A Learning and Management System on Account of Software and Hardware

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Keywords: Application, Hardware, Intelligent study.

Abstract. This topic is intended to describe and study a system, which is taking Jilin University as an example, based on the system feasibility and necessity of campus applications, this paper analyzes and investigates the problems existing in the process of functional design, application and development. So we propose a new system to satisfy the needs of students and teachers: including a learning-oriented multi-function mobile application, mainly about using Android Studio to build application interface, combined with Myeclipse, tomcat and MySQL database. The system equip with positioning, camera and other hardware plus web pages on the windows platform as an auxiliary system. After about 400 teachers and students using over 2 months, because of its good user experience and characteristics of learning, we gain lots of praise, now we are planning to promote it gradually.

Introduction

With the fast development of application and hardware, applications about the campus application are on the rise. However, because of the technology of developers and the local applicability of applications, most of these campus applications tend to the content such as entertainment, daily job, association and business. According to the current situation, it’s hard to satisfy the commands for students in the terms of study and communication, what’s more, system design with software and hardware is really less.

Existing Problems

However, according to the current situation, there still have many barriers to overcome. First of all, these functions can satisfy the basic commands of the target people generally, but they also show many obvious defects at the same time: (1) The kinds of learning and life service functions which have existed are less and lack of personalized. Specifically, taking the function of learning as an example, the majority of campus applications only have score query, schedule creation and other simple functions, but some more higher level commands, such as the study guidance based on the analysis of students’ scores data, the formulation of learning plan, and the online learning are ignored. (2)Since campus applications came into being, the number is growing fast. More and more software companies, new media studio, college students entrepreneurial team begin to try in this field. However, because of the locality of campus applications, the unduplicatedness of some functions, the shortcomings of functional design, the lack of professional teachers’ guidance and other unexpected factors, many applications can’t achieve the anticipated effect.
One Solution

According to the previous interviews and questionnaires survey, the improvement of the campus applications with this system can surround by these problems: (1) Limited by too much work and time scheduling and so on, it exists a widespread lack of communication between students and teachers in the current teaching environment. However, it’s a very important factor to promote understanding between teachers and students and improve learning interest and effect. Therefore, the function of this system is designed from classroom teaching to homework, online questions, evaluation of teaching and feedback in order to strengthen the interaction between teachers. (2) According to the feedback from students and teachers, the communication and interaction among students of different grades in the same profession showed a declining proportion. Because of the professional knowledge is similar, high grade students in the same profession often have a better understanding of the knowledge system and job hunting, have more plans for learning or some experience on lots of problems. Just for this rate of communication, freshmen will repeat some mistakes which have been made by high grade students so that wasting much time on one problem. However, apart from the waste of time, there are more waste will come into being on transfer of teaching resources and sharing of academic resource. Therefore, this system design a function called ‘Senior students world’, including undergraduates, masters, doctors and the students who have worked. It provides a free platform for students and achieves efficient communication of information. (3) Previous private order: Personalized learning planning functions and personal data transfer based on bracelet implement the private order.

Functional Design

On account of the previous investigation, visits and some related information. The implementation and function of this system are as follows: mobile phone application (including version for students and teachers). The version for students’ functions are as follows: evaluation teaching, self-regulated learning planning (short or long), score query, course plan instruction, search for information of empty classrooms, course communication (with teachers, classmates and seniors), acquisition of learning materials (course resources and examination materials), integration of school notice (academic forum, school news, corporation activities), map of school and so on. The version for teachers’ functions are as follows: check on work attendance, course communication, feedback of evaluation teaching, view real-time pictures of the classroom and so on.
Experimental Achievement

The innovation point of this system function design: (1) Emphasis on learning: it covers the long-term plan, recommended learning plan, the overall knowledge system chart, the competition certificate reminder, the course selection guide and so on. The major features of the system are the part which the traditional campus apps don’t have. It’s make users understand the knowledge architecture and improve learning interest. (2) Strong interaction: Improving the communication between students and teachers by evaluation teaching. Improving the communication between seniors and classmates. It expects to acquire better teaching and learning results by high interactivity. (3) Hardware assisted: The function of real-time picture transfer can help mangers know what happen in the classroom so that they can manger more convenient. The bracelet can record individual status and part of body data. (4) High degree of integration of messages and reliable source: It has accurate information for competitions, certificates exams, school notices, course resources, real-time classroom. And it’s all made for various majors specially. It strengthens the communication between the students which are different majors. Although this kind of communication’s rate is very low according to the survey, the effect will be very good if it implements.
Summary

In summary, findings from the present study suggests that an custom made application with study function and hardware has a better effect on raising the study efficiency than an conventional one, Now we are analyzing and designing more better function features based on problems encountered in user usage and recommendations.

Acknowledgement

The corresponding author is Zhao Hongwei. The authors are grateful to the anonymous reviewers for their insightful comments which have certainly improved this paper.

This work was supported in part by the Jilin province development and Reform Commission Special industrial innovation 2016C035 and State Key Laboratory of applied optics.

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