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The Development of a Mobile Reading Assistance System Based on Chinese Words for Students in Elementary Schools

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Abstract: The aim of this study was to develop a Mobile Reading Assistance System Based on Chinese Words for students in elementary schools. This paper presents a system which is called Reading Assistance for the elementary school students to learn anytime and anywhere by using personal mobile devices (PDA) and the Wireless Network. In this system, instructors would be required to upload the text content to the system and instructors can view the learning record of students. On the other hand, learner can read the text content and learn Chinese words by using this system. To sum up, the characters of this system are easy reading, easy learning, easy conduct, and high supportive which support for student Assistance of Reading. In the future, researchers will use tests to assess the system.

Keywords: Reading Assistance, Chinese Words, M-Learning, Chinese word segmentation

Introduction

In recent years, Internet technology and Equipment were growing so fast. With this gigantic revolution, the way of transferring knowledge was not only publication, but also transmitted through other multimedia devices such as website, e-books, and Mobile devices. Those things can make dissemination of knowledge acceleration. In this time, a person how to get and use knowledge they need has become an important issue. When author reviewed the current elementary school education, author tried to discover how to help children to have the ability to browse information and to gain knowledge. Those things have become important issues for the discussion. Reading ability means that readers' ability to obtain information from article [1]. In order to strengthen reading ability, it can be divided into: 1. word recognition; 2. the understanding of the article. In the current elementary school education, 1-2 grade students are reading by learning. It means that word recognition is important for them. But the other grade students are learning by reading [1]. Hence, the core of Learning is students' understanding of the article. This shows if people want to strengthen elementary school students reading ability, they have to build up the ability of students' word recognition. Therefore, in this study researchers incorporate online language dictionaries [2], Chinese word segmentation [3], and the advantages of M-Learning to development of a Mobile Reading Assistance System Based on Chinese words. This system can be used to assist elementary school students using wireless network and mobile devices to brows articles provided by teachers through online. The system also provides a link function dictionary which will help students obtain real-time interpretation of the word.

Hence, using this system to supporting reading activities for elementary school students should be helpful.

1. Literature review

Several researchers [4-7] to combine mobile learning theories with language teaching courses, and some researches had positive results on improving students' learning effectiveness. However, researches of this field in the past just focused on composition teaching [6] and word teaching [4-5], but rarely focused on the reading of assistance for Primary Student. In this paper, the researcher suggested a framework of Mobile Reading Assistance System, and then development a mobile reading assistance system based on Chinese words for primary student. This system will help to assist reading for primary student.

2. System Overview

In this system, the Framework of Mobile Reading Assistance System equipped with server, personal mobile devices (PDA), and wireless network. The development environment and tools including:

1. Operating System: FreeBSD 7.3 Stable
2. Programming Language: PHP, Bourne Shell Script
3. Web Service: Apache2.2
4. Chinese Word Segmentation: CKIP Chinese Word Segmentation System
5. Dictionary Service: On-line Chinese Dictionary (MOE., R.O.C)

Figure 1 shows a framework of the Mobile Reading Assistance System enables students to utilize mobile technologies with wireless network to learn anytime and anywhere. And Instructors can upload the text content to the system, and view learning record of students.

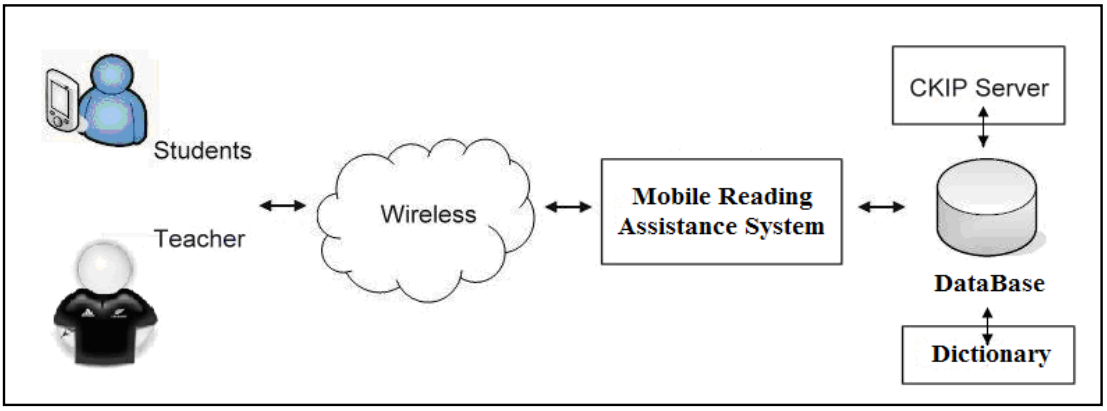

Figure 1. The Framework of Mobile Reading Assistance System

Figure 2 is teacher's main menu. This menu includes two functions: 1. Article Management; 2. Learning Record. In the first function (Article Management) is support the teacher to edit the article title and upload the text content to the system. In the second function (Learning Record), this option is to support the teacher to view the learning record of student. Figure 3 and Figure 4 show a function of upload the text content to system.

Figure 2. Main Menu (Teacher's)

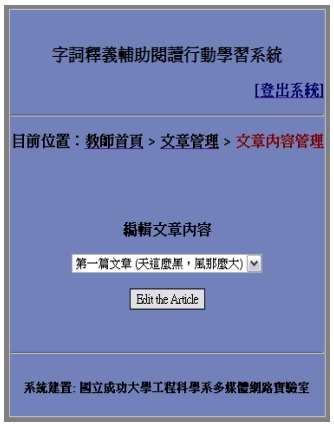

Figure 3. Select the text content

Figure 5 shows a function of edit the Article title. This function is to support the teacher to add, edit, and delete the Article title.

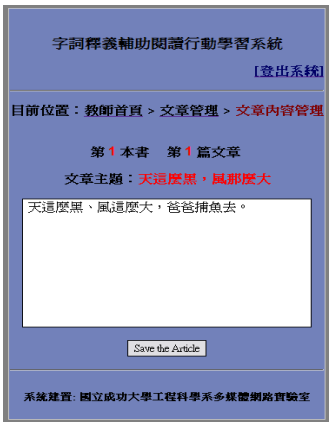

Figure 4. Edit the Article

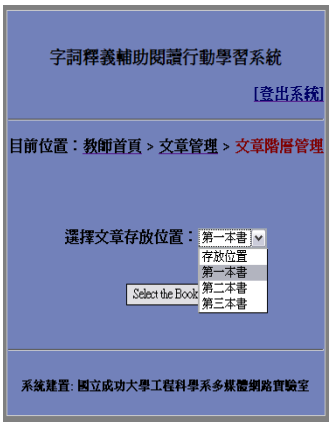

Figure 5. Edit the Article title

Figure 6 is student's main menu. This menu includes two functions: 1. Article Read; 2. Personal Chinese Words Database. In the first function(Article Read) is support the student to read the article, use dictionary service, and add the annotation of chinese word. In the second function(Personal Chinese Words Database), this function is to support the student to view and edit the annotation of chinese words (as Figure 7 shows).

Figure 6. Main Menu (Student's)

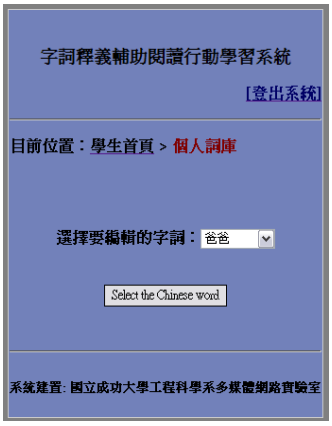

Figure 7. Select the Chinese word

Figure 8 show the function of article read. In this function, if the Chinese word is noun, then those words-loaded would automatically be word-oriented to On-line Chinese Dictionary. Figure 9 show the hyperlinks of Chinese words (link to On-line Chinese Dictionary), and student can add the annotation into personal database.

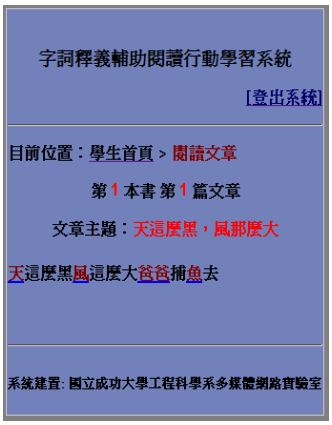

Figure 8. Read the Article

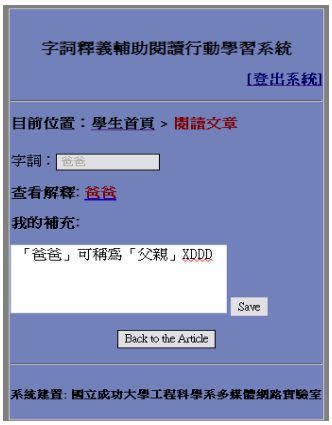

Figure9. Read and Edit the word

3. Conclusion

In this study, the researcher suggests a Mobile Reading Assistance System Based on Chinese Words for Primary Student. This system will help to assist reading for primary student. To summarize, the characteristics of this system were easy reading, easy learning, easy conduct, and high supportive which support for student Assistance of Reading. In the future, the researchers will use examine to assess the system.

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