Analysis and Design of Student Training Tracking Feedback System Based on OBE Engineering Certification

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Abstract. This paper starts with the analysis of the connotation of OBE concept, analyzes and designs the student training tracking feedback system under engineering education certification, and specifically tracks the learning status assessment, curriculum evaluation and evaluation of training objectives. The system can track the units and current positions of graduates after employment, and provide data support for the school's subsequent training goals.

1. Introduction
At present, colleges and universities are promoting student-centered, but few can see specific student-centered programs. At present, the engineering education professional certification proposes a student-centered program, the content of which is: the evaluation of students should focus on the teaching effect of students; the school should expand the teaching resources to meet the learning needs of students. Foundation; schools should pay attention to the cultivation of their abilities when cultivating students; students should be student-centered when setting teaching goals.

The school also did some research and experiment in this area in the year. In the process, I feel deeply that I lack the necessary analysis and management system in the specific practice of the school. To this end, I combine the economics major of our school's business school, and strive to cultivate applied talents, so that they can have certain securities investment analysis capabilities, accounting ability, financial institutions business processing capabilities, and made some preliminary to achieve this goal. Try and develop.

2. Overview of the OBE concept
OBE (Outcome-Besad Education) can be called education based on learning, or it can be called outcome-oriented education. The teaching method is based on the expected learning output at the time of education, thus completing the evaluation, implementation and organization of teaching. Different from the inherent teaching methods, this kind of teaching mode has many advantages, such as more advanced learning methods, more advanced teaching methods, more advanced teaching concepts, and more advanced values. The basic theory of the teaching is the mastery of learning theory by well-known research scholar B-Bloom and the principle of evaluation of the course objectives of well-known research scholar Ralph Tyler. At the same time, it also integrates 'Competency Based Education', and puts the core of education on the cultivation of students' ability. Therefore, the teaching theory of quality education is put forward, pointing out that education needs to be reformed. The core of teaching should be on the realization of students' self-value, pay attention to and guide students to grow into talents. Therefore, it can be said that this teaching concept has become the core concept of contemporary
education engineering professional certification. The educational philosophy is guided by learning output and with students as the core.

The concept has many characteristics. For example, the concept attaches importance to the evaluation of students' learning output, and always takes the expected teaching results as the core and emphasizes the definition of graduate quality. China did not introduce this concept before, and it was only affected by its introduction and its education agreement. In the process of popularization of the theory, a large number of research scholars have carried out in-depth analysis and summary of the theory at different times and in different places, thus laying a foundation for the popularization of the theory in China. Nowadays, a large number of colleges and universities have adopted the OBE concept in the training of engineering personnel, and have achieved certain results.

3. System development process
When the student develops the tracking feedback system, the demand analysis is first carried out, and then the overall design planning of the system is carried out, and the system function modules are designed. The development process of the design system described in this paper is shown in Figure 1.

4. Design goals and principles
The design described in this paper is designed to reflect the effective interaction between the user and the interface of the entire system module, and it should be very clear, so as to ensure the data in the later implementation of the system. Scalability and security, only the designed system can achieve this goal to have a better amount of expansion space to adapt to the future development of the school.

In the design of the entire system, the system must meet the following requirements:

(a). Data security
The system data that stores the privacy-related students' training and feedback system needs to ensure the security of the data. Security measures must be taken when designing the website to solve potential security problems.

(b). Ease of use
When the user's authority is set within a certain range, the user can complete the basic requirements in a unified style interface, that is, obtaining information, completing the process operation, etc., so that the system has better ease of use, higher Work efficiency makes the system more flexible.
Figure 1. Schematic diagram of the development process of the design system described in this paper

(c). Softness
Because this student development tracking feedback system involves a wide range of businesses, the system must be designed to handle the ability to accept changes.

(d). Scalability
As the management needs of the student training tracking feedback system change, the relevant platform and business of the teacher are also bound to change. Therefore, when designing the system, it is necessary to give it certain scalability.

5. Outline structure design
The function modules of this system are mainly divided into two major modules, namely administrators and student function modules, which are composed of many sub-function modules. The system structure is shown in Figure 2.

6. Database Design
The information of the computer is stored in the database, and the operations of data dissemination, processing, query, and sorting are also required to be supported by the database. Therefore, it can be said that the database is not only the core part of the system, but also the key part of the system. If the database is not enough to meet the system requirements, it will affect the speed of the system and the overall level of the system.

If you want to design the database, you need to abstract the information in the real world to complete the modelling of the real information world. At this time, you need the database conceptual model,
which is the core tool for building data. The E-R model method is the most common design method when designing it.

![System function block diagram](image)

Figure 2. System function block diagram

7. Test program

In order to facilitate the user to use the student development tracking feedback system, and to minimize the occurrence of test errors that enable students to develop tracking feedback systems.

The test content that the design system described in this paper needs to be carried out mainly includes the following: a). Testing the documentation in the system, testing the written documentation of that date does not have to affect the design, development and execution; b). Unacceptable test functions and features or listed in the test object can be tested; c). The students develop the code of the tracking feedback system, and perform system testing, integration testing, unit testing, and acceptance results.

The test resource description content mainly includes the following:

a). Study the extent to which external factors influence the test project. b). Developers can complete system development in a timely manner so that the system is not affected by the application environment, such as portable limitations. Maintainability, etc.

8. Construction of test cases and analysis of results

As the final part of the system design, the testing process is very important. After the system is designed, the reliability, performance and quality of the system need to be tested in the testing process to determine whether the system can meet the daily needs of users. If the testing process is complete, standardized and rigorous, then the system that can pass the test will also have reliability and credibility, and the probability of error will be reduced, so that users can avoid such risks. The testing process includes several aspects: such as compatibility testing, performance testing, and functional testing, and so on.

The following is a test of different aspects of the student development tracking feedback system, as shown in Table 1.
Table 1. Test schedule

| Description                                                                 | Whether to adopt | Test phase technology          |
|----------------------------------------------------------------------------|------------------|-------------------------------|
| Installation of the tester test system                                    | Yes              | Installation test              |
| Through construction, the staff of the project implementation unit operates| Yes              | Acceptance Test                |
| Including regression testing, stress testing and performance testing       | Yes              | System test                    |
| Detect the learning, operability and comprehensibility of the website      | Yes              | Usability Test                 |
| Business flow processing system, data processing requirements, integrated system to detect module requirements, business process requirements | Yes | Integration Testing |
| System security, compliance, operability, accuracy, applicability          | Yes              | Function test                  |
| Product code in the preparation phase of the test case                    | Yes              | Write test cases               |
| Testing of the functionality and design documentation of document software products, during the requirements and design phases | Yes | Review test |

When testing the system, both the design document and the requirements document need to be tested and written test cases, so that the probability of debris is reduced. When the system is defective, not only the system function will be affected. The impact, the data stored in the system will also be affected, so that the reliability of the system is reduced. After the system passes the test, its stability is improved, the integrity is optimized, the credibility is enhanced, and the quality of the system is guaranteed.

9. Conclusion
The implementation of the student development tracking feedback system under engineering certification has the following practical significance: a) improve the school's management of student information and improve the quality of students' learning and improve the efficiency of tracking feedback. b) Students can conduct various information inquiry at any time, including course information inquiry, experimental project information inquiry, training plan inquiry, syllabus inquiry and so on. c) Third, the traditional manual method has been changed, and computer entry is more convenient and quick.

Acknowledgements
2014 Lanzhou Philosophy and Social Science Planning Project: Study on the Difficulties and Outlet of Lanzhou Farmers' Continuous Income Increase——Research on the Rational Cultivation of Lanzhou Lily Industry Leading Enterprises (Moderator: Sun Fengru);

The Social Science Planning Project of Lanzhou City: the predicament and the way out of the sustained increase of Farmers' Income in Lanzhou-A study on the rational cultivation of the leading Enterprises of Lanzhou Lily Industry (14-052F);

Lanzhou Science and Technology Plan Project (2014-1-79): Cultivate the Leading Enterprise of Lanzhou Lily Industry--Promoting the Rational Development of Lily Industry Structure (Moderator: Sun Fengru).

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