarang.

After the product is validated by the expert, teacher's and ICT learning expert, then they gave some judgments and suggestions. The suggestions expressed into the form of the test, layout, content, some instructions, some exercises, need to be revised. Furthermore, additional materials in some parts should be designed in relation to the materials was done in terms of the right levels of difficulty and the vocabulary items control to ensure systemic gradation from simple to complex items. Related to the instructions, some complicated instructions were changed with the simple instructions. The example and procedure were also revised, I had to add the sample how to do it. In order to validate the data, researcher applied triangulation method in Focus Group Discussion. As Jick (1979, p. 602) stated that triangulation method is identical with the qualitative methods like interviews, observations, case studies, or focus groups. Then, the result of the research by the investigator or evaluator will compare and comprehend until it will find the same conclusion.

As finished as revising the materials, the researcher conducted Maritime English Test into 30 students by using flash application in the language laboratory. Before conducting the test, the teacher explained the material about the specific grammar are used in the discussion, what kind of specific vocabularies are used, the using time and number and the material of pronunciation especially how to spell the words. The teacher is accompanied by researcher in handling the class. Then, the next step was conducting the post test. As same as the pre-test item, there were 30 mixing questions randomly taken from shipping terminology, odd words, time and number, listening and also grammar.

The next step was conducting Pre test and post Test. As finish as the pre test and post test conducted, then the result of the tests are analysed by using N-Gain formula and T-test formula.

The next step was comparing the Pre-Test and Post-Test score. To analyze the effectiveness of the product, the researcher used SPSS program to compare Pre-Test and Post Test score by using T-Test Formula. The analyzing of the pre test and post test by using N-Gain showed that the average increasing score was 0,85. It was categorized as high category.

The result of the analyzing by using T test formula was significant since the result of the paired sample t test $< 0,05$. It means there is a significant difference between pre-test and post-test. The post-test is higher than the pre-test. The result showed that students got significant achievement by using MEPT as interactive material for conducting Maritime English Test.

Maritime English preparation Test flash application was considered effective to be implemented in conducting the maritime English Test to the second semester of technical students of STIMART AMNI Semarang. It could be seen from the comparison result between pre-test and post-test. The post-test was higher than the pre-test. It indicated that students got significant achievement in conducting the test by using MEPT flash application. Before students used MEPT flash application, their score was not good enough. But since they used MEPT flash application their score was increase effectively. It was also strengthened by the result of the interview which concluded that students like learning through this material. Finally, researcher recommended MEPT flash application as materials for conducting the maritime English to prepare the online maritime English Test, especially to to the second semester of technical students of STIMART AMNI Semarang.

5. CONCLUSION AND SUGGESTIONS

The conclusion of this study found that before students used Maritime English preparation Test flash application, their score was not good enough. But since they used Maritime English preparation Test flash application their score was increase effectively. It was also strengthened by the result of the interview which concluded that students like learning through this material. Finally, I recommended Maritime English preparation Test flash application as materials for conducting the maritime English to prepare the online

maritime English Test, especially to to the second semester of technical students of STIMART “AMNI” Semarang.

Based on the result of the study, I offer some suggestions to be considered. For the English Department of Semarang State University it is suggested that If technology is used thoughtfully and is learner centered, the results will be excellent. The power of technology enables students to learn and to interact at school, at home, or even in the most remote areas of the developing world.

As the teachers who live in the digital era, teachers have to master the technology. Innovative and curious teachers are needed now, since technology plays an important role in teaching. The school also has to support the teachers in using sophisticated media such as complete the instruments in language laboratory like laptop, computer, LCD, website, application etc.

The next is for the students, students need skill in mastering technology. The use of technology can help them to learn especially in learning English. However, guidance from the experts and teachers are still needed to keep students from misguiding. Finally, this research are expected can be used as the reference for next researchers in conduct research about ICT. Even though there are many difficulties in doing this kind of research, but the advantages of this research can give high distribution especially in Teaching English for Specific Purpose.

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