

Android-Based Maritime English Application to Support the Learning of Nautical Cadets At Maritime Department

Aprizawati¹⁾, Bobi Satria²⁾, Zusniati³⁾

¹Politeknik Negeri Bengkalis, Riau, Indonesia

² Politeknik Negeri Bengkalis, Riau, Indonesia

³ Politeknik Negeri Bengkalis, Riau, Indonesia

E-mail: aprizawati@polbeng.ac.id, bobisatria50@gmail.com, zusniati@polbeng.ac.id

Abstract: The purpose of this research is to create a basic application of Maritime English that is useful in supporting learning and improving the skills of Maritime English cadets at Maritime Department especially for nautical program. Maritime English is one of the English language learning with a special purpose that is indispensable in communicating, maintaining safety and activities at sea both nationally and especially internationally. The research problem is many seafarers do not understand maritime terms, either in their daily conversations at sea, from ship to ship or ship to shore station, whether it's about health, safety, or security issues in the shipping industry. In this millennial era, it is very rare for sailors to read books to increase their knowledge because they tend to be boring and unpleasant. Therefore, as a basic step in the maritime department, researchers created an android-based application consisting of vocabulary and pictures about maritime English to increase interest in learning Maritime English. There are lots of English apps but not much about sailing. Therefore, with the proliferation of android-based gadgets, as the result, the researcher was successful find an application as a solution to support students or cadets as a basic learning in Maritime English.

Keywords: English for Maritime, Application, Android, Learning, Cadets

1. Introduction

Today's very rapid technological developments, one of which is the use of gadgets technology which also contributes to the learning system aimed at children, youth and adults, therefore learning applications are one of the technological media that can be used in childhood learning systems. The theory says that learning needs an adaptation from server to give a good content in mobile learning service to make it easy in use means that learning requires adaptation from the server in order to provide good results through mobile learning (moving) so that it is easy to use.[9]

The learning process can be carried out by utilizing technology that has a positive impact in the form of progress and welfare for humans, which means that technology can be used for the widest possible use. From this explanation, it is necessary to realize a learning solution so that someone is interested in learning English. One solution is to create an android-based learning application.

English is an international language that is widely used in various fields, such as social, economic, information and technology, and others. For example, an entrepreneur who is proficient in English can successfully engage in trade or business around the world. In other words, he will have a good career and compete internationally. In addition, mastery of English both in spoken and written form can help people get updated information and technology that is important for today's life. Therefore, it can be said that English is very important for everyone to master.

In Indonesia, English is studied formally from elementary school to university level. Meanwhile, students can also study it in the courses offered for those who want to improve their English. However, students still face difficulties in learning and mastering it, including students and workers in every aspect of life. One of the difficulties is in understanding the English for Maritime program in the shipping sector.

Maritime English is English that is commonly used for activities related to the maritime world. English is different from English in general because this language is used to facilitate communication while at sea.[1]

Android is a mobile operating system developed by Google, based on the Linux kernel and designed primarily for touch screen mobile devices such as smartphones and tablets. Android's user interface is primarily based on direct manipulation, using touch gestures that loosely correspond to real-world actions, such as swiping, tapping, and pinching, to manipulate objects on the screen, along with a virtual keyboard for text input. In accordance with the STCW78/95 convention made by the IMO, seafarers are required to have competence in using English for professional purposes. Maritime English is included in the ESP category, English for Specific Purpose.[8]

ESP focuses the learner's attention on the language and communication requirements of a particular professional area. Maritime English is to meet the needs of seafarers. Therefore it has its own characteristics.

- 1) SMCP It defines the tenses and expressions used by seafarers in various work situations. It is characterized by concise language.
- 2) English written in maritime English. This includes scientific English which can be found in weather reports, manuals, operating manuals, rules and regulations at ports and legal English which can be found in accident reports, claims, contracts, conventions, etc.
- 3) Like scientific English and legal English, maritime English also has all its characteristics. Maritime English has its own technological jargon or phrases. The terms do not make sense from maritime English or cannot be understood or transferred. For example, the phrase "hard a port" cannot be understood in its literal sense, but in maritime English it denotes a certain meaning. [2]

Bengkalis State Polytechnic has one Maritime Department whose graduates play a direct role in operating ships, namely the Maritime Department. One of the most important things for a sailor is to communicate fluently in English. Due to the minimal English competence of prospective young seafarers, researchers will make a new breakthrough in the maritime department in order to improve their learning system and understanding of Maritime English language skills. [4]

2. Method

This research used research and development methods. The R&D Method by Borg & Gall has been applied and implemented widely in educational research. It is as a model design for educational practices in all levels of education. The fact that its ten steps are every so often simplified or modified by educational researchers in their studies, it also develops other alternatives model design. Some of the alternatives are likewise implemented in educational fields, however, still few of them are a matter of references only. [5] This method is usually used in industry to create and develop a product. In the world of education, this method is used to create and develop modules, books, curriculum models, learning media, and so on. In this study, en-mar learning was made as a learning medium for learning Maritime English. There are several steps in making en-mar learning. In designing this En-Mar Learning android application, it will help students and seafarers to learn Maritime English. It can also show pictures and how to pronounce words correctly.[7]

The system design in software development used in this research includes:

1. Defining System Requirements

Definition of system requirements that determine the specifications of the Android-based Maritime English learning application system design. System requirements include spelling of words, a glossary of ship types and the main parts of the ship as well as quizzes.

2. System and Software Design

After the system specifications are obtained, the next step is to design the application to be developed. The design process includes designing menus, interfaces and databases.

3. Implementation

System and device designs are all designs created using Eclipse and the Android SDK tools. The implementation design begins with the development of an existing database by adding several tables according to the needs of the mobile system, to make it visible and provide a programming language.

4. Testing

After the application is ready to use, the next step is to perform tests or tests aimed at optimizing software performance. Testing using the black box method and alpha testing. Black box testing is done by trial and error, namely by trying some input when the application is run, this testing process is carried out by the lecturer. While the alpha test was carried out by students to try to use the program using an Android device/smartphone.

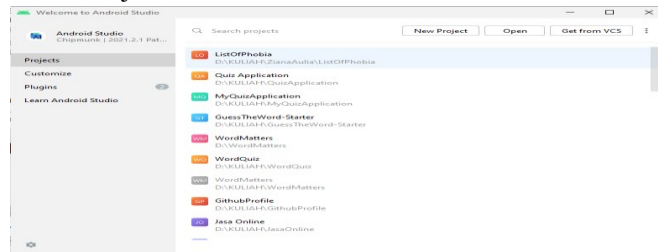
At this stage, En-mar learning is applied to students of the Bengkalis State Polytechnic Marine Studies Program. Students are asked to provide feedback on the application.

- 5) Revise the E-Mar learning application. Revised application for product achievement.
- 6) Making the final product. After the revision process, the application continues to be the final result or product.

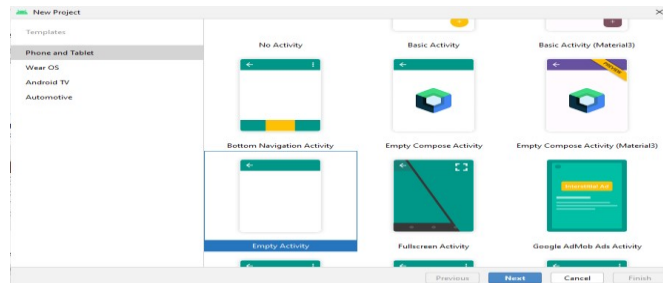
3. Results and Discussion

EnMar Learning Application Development Process

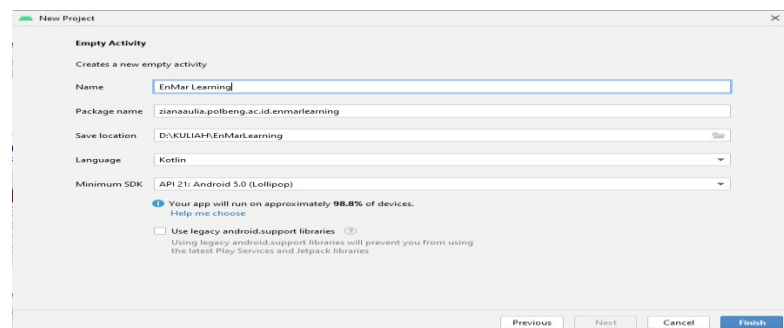
- a. The first step in making the EnMar Learning Application is to open the Android Studio Application and create a project by clicking the New Project Button as follows:



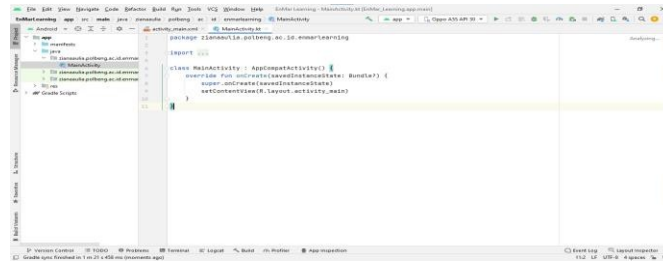
- b. After that a menu will appear as follows and select Empty Project; then click the Next Button as follows:



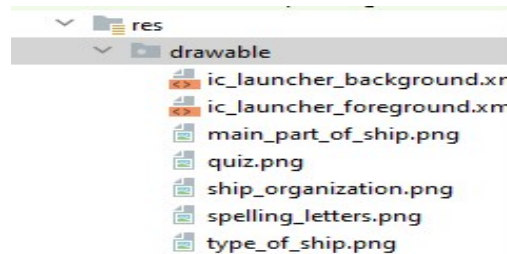
- c. Clicking the Next button will then create a new empty activity and enter the project name, package name, save location, program language used and the minimum SDK that can use the application. Then click the Finish button.



- d. The following view is the Empty Activity view from Android Studio.



- e. The next step is to create some logos that will be used in the application menu. Like the following and put it in the res/drawable folder in Android Studio.



- f. The next step is to change an empty activity layout into an activity layout that can display menus by coding with XML markup language.

- g. After the layout view is created as shown below, then changes to MainActivity.kt using the Kotlin programming language which is used to process commands in the activity layout and create Intents that are used to access other activities such as Menu Spelling Letters, Ships Organization, Type of Ship, Main Part of Ship and Quiz .

- h. After creating the activity layout, then changing the SpellingLettersActivity.kt to be able to process the UI display in the activity layout using the Kotlin programming language

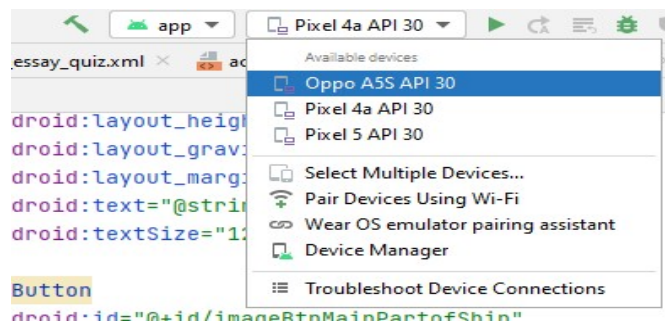
- I. Create a layout view for the Ship Organization Dashboard using the XML markup language.

- j. Create a layout view for the Ship Organization Dashboard using the XML markup language.

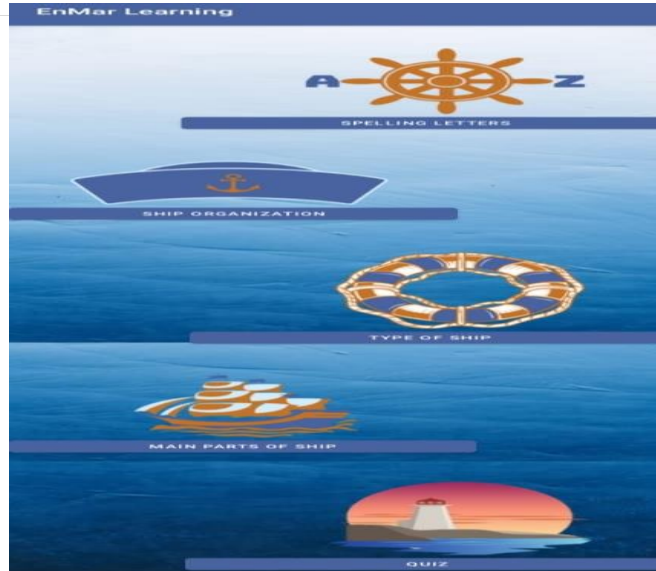
- k. Changed Ship Organization Dashboard.kt to process the UI display in the activity layout and created an Intent to go to the Menu department in Ship Organization.to this action for each contents in materials of application

- l. Create EssayResult.kt to process the EssayQuestion layout activity UI view.

- m. To run the application, select the Emulator and the Play button at the top center. Then the application can be run.



Based on the results of the data analysis of the application development using the Research and Development (RnD) method, the results of the android application display are as follows:

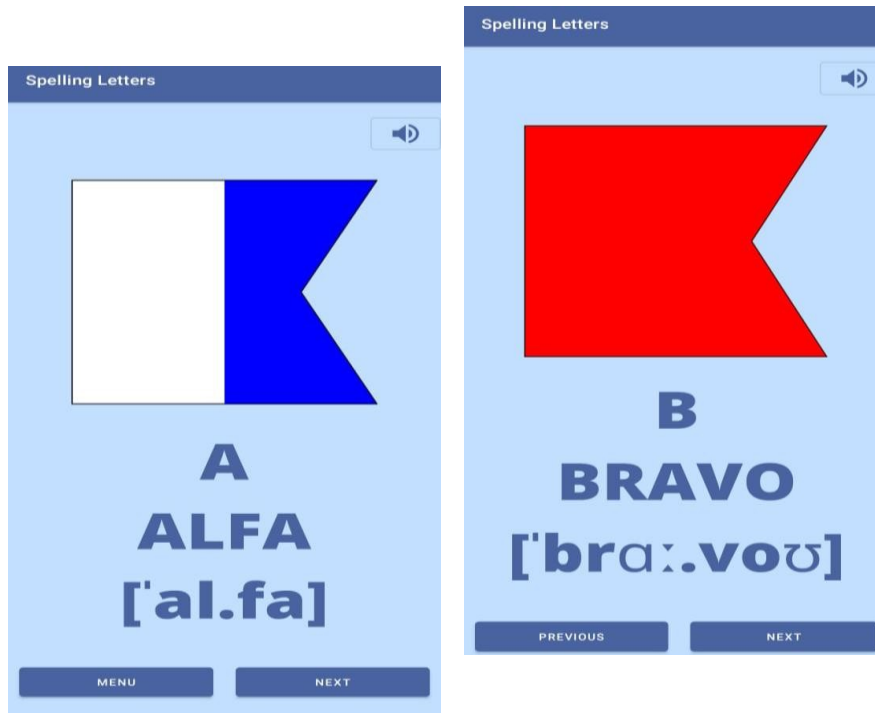


Sketch 1. Front view of English for Maritime application

a. Spelling Letter

Table 1. Spelling letters of English for Maritime

Letter	Code	Letter	Code
	Alfa		Novembe
	Bravo		Oscar
	Charlie		Papa
	Delta		Quebec
	Echo		Romeo
	Foxtrot		Sierra
	Golf		Tango
	Hotel		Uniform
	India		Victor
	Juliet		Whiskey
	Kilo		X-Ray
	Lima		Yankee
	Mike		Zulu



Sketch 2 and 3. Spelling Signs

b. Ship organization



Sketch 4. Organization on board

c. Types of Ship

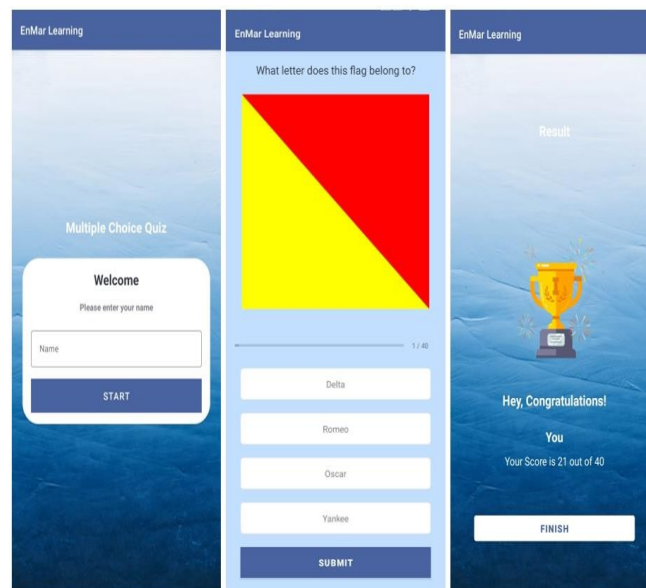
According to LPK Antares Semarang, the following are ship types:[2]

- Cargo ship
- Passenger ship
- Container ship
- Combo
- Superline
- Dredger
- LNG Ship
- Ore Bulk Oil (OBO)
- Roll On/ Roll Off(RORO)
- Tugboat
- Trawler
- ULCC
- VLCC
- Submarine
- War ship
- Freighter
- Seaboard
- Steamship
- Cruise
- Yacht



Sketch 5. Barge Ship

d. Quiz



4. Conclusion

The Maritime English application based android is expected to be one of the creative and innovative teaching methods in the Maritime English learning process for Maritime majors in particular. Learning using this application can be used wherever and whenever they are. Learning by this application is also easier and more practical to use, just by downloading the application in the play store and using soap according to the instructions for use through each Android user.

Acknowledgment

Thanks to God Almighty for the completion of writing this article. Also, a very big thank you to the Bengkalis State Polytechnic in the field of Research Center and Community Service for the support both materially and spiritually for this research. Hopefully this research is useful for readers, students in particular and also for English lecturers.

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