The English Learning System Design Based on the Android Platform

Man LIU

School of Foreign Languages, Changchun Institute of Technology, Changchun, China, 130012

Keywords: English learning system, Android platform, Mobile learning.

Abstract. With the rapid development of information technology in modern society to promote the informatization process, the world has accelerated the pace of modernization of education forward. Education technology has experienced from the traditional teaching, the common media technology to the computer technology and communication technology on the basis of the development of multimedia information network technology. This paper is to implement an English learning system based on Android platform. In this system, learning service provider can learn listening resources released by the server and system management work, which can satisfy English learning, learning, communication and other activities.

Introduction

With the mature of mobile technology, language learning is gradually to the day-to-day work, advanced technology, combined with the characteristics of language learning, encourage the development of the mobile language learning, mobile learning English has become a modern important way of learning. According to the survey, English listening is still many students feel a weakness and difficulties. Traditional classroom teaching of listening learning to form gradually, in short, between people and students class time, less resources, could not guarantee the quality of listening teaching, causes students to get full voice edification and exercise [1]. Mobile smartphones in college students' group, however, has been popular, the use of mobile smartphones as a learning carrier, overcome the limit of time and space, make up for a lack of resources, create heard environment anytime and anywhere, is beneficial to increase the chance of hearing, but also to improve the quality of the college students' English listening, to strengthen college students' English comprehensive ability to lay the foundation.

Mobile learning is based on digital learning on the basis of a new type of learning style, it has the mobility, high efficiency, such as broadcast, interactive, sharing, personalized learning characteristics. Android is an open source operating system based on the Linux kernel, is mainly used in smartphones, tablets and other mobile terminals. Using computer technology, wireless communication technology, multimedia technology and other modern technology to establish a mobile learning system, by running in an Android system of intelligent terminal equipment, can be used to supplement to the traditional learning mode powerful, for the majority of users provide personal learning support services anytime and anywhere [2]. The purpose of this paper is to implement an English mobile learning system based on Android platform. In this system, learning service provider can learn through the server-side resource distribution and system management work; learn the service recipient by installing the mobile client to Android mobile devices, can live course learning, learning, communication and so on.

Android Mobile Development Technology

Android is a mobile operating system based on the Linux kernel, by Google and its Allies, the open handset alliance. Android smartphone operating system is based on the Linux kernel, the Android system is composed of four parts. The top is application software, directly facing the user. And then the developer can call for interface display component, the third layer is the middleware, it blocked the underlying operating system, the fourth floor is the Linux operating system kernel [3-4]. The Android operating system has the complete API and open nature, as shown in Figure 1.
The client of mobile learning system mainly includes the Android smart phones and portable equipment such as Android tablets, users through their mobile devices to access courses and learning and other learning related operations. Mobile learning system of server-side mainly consists of two parts, the database server and server resources. Database server's main function is to store student related personal information, and is responsible for the validation and feedback the correctness of the users to submit personal information legitimacy. Server to manage the management course resources (hypertext, images, animation, streaming media, etc.) and handling online interactive information including student to ask the teacher answer questions, etc.

**Function Design of English Learning System Based on Android**

Based on English learning Android system with the method of modular design. First of all, the learners use Android smartphone or tablet, mobile terminal equipment run the client program. After entering through the welcome screen, learners can conduct online course in communication, personal educational administration information management, online consulting, view school announcements, and other learning related activities [5]. English learning system Server adopts B/S (Browser/Server and Browser/Server mode) structure of implementation, for the resource publishers, system administrators, mobile users of the client software for mobile learning related activities provides all kinds of basic services. The function of English learning system based on Android platform design module diagram is shown in Figure 2.

English learning system is based on the Android support for multiple devices. Client system configuration can be run on Android mobile phone, PDA, tablet computers and other portable devices. Updated listening resources for online and offline. Consider online update data traffic, can download learning resources to SD card in the PC, used to load the system. Online communication data flow is small, fast response speed. Client system configuration in the Android devices, the communication with the server using the Socket HTTP protocol, the communication data encapsulation as XML text. At the same time, the learning resources using a database to store, convenient for system data maintenance.
The Development of English Learning System Based on Android

According to the potential user demand survey and content design principles, the final design of English learning system based on Android design process is shown in Figure 3.

Figure 3. The development of English learning system based on Android.
The study of English learning system design principles, the first consideration is positioning of the system rationalization, in the first line of user demand survey content is in potential users, ask is need a lot of learning content and learning content of small and exquisite. Obviously, the choice of the user does not want to be an encyclopedia of mobile learning platform. When set up mobile learning system, therefore, it must first be clear that who is the service object in the system, the system for the user needs to provide what aspects of learning content. Due to the principle of index system is set up mobile learning content is important basis of evaluation standards, thus determine the indicators of mobile learning content design, is the foundation of the mobile platform design. The scheme through prototype design scheme, design a prototype first, and through constant selection, refactoring, gradually improve the design of the knowledge of mobile learning platform, eventually form contains words, audio, video, images and other content, knowledge point segmentation good English learning platform. In this paper, in the design of the prototype of the due time is limited, only the content of design work, the final result is stored in the MYSQL database.

Conclusion
Mobile learning is a kind of rapid development of new learning style. Intelligent mobile terminal equipment of the expansion and the rapid development of wireless network technology, for the purpose of the Android mobile learning system development and implementation provides the necessary theoretical and material basis. This article through the analysis of mobile learning development both at home and abroad, to understand the mobile learning related theory and basic knowledge of the Android platform software development, discussed how to on Android intelligent terminal equipment for the design and implementation of mobile learning system. With the constant innovation of mobile learning theories as well as the rapid development of science and technology, mobile learning areas become a worthy of exploration and development of emerging field. In such a background, how to optimize the mode of mobile learning applications, how to design a more perfect mobile learning system architecture, how to develop the application and the user experience more user-friendly mobile terminal software, learning all of these are worth thinking about and deeper problems.

Reference