Scheme of Application Study of Kanji Characters Japan to Children Base On Android

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Abstract-- **This research aim to to design a application base on Android to assist children learn japan Kanji Characters. Besides this application also can become media to assist instructor of japan language to teach Kanji Characters to educative children of by more pleasant and modern. Android selected as platform for the development of application because this platform used many for the peripheral of mobile so that consumer can access whenever and anywhere. End result at this research is a scheme of application study of japan Kanji Characters can be used as reference to develop study application.**

Keywords: *Children, Japanese Kanji, Application, Android, Naritachi Kanji.*

I. INTRODUCTION

Research Background

The development of mobile android technology is currently running very fast. Since its first launch in 2008 [1] up to now the number of Android users in Indonesia is among the highest in Southeast Asia, totaling 41 million users or a market share of 94% [2].

Android is a Linux-based operating system designed for touch screen mobile devices such as smart phones and tablet computers. Android was originally developed by Android, Inc., with financial support from Google, which was later purchased in 2005. The operating system was officially released in 2007, in conjunction with the establishment of the Open Handset Alliance, a consortium of hardware, software, and telecommunications that aim to advance the open standards of mobile devices. The first Android phone went on sale in October 2008 [3].

Child is a man or woman who is immature or has not yet experienced puberty. The child is also a second offspring, where the word "child" refers to the opposite of the parent, the adult is the child of their parent, even though they have grown up. According to psychology, the child is a period of development that extends from infancy to five or six years, this period is usually called the preschool period, then develops on a par with elementary school years [4].

Japanese Ambassador to Indonesia Yasuaki Tanizaki said that Indonesian students studying Japanese are about 870,000 or the second largest in the world after China [5]. And the method to teach Japanese children especially kanji is still conventional, so for teachers and parents who want to introduce Japanese kanji face difficulty.

The Japanese language itself consists of 3 types, namely hiragana, katakana, and kanji. The kanji script is used to symbolize concepts or ideas (nouns, verb roots, adjective roots, and adverbs). Meanwhile, hiragana (ancient katakana) is generally used as an okurigana to write verb inflexions and words whose roots are written with kanji, or native Japanese words. In addition, hiragana is used to write words that are difficult to write and remember when written in kanji script. Except for the word absorption, kanji script is used to write almost all vocabulary from both Chinese and Japanese [6].

The Android-based learning app was chosen because of the platform for mobile devices. This device is easy to carry anywhere. This application will be offline so do not require internet connection to run it. Based on this background researchers in this study are interested in the title ""Scheme Of Application Study Of Kanji Characters Japan To Children Base On Android ".

Formula of Problem

According to the research background which has explained, researcher has proposed research matter as follows, "how to design Japanese kanji learning application which easy to understand by the children and easy to use by the teacher so that learning process can be flexible, pleasure, and modern?".

Research Definition

The research in order that can more focus and reach the target, so that researcher create framework as follows :

1. The application is only use for learning Japanese Kanji.
2. The application which has designed use Android Platform.
3. The application which has designed doesn't need internet connection to run.
4. The research is only discuss interaction design between users and system.

Research Aim

The aim of the research is to design information technology based Android to help Japanese Kanji learning process in order that can be more efficient, pleasure, and modern.

Research Benefit

This research have expected to give benefits to help Japanese teacher especially to teach Japanese Kanji. Next the expected benefits of the research :

1. Children can study Japanese Kanji by themselves.
2. Children can study Japanese Kanji without join at Japanese course.
3. Lessening usage of practice moment paper write kanji.

II. METHODOLOGY

Research methodology that use in Scheme Of Application Study Of Kanji Characters Japan To Children Base On Android involve some steps as follows:

Analyse and system scheme

In this step will held some steps as follows :

1. Data Collection
   In this step, researcher collecting for the various materials which use to teach Japanese Kanji.
2. User Needs
   In this step, research analyse what is the user needs in order the application can help in Japanese Kanji learning process. As for user needs is as follows :
   • The interesting view.
   • There are introducing Kanji by picture.
   • There are exercise to guess Kanji by picture or the contrary, guess picture from Kanji.
   • There are writing and reading Kanji exercise by word or sentence.
   • There are writing Kanji exercise suitable with the Kanji writing step.
   • There are exercise to guess the number of the Kanji stroke.
3. System Development Needs

In this step, researcher analyse the system development needs. And there are the system development needs as follows :
• The newest Software Android Studio.
   • PC with Prosesor Intel Core i5 specification or higher one, RAM 8 GB or higher one, Harddisc 250 GB.
   • Middle level Android programmer.

4. Learning Design
   In this step, researcher will map out the learning model which will use in this application later. Learning will divided by topic, there are : number topic, days name topic, position topic, family topic, school topic, daily activity topic, etc. Each topic will teach reading and writing Kanji be accompanied picture.
5. Exercise Design
   In this step, researcher will map out the design of the exercise which later can use in this application. The exercise will give in each topic by the exercise like writing and reading Kanji.
6. Assessment Design
   In this step, researcher will map out the assessment design which later will use in this application. The application will use star in each topic. Highest score is 3 stars, and the lowest score is 1 star. To reach 3 stars, the user should success answer the exercise until 90%, to reach 2 stars, the user should success answer 80%, and if the user only success answer for 40%, they only can reach 1 star.
7. User Interface Design
   In this step, researcher will map out user interface which will use in this application.

III. DISCUSSION

Result of from this research is a application scheme of study of japan Kanji Characters in the form of application base on android so that childrens can learn japan Kanji Characters at anywhere and whenever with more flexible and interest pleasant.
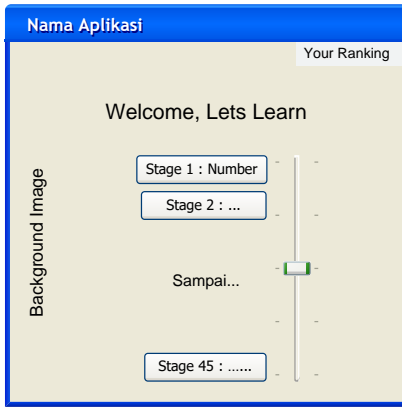
Fig 1 :front page of the Japanese Kanji learning application

This image is the front page of japanese kanji learning app. Where there is an interesting animated background. In the top right corner there is a total ranking symbolized by three stars which is the result of the accumulation of each material. In the middle there are the menu buttons that read the topic of existing material. The amount of material to 45 chapters. Users must start learning from material 1, if successful pass on the material can just proceed to the next material.
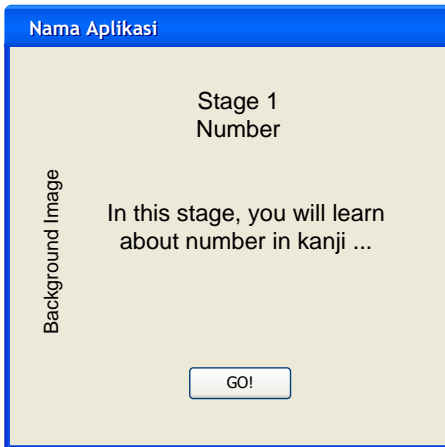

Fig 2 :An explanation page about the content of the material

This picture is an explanation page before start the learning. This page will appear after the user choose one of the matery on the menu in front page. This page use to help user to understand what will they learn in this menu. In this page, there are a button that read "GO!" which is if user clicked will lead to the next page.

Fig 3 :menu page after explanation page

This picture is page which appear after "GO" button clicked. This page contain 2 main buttons that read "Start Learn!" and "Start Practice!". Next, under two main buttons there are user assessment on that stage. This assessment symbolized with star. 1 star mean good enough, 2 star mean good, and 3 star mean very good. The assessment will appear after the user follow exercise session.
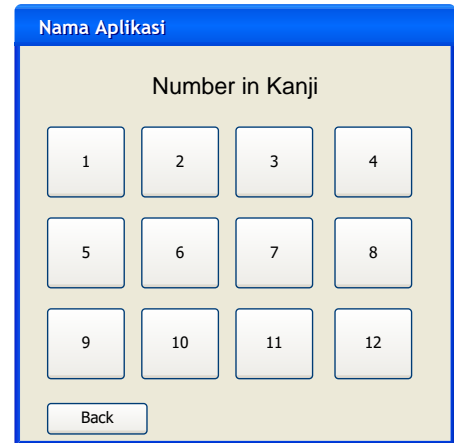

Fig 4 : Page Learn 1

This page appear after "Start Learn!" button clicked. On this page there are buttons which each button read number start from number 1 until 12. Each button contain number matery and if clicked will guide to the next page. Next, there is 1 another button on the top corner of page that is "BACK" for back to the previous page.
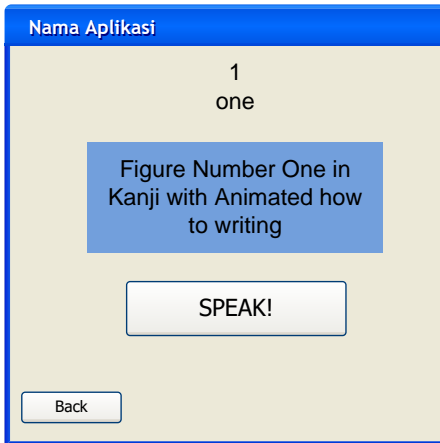
Fig 5 : Page Learn 2

This page appear after user choose one of the button that read number on the previous page. For example, the button that read number "satu". On this page, on the top there are the same number that suitable with the button which the user have choosen and also the reading in English. Next, just below on it there is animation picture of the number in Kanji. That animation explain how to write Kanji. Next, under the animation picture there is button to hear how to spell those Kanji which is if it clicked will sound in Japanese. Next, there is one more button in the left bottom corner of the page that is "BACK" to back in the previous page.

Fig 6 : Page Practice 1

This is exercise page which appear if the "Start Practice" button on Figure 3 clicked. The exercise design of this page is user should choose one of the correct answer from four options. The exercise design not only multiple choice, but also writing and speaking exercise, like the next explanation on this next figure.
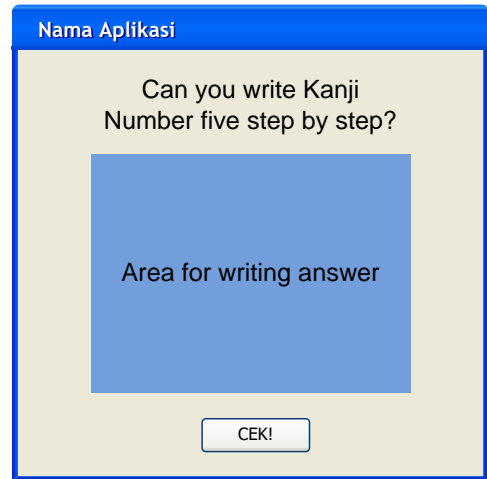

Fig 7 : Page Practice 2

Figure 7 is one of the exercise design besides the choices. On this page, user required to write Kanji gradually in the correct stroke. If user write Kanji not in sequence of stroke, even the Kanji looks right, the system will read it as wrong Kanji.
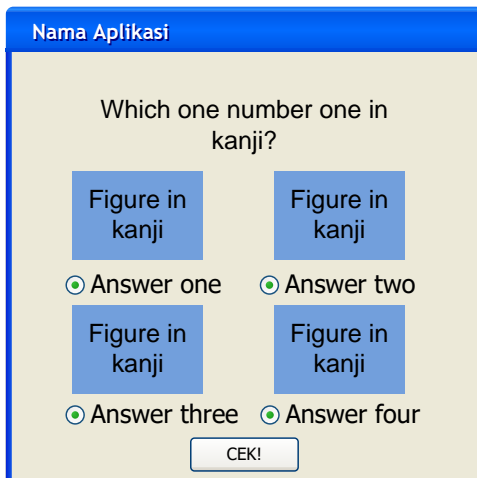

Fig 8 : Page Practice 3

Figure 8 is one of the exercise design besides writing exercise. On this page, user required to speak Kanji suitable with the picture that appear by clicked "Click to Spoke" button first then speak. Sound from user will recorded and matched with the original sound contained in the system. If the sound of the user considered similar with the original sound, the user sound will considered true.

IV. CONCLUSION

According to the interaction design result between user and the Japanese Kanji learning application for children can be concluded that:

- Children can study Japanese, especially Kanji, anywhere anytime.

- Children can study Japanese Kanji without join at Japanese course.
- This application later just as a tool, not to replace the role of teacher.
- Can lessen usage of paper which usually used as appliance for practice to write.
- Result of this scheme can be used as reference develop application study of japan Kanji Characters.

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