The Design and Realization of Management System for College Students’ Innovation and Entrepreneurship Training Projects

Li-hua LI¹,*, Su-hua LUO²

¹School of Economics and Management, Tianjin University of Science and Technology, Tianjin, 300222, China
²Business School, Guangxi University, Nanning, 530004, China

*Email: 791879422@qq.com

Keywords: Project Management, Innovation and Entrepreneurship, Management System.

Abstract. Management system for college students’ innovation and entrepreneurship training projects proposed in this study aims to deal with the heavy workload of project managerial personnel. This study adopts B/S structural model to develop the management system for college students’ innovation and entrepreneurship training projects, selecting the C computer language as the developing language, Microsoft Visual Studio 2010 as the developing tool and SQL SERVER 2008 as the database. This system is able to improve project managerial personnel’s supervision and management of approved projects, promoting the communication between the project team and the instructor, and is conducive to train and guide college students to participate in such kind of practice, thus providing references for colleges and universities in the cultivation of college students’ practical abilities.

Introduction

Colleges and universities abroad have paid an increasing attention to the cultivation of college students’ practical abilities in independent innovation and entrepreneurship so as to make them keep up with the demands and development of the era. Many colleges and universities, such as the University of Miami, Stanford University, Yale University, etc, have encouraged students to try to participate in innovative projects. Among them, Stanford University even allows students who engage in entrepreneurship, whether succeeded or not, to come back to school to continue their studies within two years, which undoubtedly creates a favorable atmosphere for both students and teachers to perform practical training of innovation and entrepreneurship [1]. Thus, it can be seen that it is the striving direction for various colleges and universities to emphasize the cultivation of application-oriented college students’ practical abilities in innovation and entrepreneurship training projects and such kind of training is also a good opportunity for college students to improve themselves.

Domestic management system for science and technology projects started rather late compared with the foreign one. Currently, the management system for innovation and entrepreneurship projects used by domestic colleges and universities mainly integrates the implementation process of project application by the informational means under the background of information era, and provides project management platform to assist decision-making. The development of management system for college students’ innovation and entrepreneurship projects that is in line with college students’ characteristics can accurately and timely grasp information about project implementation, effectively reduce the disadvantages resulted from labor management as well as the inconvenience derived from repeated data collection, confused management and paper storage of information, and improve the management efficiency of college students’ innovation and entrepreneurship projects in colleges and universities [2-6].
The management system of college students’ innovation and entrepreneurship training projects developed and designed in this study intends to intensify project managerial personnel’s supervision and management of approved projects, facilitate the communication between the project team and the instructor, and help colleges and universities to cultivate and guide students in the participation of social practices. Meanwhile, this study primarily solves the problems of statistics and inquiry of project information, providing certain screening and evaluation functions for both application and supervision of projects.

**Processing Scheme of the System**

The users of the system are mainly students in charge of innovation and entrepreneurship training projects applied, project instructors, department-level and school-level project management personnel and super administrators. The operation of the system is required to be as clear and simple as possible. In addition, the system is in need of facilities conformed to the development conditions provided by colleges and universities, and the model defined in the system specification should also be in accordance with the management requirements of college students’ innovation and entrepreneurship training projects.

Referring to the system requirements, this study works out the top-layer data flowchart, shown in Fig.1.

![Figure 1. The system’s top-layer data flowchart.](image)

The above figure clearly illustrates the process through which the system deals with various affairs. Firstly, researchers who apply for projects should fill in necessary project information in the browser. Then, the project instructor and project managerial personnel should successively review and manage the project information. After the project is approved, managerial personnel and the instructor should implement real-time supervision on the project by using this system and then advice and suggestions can be timely given on the project’s schedule and process according to the actual situation. The project leader should submit the interim and final reports of the project so that the project management personnel can approve and review online. As the project is concluded, the instructor and project leader should make comments on the project. These comments will be the basis of assessment as well as decision of the direction for colleges and universities to cultivate college students’ practical abilities. Furthermore, the system also has the function of project achievements presentation.
Function Classification of the System

The main interface of the system contains hyperlinks for all functional modules which can directly link to corresponding functional module. The system’s overall functional structure is shown in Fig.2.

Project Application Information Management Module

This module is designed for import and inquiry of basic information of applied projects and other basic operations. This module also provides student leaders with freestyle input interface. When saving the information, student leaders should check the completeness and correctness of data imported. Only correct data should be saved in the database while prompt information will be given once incorrect data are imported. Moreover, users can inquire any specified information. However, information once submitted by the project leader can no longer be modified or deleted. Then, the instructor should import his/her review comments, followed by the department-level leader and school-level leader’s reviews of project information.

Weekly Records Information Management Module

This module is mainly used for import and inquiry of weekly records' basic information of approved projects and other basic operations. This module also provides student leaders of the project with freestyle input and inquiry interface. After the instructor and project managerial personnel both submit their review information, the completeness and correctness of the data imported should be checked before data are saved. Only correct data should be saved in the database while prompt information will be given once incorrect data are imported. Moreover, information once submitted, without special circumstance, can no longer be modified or deleted. Certainly, this module also allows users to inquire specified information. The instructor can only review and inquire weekly records of projects instructed by him/her, and put forward suggestions on these projects.
Interim Review Information Management Module

This module is mainly used for import and inquiry of interim review’s basic information of approved projects and other basic operations. This module also provides student leaders of the project with freestyle input and inquiry interface. In this module, the instructor can merely review and inquire interim review of projects under his/her own guidance and suggestions can be only made on these projects as well.

Funds Withdraw Management Module

This module is mainly used for approval and inquiry of funds submission information of applied projects and other basic operations. This module also provides instructors and project managerial personnel with freestyle inquiry and approval interface.

Project Conclusion Information Management Module

This module is primarily used for import and inquiry of basic information of concluded projects and other basic operations. This module should provide student leaders of the project with freestyle input and inquiry interface. After the instructor and project managerial personnel both submit their review information, the instructor can only review and inquire interim review of projects under his/her own guidance and his/her suggestions can just be made on these projects as well. In this module, the instructor and project managerial personnel can make tabulate statistics of reviews of all projects by exporting basic information of projects into an excel form. Additionally, they can inquire corresponding application information through the interface. Referring to such information will help them guide their projects more effectively.

Message Communication Information Management Module

This module is primarily used for import, delivery, reply, inquiry and other operations of basic information communicated between student leaders and instructors. This module should provide users with freestyle input and inquiry interface and allow continuous input of data and transfer of attachment. Besides, when the sender or the recipient delete his/her message information respectively, the message information management performed by the other side will not get influenced.

Design and Realization of the System

Analysis Phase of the System

At this phase, analyses of management system of college students’ innovation and entrepreneurship training projects are conducted, including identifying the system’s objectives, determining the organizational structure, and depicting the organizational chart. What’s more, the application, approval, conclusion and other business processes of college students’ innovation and entrepreneurship training projects are also analyzed and the business process chart is afterwards drawn. Subsequently, jobs such as analyzing the data, drawing the data flowchart and ER diagram, compiling the data dictionary, making functional/data analysis and classifying sub-systems are done. In short, requirements specification and data specification should be finished during this phase.

Design Phase of the System

This phase mainly focuses on the design of college students’ innovation and entrepreneurship training projects. The design of the system includes general design and detailed design. General design mainly covers concrete realization schemes of the system, function decomposition of information system, etc; while detailed design mainly targets at input/output design, interface design, process design of each module divided by the system, including drawing data processing flowchart, input/output interface diagrams, etc. At this phase, general design specification, database design specification and detailed design specification of the system should be completed [7-9].
Realization Phase of the System

This phase centers on the realization of college students’ innovation and entrepreneurship training projects. According to the requirements of design specification of the system, C# is set as the developing language and Microsoft Visual Studio 2010 is set as the developing tool. Then, the software codes of information system are realized in combination with the database of SQL SERVER 2008, and the debugging of presentation layer is performed. At this phase, submission of the program list, programming specification and instructions of the system is required [7-9]. Eventually, the system with complete functions can be issued after the testing phase of the system.

Conclusions

Through feasibility analysis of technical, economic, social, legal, operational and other aspects, the development of the system is completely feasible. The system, combining Microsoft.NET platform’s ASP.Net technology and SQL technology, achieves the back-end processing and front-end design. The application of B/S model in the development of the system is conducive to the convenience of the system’s upgrade and makes the system possess strong portability and good safety performance at the same time.

References

[1] Hua-jun Xiong, Ceng Yue, Stanford University: developing entrepreneurship education into every corner (In Chinese), China Science Daily, other information is missing (2012).


