Development of Mobile Learning Application Android-Based for English Subject to Support Blended Learning Model in The Department of Guidance and Counseling State University of Medan

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Abstract: The purpose of this study was to determine the shape of the android based Mobile Learning needed by students majoring in guidance and counseling Unimed in learning English. To find out how the students' interest towards online learning application android-based English language. This research has been conducted using ADDIE development model. This media development begins by analyzing some of the necessary requirements. These needs include: the selection materials, the determination of the user (user), eligibility criteria, and software to develop android applications online learning. After that the next stage is to draft structured in a flow diagram that contains forms and display features contained in the application. The development stage is the stage of manufacture of mobile learning applications in accordance with the design plan. Media experts give excellent ratings for throughout the item with the total amount of 82.50 with an average value is 4.10 and the results of the calculation for the item throughout the expert assessment of as many as 20 items of material obtained a total of 86 ratings with an average value is 4.30 so that it can be concluded that the application and the material is very viable for use in learning English. This application is tested on 30 students of the 1st half of Guidance and Counseling Department of the Faculty of Education Unimed. The results of calculations throughout the student questionnaire responses obtained 87.15% percentage of aspects of good feelings, 86.57% of the student's interest aspects of the use of the application, 85.85% of aspects of attention, and 88.24% of aspects of student involvement. Viewed from a fourth aspect of the students showed a very positive response, so it can be seen that the interest of students towards learning English using the application "English For Counseling" very high.

Keywords: Mobile Learning, Android, English for Counseling.

1. Introduction

English is a language that is very popular in this era of globalization. The language used in almost all sectors of human life; education, work and social communication. Mastery of English today is one of the important prerequisites for a person in the face of job competition and will determine one's career development.

The need for mastery of the English language in the future is a challenge for the college as a printer of labor. If you want to win the competition in the job world universities must equip its graduates with adequate English skills. In addition, for students, have sufficient English language skills will be very helpful in completing assignments, especially in reading text books in English.

Preliminary studies have been conducted research through observation and interviews with students majoring in Counseling Faculty of Education, State University of Medan. based on interviews and observations that have researchers did, ditariklah some conclusions, namely; (1) Students have a sense of boredom with the routine of learning with face-to-face where learning is too monotonous, (2) the student looks less active in learning, (3) students feel shame (fear of being
wrong) when conducting a conversation in English in front of the class, (4) not optimal and independent students in the following study, (5) the time learning English is considered still less by students, (6) the ability of speaking and listening the students are still in the low category, (7) students need a flexible learning concept,

Based on these findings, researchers concluded that the need for change or innovation learning system that can make students become more interested, challenged and independently in the following study English in guidance and counseling department, State University of Medan.

The development of technology in education in the era of revolutions 4.0 has changed the conventional learning system into a modern learning system, demands for innovation in the delivery of learning. Then the challenge is what makes the changes in the learning environment and helped to move the process of learning, especially in the lesson. According to Akhbar Galang M, et al (2015) utilization of Science of Technology (Science and Technology) in education into something that is considered very important to change the learning system. Science and technology have changed the conventional learning system into a modern learning system which is based on information and communication technology (Information and Communication Technology [ICT]).

Researchers assume that e-learning provides an opportunity for student self-control of learning success. Learners are free to decide when to start, when it will be complete, and what part of the module that wanted to learn first. If, after repeated there was something that he had not understood, learners can contact lecturers via chat or join an interactive dialogue at certain times available on the menu in android application which will be designed in this study. By doing so, students will feel more interested and excited to learn English.

Based on the above exposure, the researchers want to conduct a study entitled "Mobile Application Development Android-Based English Language Learning To Support Blended Learning Model In the Department of Guidance and Counseling Unimed.

2. Literature Review
   a. Face To Face Learning
      Learning-face (face to face learning) by Seary, et al (2014) is a condition in which pesertadidik or students, instructors, and facilitators meet together in the same place and at the same time. To-face sessions or events are direct meetings between pesertadidik, instructors and facilitators. Face interaction can help break down barriers and provide cross-cultural experience that is real and thus helps in maintaining relationships and encourage the exchange of knowledge.
   b. Mobile Learning
      Mobile learning (m-learning), the use of portable electronic devices to access and share information, it is a trend in higher education, and are redefining the way in which learning takes place and how instruction is delivered (Geist, 2011; Miller, 2012).

According to Cher Ping Lim & Daniel Churchill (2016) m-learning is defined as any activity that allows individuals to become more productive while
eating, interacting with, or make informed, mediated through digital compact portable device that brought people on a regular basis, have reliable connectivity, and fits in a pocket or purse. *M-learning* as a form of e-learning, which can take place anytime, anywhere with the help of mobile phone communications devices such as cell phones, personal digital assistants (PDAs), iPods or any other small portable devices.

**c. blended Learning**

 Learning a mixture (blended learning) is a formal educational program that allows students to learn (at least partly) through user submitted content and online (online) with independent control over time, place, order, or the speed of learning (Staker, 2012). according to the opinion of Mugenyi and Edmond Kagambe (2017) Blended learning is a learning system that combines learning face to face (face to face / classical) with online learning through the use of facilities / internet media.

**d. Android applications**

 According Nasruddin Safaat (2012) Android is an operating system on mobile phones that is open and based on the Linux operating system. Android can be used by anyone who wants to use it on their devices. Android provides an open platform for developers to create their own applications that will be used for a variety of mobile devices. There are several advantages of Android according to a) Multitasking If you ever feel the advantages of Symbian that can open several applications at once, as well as Android are able to open multiple applications at once without having to close one of them.

**e. Learning English Through Android Apps**

 According Paulins, et al., (2014) mobile devices have become an important part in the process of everyday life. Devices such as smartphones or tablets to connect learners to extensive resources and allow for interactivity with others virtually wherever they are. This device provides a large memory storage, performance and high data transfer rates, which in turn can be redirected for educational purposes.

 The use of mobile phones in collaborative learning English language students can reduce stress and facilitate cooperation in learning English. Furthermore, mobile technology makes it more convenient for students to perform various activities, mainly make students interact with each other and share what they have learned (Hwang, et al., 2014).

**3. Research Methods**

**a. Types of research**

 This type of research that is used is a research and development or research and development (R & D). Sugiyono (2007) states that the development method is a method used to produce certain products and the testing of the effectiveness of the product. This study disinteresikan to develop Android applications products English language learning that can be used to support the learning model Blended Learning.

**b. Development style.**
This research is an android application development as a learning medium. Research procedures android application development as a learning medium adapted ADDIE development model, is a model which includes five phases that include analysis, design, development, implementation and evaluation (Mulyanta & Leong, 2009).

c. Research Instruments
The instrument used in this study was a questionnaire media assessment using a questionnaire. Questionnaires were guided by three main criteria according to Walker instructional media and Hess (Arsyad, 2010), namely the quality of the content and objectives, instructional quality, and technical quality.

4. Results and Discussion

Results
a. M-Learning Application Development Android-Based Course In English For Guidance And Counseling.

1. phase Analysis
This media development begins by analyzing some of the necessary requirements. These needs include: the selection of materials and the determination of the user (user), to be used as a reference in the development of M-Learning applications based on Android. Target users of mobile applications developed learning is student of Department of Guidance and Counseling at the Faculty of Education, State University of Medan. Based on interviews with students showed that learning using mobile devices (smartphones) is very attractive to them and can help learners to learn independently whenever and wherever.

Students are asked to give an opinion on how the importance of these topics to them based on the needs they encounter in lectures. Ask questions that researchers are concerning how important topics prepared has learned to develop the English language skills of students.

Based on interviews that researchers do, we concluded that The material will be put into application-based English language learning andorid are as follows:

1) Reading Comprehension, Vocabulary,
2) Reading Comprehension - Active and Passive Voice,
3) Reading Comprehension - Present and past tense,
4) Writing - Conversation text,
5) Listening (Listen the conversation between Consellor and consellee)
6) Reading Comprehension, Vocabulary, Structure (modals Auxilaries)
7) Verbal and non-verbal Communication in Guidance and Counseling,
8) Speaking - Watching the short video of the Guidance and counseling process,
9) Writing - make a report text.

2. Stage Product Design (Design).
1) Preliminary Design Products.
After the analysis phase then the next stage is designing products in the form of android applications. This design is tailored to the competencies specified in the curriculum KKNI. The initial design application M-learning products based on Android divided in two designs, the design for the front-end is designed for users (students who follow courses in English) and back-end design that is designed for the administrator that is a lecturer. The design of the application shown in Figure 1.

3. Application Development.

After all the material collected, the next step is to make mobile learning applications through the Android version of the Android software and HTML Studio 8. In order to use this application to the maximum, the authors use the VPS
VPS is a type of server that uses virtualization technology to hardware divide physical servers into multiple virtual servers. Forms application view once developed can be seen in the following explanation:

1) Initial Display Applications

Forms an early look at the application is not much different as contained in the application design. The logo contained in the initial appearance of the application is English language learning logo for the Department of Guidance and Counseling as in Figure 3 below.

![Figure 3, display Log](image)

2) Front view

On the front display are class menu that displays the names of classes following the lecture English (Figure 4). If you see one of the classes is clicked it will display the chat which can connect to all students who are in the class (Figure 5).

![Figure 4. Display Entire Class.](image)
Students and lecturers can conduct discussions in chat rooms. In the chat room there are some media that can be displayed is the video, audio and images.

3) Main Menu Display.
Maps menu (≡) displays a list of the main menu consists of 5 menu. The main menu display form shown in Figure 6 below.
4) Upload Tasks menu display

On the menu upload (upload) duty to see that there are 3 upload button, the last date collection of tasks set by the lecturer and the date of assignment to the server diunggahnya by students. Upload task menu display form shown in figure 7 below.

![Image of Upload Tasks menu display]

**Figure 7.** Upload Menu Display

5) Display Menu Home (home)

In the home menu, there are several views yait, on application, material, RPS, other learning materials that can be downloaded by the students as PowerPoint slides. The material shown is temporary due to the anticipation of the full memory on the application server, then the material that appears on the homepage according to the topic at one or two meetings lectures. Home view can be seen in Figure 8.

![Image of Display Menu Home]

**Figure 8.** Image Display Home.
6) views Quiz

Menu quiz or exam quiz presented on the menu contents for the topic material. This matter is a collection of exercises from various sources. Exercises that are presented in a mobile learning application is expected to help users to measure their knowledge on matters relating to learning English. Each quiz has been completed by the student automatically results appear on the application and appear on the application server. So students and faculty can view the quiz results obtained by students. Quiz the display shown in Figure 9 below.

![Quiz Page Views](image)

**Figure 9. Quiz Page Views.**

4. Implementation Phase (Implementation)

Pilot implementation phase containing products have been developed to a number of respondents. In the implementation, researchers created a model of learning scenarios Blended Learning. Implementation of blended learning consists of 4 meeting, the two face to face meetings and two meetings online using android application for lectures English. When the trial researchers asked two experts namely media specialists and subject matter experts to provide an assessment of the product applications.

(a) Media Expert Assessment Results

A media expert respondents who are considered to have good judgment and cons of a medium of learning. This app was tested by 1 digital learning media experts who assess the software engineering and visual communication. Results recap media assessment are shown in Table 1 below:
Table 1. Media expert Validation Results

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Description clear application</td>
<td>4.00</td>
</tr>
<tr>
<td>2</td>
<td>The application installation process goes well</td>
<td>4.50</td>
</tr>
<tr>
<td>3</td>
<td>Free use of the application is easy to understand</td>
<td>4.50</td>
</tr>
<tr>
<td>4</td>
<td>Application does not take up much memory</td>
<td>3.50</td>
</tr>
<tr>
<td>5</td>
<td>The process of loading media goes well</td>
<td>4.00</td>
</tr>
<tr>
<td>6</td>
<td>Display layout interesting applications</td>
<td>4.00</td>
</tr>
<tr>
<td>7</td>
<td>The composition and interesting colors used design</td>
<td>4.00</td>
</tr>
<tr>
<td>8</td>
<td>Display design, size and layout of the proper icon</td>
<td>4.50</td>
</tr>
<tr>
<td>9</td>
<td>Button that allows users to use the media</td>
<td>4.50</td>
</tr>
<tr>
<td>10</td>
<td>Audio files in the app runs fine</td>
<td>4.50</td>
</tr>
<tr>
<td>11</td>
<td>The video link learning goes well</td>
<td>4.50</td>
</tr>
<tr>
<td>12</td>
<td>Applications can be run in all versions of android</td>
<td>4.00</td>
</tr>
<tr>
<td>13</td>
<td>Use of the font type and size are correct</td>
<td>4.50</td>
</tr>
<tr>
<td>14</td>
<td>The use and effect of the application interface is simple and attractive</td>
<td>4.00</td>
</tr>
<tr>
<td>15</td>
<td><em>bug</em> or error in the application a little</td>
<td>4.50</td>
</tr>
<tr>
<td>16</td>
<td>Application can be easily modified</td>
<td>3.00</td>
</tr>
<tr>
<td>17</td>
<td>Applications can be used anytime and anywhere</td>
<td>4.50</td>
</tr>
<tr>
<td>18</td>
<td>Some or all of the application programs can be recovered</td>
<td>4.50</td>
</tr>
<tr>
<td>19</td>
<td>Design of a display according to the user level</td>
<td>3.50</td>
</tr>
<tr>
<td>20</td>
<td>The ease and simplicity in pengoprasian</td>
<td>3.50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Total number</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>very</td>
<td>82.50</td>
<td>4.10</td>
</tr>
<tr>
<td>Decent</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the above assessment questionnaire we can see that the media experts give a very good assessment for throughout the item with the total amount of 82.50 with an average value is 4.10. Based on the total and average, it can be concluded that the android app "English for Counseling" eligible for use in the blended learning model.
(b) Results Matter Expert Assessment

A matter experts who assess the feasibility of respondents in terms of instructional design and content learning materials. In this study the authors define material experts are experts who truly understand how to design an interesting learning material and sub-material based on courses in English and have a background in science relating to science teaching and learning English for special purposes. The results of the assessment of the material shown in Table 2 below.

<table>
<thead>
<tr>
<th>No.</th>
<th>item</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The material contained in the application in accordance with the curriculum KKNI</td>
<td>5.00</td>
</tr>
<tr>
<td>2</td>
<td>This application can support the achievement of learning goals</td>
<td>4.00</td>
</tr>
<tr>
<td>3</td>
<td>This application can support the implementation of blended learning models</td>
<td>5.00</td>
</tr>
<tr>
<td>4</td>
<td>This application can make learners interested to learn more about the teaching materials</td>
<td>4.50</td>
</tr>
<tr>
<td>5</td>
<td>The material contained in the application in accordance with the RPS English courses</td>
<td>4.00</td>
</tr>
<tr>
<td>6</td>
<td>Applications can add courage students to use English.</td>
<td>4.50</td>
</tr>
<tr>
<td>7</td>
<td>This application allows students to learn independently</td>
<td>4.00</td>
</tr>
<tr>
<td>8</td>
<td>Readability clear sentences and paragraphs</td>
<td>4.50</td>
</tr>
<tr>
<td>9</td>
<td>The material contained in the application are arranged in a systematic and coherent</td>
<td>4.00</td>
</tr>
<tr>
<td>10</td>
<td>Fucking displayed in the application can help learners to understand the material</td>
<td>4.00</td>
</tr>
<tr>
<td>11</td>
<td>The video link is presented in accordance with the material</td>
<td>3.50</td>
</tr>
<tr>
<td>12</td>
<td>Encouraging learners actively involved</td>
<td>4.00</td>
</tr>
<tr>
<td>13</td>
<td>Exercises given in the application is in conformity with the material presented</td>
<td>4.50</td>
</tr>
<tr>
<td>14</td>
<td>Conformity exercises with the aim of learning</td>
<td>4.00</td>
</tr>
<tr>
<td>15</td>
<td>Uses terms that are easily understood</td>
<td>4.50</td>
</tr>
<tr>
<td>16</td>
<td>Provide motivation / interest and curiosity of learners</td>
<td>4.50</td>
</tr>
<tr>
<td>17</td>
<td>The material is up to date</td>
<td>4.50</td>
</tr>
</tbody>
</table>
In the above assessment questionnaire we can see that the subject matter experts also provide a very good assessment of the material that has been shown researcher on products. Results of the calculations for the item throughout the assessment as many as 20 items of material obtained a total of 86 ratings with an average score is 4.30. Based on the total and average, it can be concluded that the materials contained on the android app "English for Counseling" eligible to be used in the discussion of learning English with blended models.

2) Application Deployment in Learning English.

Learning English courses are based blended learning model used researcher to find out how the application of English for Counseling application products based on Android in the learning process. The scenario set out by researchers is done 2 times 2 into face to face and online learning times. At the meeting of 1 and 2 (face-to-face learning) materials studied there use to be and the subjects and objects in English. Later in the meeting of 3 and 4 (online learning) materials studied is the present tense and Past tense in English. There are 30 students enrolled in this study. Android apps already installed on the phone 30 students.

2. Interests Students Against Android-Based Learning

To find out the interest of the students towards learning English listening using the application "English for Counseling", students are asked to fill out a questionnaire responses to pass judgment on each indicator by affixing a check mark (√) in the range of answers to figures that are considered appropriate. There are 20 items of the statement to be completed by the student.

Table 3. Results of Student Questionnaire Response

<table>
<thead>
<tr>
<th>No.</th>
<th>Aspect</th>
<th>Percentage</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Feeling happy</td>
<td>87.15%</td>
<td>very positive</td>
</tr>
<tr>
<td>B</td>
<td>The interest for the Product</td>
<td>86.57%</td>
<td>very positive</td>
</tr>
<tr>
<td>C</td>
<td>Attention</td>
<td>85.85%</td>
<td>very positive</td>
</tr>
<tr>
<td>D</td>
<td>Student involvement</td>
<td>88.24%</td>
<td>very positive</td>
</tr>
</tbody>
</table>
Results of student questionnaire responses obtained percentage of 87.15% of aspects of good feelings, 86.57% of aspects of student interest towards the use of applications, 85.85% of aspects of attention, and 88.24% of aspects of student involvement. Viewed from a fourth aspect of the students showed a very positive response, so it can be seen that the interest of students towards learning English using the application "English For Counseling" very high.

5. Evaluation Phase.

The evaluation was done in order to improve the android-based mobile learning applications. In this study, summarized the suggestions and criticisms of the respondents were divided into three aspects, namely, software engineering, instructional design and visual communication.

Discussion.

The need for mastery of the English language in the future is a challenge for the college as a printer of labor. If you want to win the competition in the job world universities must equip its graduates with adequate English skills.

Preliminary studies have been conducted research through observation and interviews with students majoring in Counseling Faculty of Education, State University of Medan. based on interviews and observations that have researchers did, ditariklah some conclusions, namely; (1) Students have a sense of boredom with the routine of learning with face-to-face where learning is too monotonous, (2) the student looks less active in learning, (3) students feel shame (fear of being wrong) when conducting a conversation in English in front of the class, (4) not optimal and independent students in the following study, (5) the time learning English is considered still less by students, (6) the ability of speaking and listening the students are still in the low category, (7) students need a flexible learning concept,

Based on these findings, researchers concluded that the need for change or innovation learning system that can make students become more interested, challenged and independently in the following study English language in the department of guidance and counseling Unimed.

The development of technology in education in the era of revolutions 4.0 has changed the conventional learning system into a modern learning system, demands for innovation in the delivery of learning.

Blended learning is known as a hybrid learning, has three definitions according to White Lock and Jelfs (2013), such as (1) a combination of conventional learning and web-based learning online, (2) a combination of media and devices are used to build e'learning, and (3) a combination of pedagogical approaches which are not affected by the use of technology.

This research is an android application development as a learning medium. Research procedures android application development as a learning medium adapted ADDIE development model.

This media development begins by analyzing some of the necessary requirements. These needs include: the selection of materials and the determination of the user (user).Target users of mobile applications developed learning is student
of Department of Guidance and Counseling at the Faculty of Education, State University of Medan. Based on interviews with students showed that learning using mobile devices (smartphones) is very attractive to them and can help learners to learn independently whenever and wherever.

After the analysis phase then the next stage is designing products in the form of android applications. The initial design manufacture M-learning application based on Android divided in two designs, the design for the front-end is designed for users (students who follow courses in English) and back-end design that is designed for the administrator that is a lecturer. The next step is the development of products where the preliminary design of the display that have been defined then visualized in the form of an image using Android Studio. The entire menu and features in the application server that connects to the server admin is a lecturer.

Pilot implementation phase containing products have been developed to a number of respondents. In the implementation, researchers created a model of learning scenarios Blended Learning. Implementation of blended learning consists of 4 meeting, the two face to face meetings and two meetings online using android application for lectures English. When the trial researchers asked two experts namely media specialists and subject matter experts to provide an assessment of the product applications.

Media experts give excellent ratings for throughout the item with the total amount of 82.50 with an average value is 4.10 so it concluded that the application is very feasible to use.

Results of the calculations for the items on the expert assessment throughout the material as many as 20 items obtained a total of 86 ratings with an average score is 4.30. Based on the total and average, it can be concluded that the materials contained on the android app "English for Counseling" eligible to be used in the discussion of learning English with blended models.

Because the application has been set in the category of very decent by media experts and material, the researchers made a model of blended learning scenarios where there are 4 meetings that 2 times 2 into face to face and online learning times. At the meeting of 1 and 2 (face-to-face learning) materials studied there use to be and the subjects and objects in English. Later in the meeting of 3 and 4 (online learning) materials studied is the present tense and Past tense in English.

To find out the interest of the students towards learning English listening using the application "English for Counseling", students are asked to fill out questionnaires interest. The results of calculations throughout the student questionnaire responses obtained percentage of 87.15% of aspects of good feelings, 86.57% of aspects of student interest towards the use of applications, 85.85% of aspects of attention, and 88.24% of aspects of student involvement. Viewed from a fourth aspect of the students showed a very positive response, so it can be seen that the interest of students towards learning English using the application "English For Counseling" very high.
Closing.

Should the lecturers to develop media online learning (M-Learning) are guided by the technical and teaching approaches in the course of teaching and lecturers should undertake a study with the model of blended learning because it is based on observations of researchers, the learning model of blended learning and the use of media online learning is very effective and well used to increase motivation and student learning outcomes.

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