

A Need Analysis for Kanji Learning Applications

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Abstract. This study aims to analyze the need in learning kanji through applications that can make it easier for students. This study uses a quantitative descriptive method with a research instrument used is a questionnaire. Respondents in this study were 20 students of the Japanese Department Faculty of Humanities at the Universitas Komputer Indonesia for the Academic Year 2022/2023. The results of this study described that students need an application with a brightly coloured design with decorations that have kanji characteristics, but the colour used must still be considered for its saturation because it can become a user attraction, equipped with complete features such as sounds, kanji illustrations, as well as other features such as quizzes or games that can test the ability to remember and write kanji as well as practice questions that focus on the JLPT. Other features can also be used, such as media images, pictures, or others. Therefore, learning kanji with media applications that are equipped with illustration, sound, quizzes, and game features is needed. In addition, an attractive design with bright colours can also attract users' attention in learning kanji through the application.

1. Introduction

Now the smartphone is a medium that is owned by almost everyone, including the people of Indonesia. According to Indonesia Baik survey data, 70.98% of students already have a smartphone. Many activities have become more efficient and effective after smartphones. This is because smartphones are not only used to communicate and get information from the internet but can also be used as learning media. Smartphone learning media can be one the interesting learning media, because students can learn the material in different ways, namely using cell phones as a learning resource [1]. This proves that the use of smartphones has a positive impact as a learning tool for students. Smartphones are one of the important media in facilitating the learning and teaching process, especially in today's education where learning methods are modern. Application is a software system that is intended to perform a specific task available on a smartphone. An application can be downloaded and has certain functions that can increase performance according to the needs of a device. Applications are used to add functionality to a device that is used by humans [2]. Therefore, the application can be

an effective and efficient learning media. Many Indonesian students learning Japanese find it difficult with kanji [3]. Kanji is one of the Japanese letters and includes letters that are difficult to learn, especially for countries that use alphabet letters. In the process of learning kanji through smartphones, what do students need to improve their ability to learn kanji in a kanji application?

For beginner Japanese learners, learning kanji is very difficult. Therefore, many developers create kanji learning applications that can motivate Japanese language learners. A study says the need for learning media that can attract students' interest in learning so that a learning goal can occur [4]. Meanwhile, other works state that many students are more interested in learning Japanese using an android than through books and websites [5]. Through Android, learning Japanese can be done anytime and anywhere. Another study created a Japanese language learning application based on quizzes but needed to add a sound control function during learning or quizzes [6]. Based on the evaluation process, additional pronunciation sounds that are much clearer are needed. Although mobile apps based learning tools are available, apps specifically work with textbooks are rare and can be useful for language courses[7]. Students are more likely to focus on the vocabulary from their textbooks, so it is preferable for learning tools to be based on the content of a textbook. Another study created an application that has features such as the meaning of kanji in Indonesian, examples of its use in vocabulary, and the meaning of this vocabulary in Indonesian [8]. Although the last features are still difficult to find in other kanji applications.

Many kanji learning applications have been created by both Android and iOS-based developers. Starting from various themes, designs, features, and so on. Because there are many types of kanji learning applications, a research project was carried out to find out what students, especially students, needed in learning kanji.

The purpose of this study is to analyze the need of learning kanji through applications. The method used is quantitative descriptive using an online questionnaire instrument via Google Forms.

2. Methods

This research uses a quantitative descriptive method. This is because the results of the approach use the lift, starting from data collection, interpretation of the data, and the appearance of the results. The results of these numbers will be drawn from descriptive conclusions. Descriptive approach studies are used to describe and describe the social reality that occurs in society [9]. This research also uses a quantitative approach because it uses numbers, starting from collecting data, interpreting the data, and the appearance of the results. The approach uses quantitative because it uses numbers, starting from data collection, interpretation of the data, and the appearance of the results [10]. Therefore, this method is very suitable for use in this research. Respondents in this study were level 2 students of the Japanese Department at the Universitas Komputer Indonesia for the 2022/2023 academic year a total of 44 people. The sample used was 20 students using a random sampling technique. The data instrument used was a questionnaire which was distributed directly to respondents via the Google form.

3. Results and Discussion

Based on the data obtained from the questionnaire, it can be seen that the responses to the use of the kanji learning application are presented in table 1.

Table 1. Students responded whether they routinely use the kanji application

Responses	Percentage (%)
Yes	80%
No	20%

Based on table 1 above, it was concluded that 80% of students stated that they used the kanji application to study regularly and 20% of students stated that they did not use the kanji application to study regularly. Next is the response regarding an attractive display in a kanji application. This is because using a smartphone has become routine and people learn how to use, give meaning to, and be influenced by technology [11]. Furthermore, the responses regarding the interesting application design are presented in Table 2 below.

Table 2. What kind of application design is interesting

Responses	Percentage (%)
Brightly Colored	50%
Neutral Colores	35%
Other	15%

Based on table 2 above, it was concluded that 50% of students stated that they preferred brightly colored application designs, 35% of students stated that they preferred neutral colored application designs and 15% of students stated others accompanied by reasons such as an attractive design must be equipped with an image or decoration Kanji decoration that attracts attention, colors can be adjusted as long as the features are attractive, and an interesting design is that each menu has a different color accompanied by illustrations or pictures. Color selection in an application is very important. Color carries meaning and can influence consumers' thoughts, feelings, and behaviors [12]. However, the selected color can be adjusted and its saturation can be adjusted. Boredom decreases speed and relaxation is felt. Table 3 below presents responses regarding the need for illustrations in starch applications.

Table 3. Responses regarding the need for illustrations in kanji applications

Responses	Percentage (%)
Need	100%
No Need	0%

Based on table 3 above, it was concluded that all students stated that illustrations must exist in a kanji application. The students also added that the steps in writing kanji are important, because clear and complete explanations and examples are needed, and to be able to read kanji. To make it easier to learn kanji, illustrations are needed because they can help remember the correct way to write kanji. The thing that makes students feel interested is the way to remember kanji with illustrations [13]. Furthermore, responses regarding the need for sound features in the kanji application are presented in table 4 below.

Table 4. Responses regarding the need for sound features in kanji applications

Responses	Percentage (%)
Yes	85%
No	15%

Based on table 4 above, it was concluded that 85% of students stated that the sound feature needs to be present in a kanji application because this feature can help students pronounce new vocabulary. Meanwhile, 15% of students stated that they did not need to add a sound feature to a kanji application because this feature is not useful if they want to learn kanji, which is based on writing, not listening. With the sound feature, a user can enjoy and delight from writing Kanji with various pronunciation sounds depending on the different handwriting of the written Kanji [14]. Furthermore, responses to other features that need to exist in a kanji application are presented in table 5 below.

Table 5. Other features that need to be in a kanji application

Responses	Percentage (%)
Quiz	45%
Games	40%
Other	15%

Based on table 5 above, it was concluded that 45% of students stated that the necessary features in a kanji application were quizzes, 40% of students chose games, and 15% of students choose others. Other options are also filled with additions such as a Japanese Language Proficiency Test (JLPT) focused question practice feature. The use of quizzes stimulates students to understand questions better than textbook-based questions [16]. The characteristics of games that are fun, challenging, and can be played collaboratively make games popular with many people [17].

4. Conclusion

From the results of the analysis of the data obtained from the questionnaire, it is known that students need an application with a brightly colored design with decorations that have kanji characteristics, but the color used must still be considered for its saturation because it can become a user attraction, equipped with complete features such as sounds, kanji illustrations, as well as other features such as quizzes or games that can test the ability to remember and write kanji as well as practice questions that focus on the JLPT. Other features can also be used, such as media images, pictures or others. Therefore, learning kanji with media applications that are equipped with illustration, sound, quizzes, and game features is needed. In addition, an attractive design with bright colors can also attract users' attention in learning kanji through the application.

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