Analysis and Discussion on UML Evaluation System of Moral Education in Colleges and Universities

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Abstract. University as a whole social system, in the construction of socialist harmonious society has a decisive role. To strengthen the ideological and political work of college students is to promote the comprehensive and harmonious development of college students and the need of harmonious campus construction. Based on the in-depth study of the evaluation index system of ideological and political education in colleges and universities compiled by the Ministry of Education and the Education Department of Guizhou Province, this paper analyzes the requirements of ideological and political education in colleges and universities by using UML technology, analyzes the functions of each post, and analyzes its main business processes in detail.

Keywords: Ideological and political education, Evaluation index, UML, Business processing process.

1 Introduction

In the field of higher education, college students are the founders and successors of socialism with Chinese characteristics [1]. We should start with daily education, strengthen ideological and political education, and make it become an important part of socialism with Chinese characteristics. Moral education in colleges and universities is an important part of moral education. The evaluation of college students' ideological and political education is an important aspect to measure the effect of college students' ideological and political education, which is also a very active field in the current work of college students' ideological and political education [2].

The level of running a university and the distribution of students are scattered, and the ideological and political quality of students are very low [3]. This series of situation makes them very surprised. It will cost a lot of manpower, material and financial resources, encounter more and more difficulties and resistance, and the effect will not be very good. Therefore, universities everywhere should adopt the unified assessment system of the Ministry of Education [4]. The evaluation index of this system is a unified evaluation index formulated by the Ministry of Education according to the specific situation of different colleges and universities. Then teachers and students of each school grade each index, and then determine the score according to the weight. The

biggest drawback of the system is that universities are unable to dynamically set their own assessment indicators, which creates a mismatch. Therefore, how to use modern information technology to establish a new kind of moral education evaluation system which ADAPTS to the practical teaching has become the inevitable trend of the current university moral education [5].

2   System Analysis

2.1   System Use Case Analysis

Through the investigation, it is found that the current users include administrators, students and teachers [6]. In various application scenarios of the whole system, the system use case analysis mainly studies the operation range of these three roles.

   Administrator use case analysis. The administrator of this system has the highest operation authority, in addition to not participate in the teaching work evaluation, other modules have the operation authority, including all the submodules of the system management, the basic data module of the work evaluation and the statistical query module. The use-case diagram is shown in Figure 1.
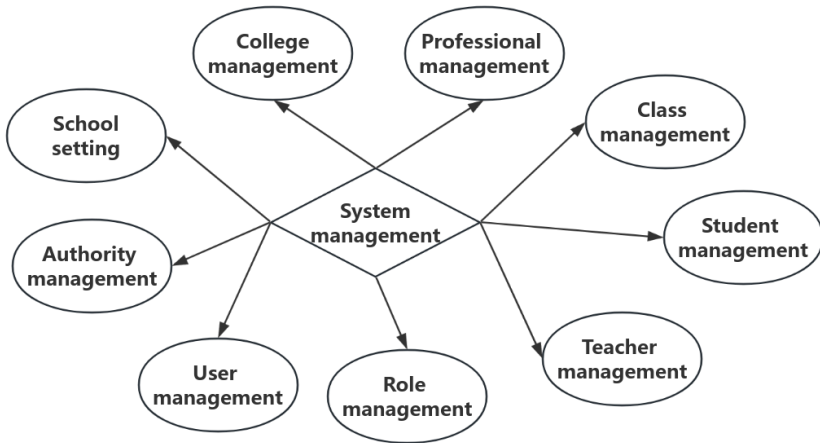

Fig. 1. Administrator use case diagram.

   Student use case analysis. As one of the evaluation subjects, the students mainly complete the operation of the student evaluation module in the system, including the completion of the current evaluation and browsing history evaluation, as well as the browsing evaluation plan. The use case diagram is shown in Figure 2.
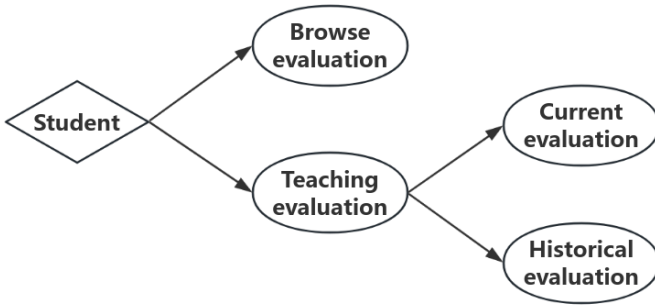
Fig. 2. Student use case diagram.

Teacher use case analysis. As another important part of the evaluation subject, teachers also have the right to browse the evaluation plan in the system, and complete the teaching evaluation, including the current evaluation and historical evaluation of two secondary modules. The use case diagram is shown in Figure 3.
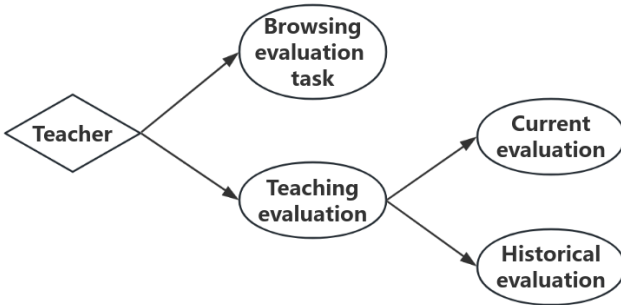

Fig. 3. Teacher use case diagram.

2.2   Business Process Analysis

Based on the analysis of functional needs, this paper holds that the core function of the evaluation system of ideological and political work in colleges and universities is the work evaluation. In the work evaluation, we must first determine the evaluation object, then formulate the evaluation plan, and finally carry out the evaluation [7]. Therefore, the focus of enterprise process analysis is to analyze each link of these three processes.

Process of creating evaluation templates. Evaluation template is an organic combination of evaluation indicators, so it is necessary to ensure the existence of evaluation index when establishing the evaluation template [8]. The process of establishing evaluation index is: to establish a template of basic information; Then, the details of the template are designed, and the required evaluation indicators are selected from the

specific data. When there is no evaluation indicators, the evaluation indicators are established in the index management. Otherwise, the input of other information is completed according to the index scores in the template. After the final submission, the system will confirm the content filled in by the user. After the confirmation, it will be saved. If it fails, a prompt will pop up. Its flow is shown in Figure 4.
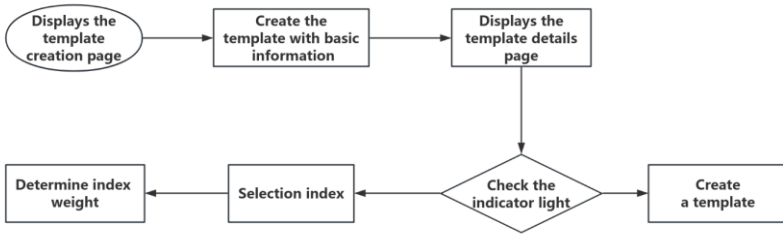
Fig. 4. The activity diagram for creating the evaluation template.

Creation process of evaluation plan. The evaluation scheme is that the manager designs the corresponding evaluation scheme according to the needs of the evaluation object in the evaluation work. It includes the beginning and end time of the evaluation, the teaching unit where the evaluation subject is located and the implementation of the evaluation plan. The steps to establish an assessment plan are as follows: First, open the webpage of establishing the evaluation scheme, establish the basic information of the evaluation scheme, then open the detailed design page of the evaluation scheme, select the role of the evaluation object, determine the department of the evaluation institution (the department of the student is the class, the department of the teacher is the school), if not, go back to the corresponding management page, establish the department, and fill in the relevant information. After confirmation, the information will be saved to the evaluation scheme management page. Otherwise, it will show that the review failed, and users can continue to carry out detailed design of the evaluation scheme. Its flow is shown in Figure 5.
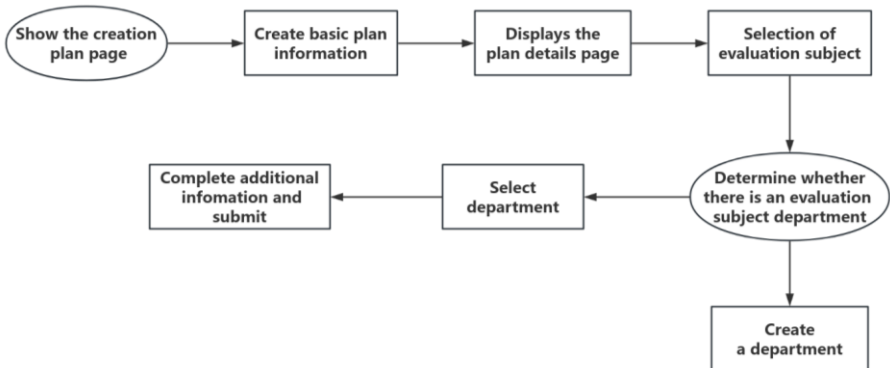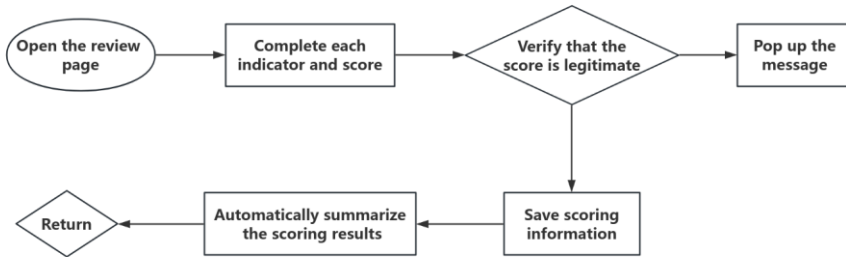
Fig. 5. The activity diagram for creating the evaluation plan.

Teaching evaluation process. When the administrator completes the evaluation scheme and announces it to the public, the weight of the evaluation results of each evaluation object is set in the final evaluation, and then the students and fellow teachers score on the corresponding webpage respectively. The procedure of teaching evaluation is as follows: First, the user opens the scoring page on the web page and submits each score. The system will judge the correctness of the score according to the difference of the score, and the unqualified one will be popped up; otherwise, the score results will be summarized on the historical score management page according to the weight of the score. Its flow diagram is shown in Figure 6.

Fig. 6. Activity diagram of teaching evaluation.

3 Conclusion

The business function module of the evaluation system of ideological and political work in colleges and universities constructed by UML can dynamically compile various assessment indicators and assessment templates, so as to adapt to the requirements of ideological and political education in colleges and universities in different periods, and provide a reference for the design of other teaching evaluation systems. The ideological and political work in colleges and universities can be well adapted to the demands of various functional departments.

References

1. Wang Yi. (2023). Thinking on the Reform of Moral education Evaluation in Colleges and universities. Western Quality Education (01), 57-60.
2. Alhazmi, S., Thevathayan, C., & Hamilton, M. (2021, March). Learning UML sequence diagrams with a new constructivist pedagogical tool: SD4ED. In Proceedings of the 52nd ACM Technical Symposium on Computer Science Education (pp. 893-899).
3. Cheers, H., Javed, M., Lin, Y., & Smith, S. (2019, July). Exploring a Comprehensive Approach for the Automated Assessment of UML. In 2019 8th International Congress on Advanced Applied Informatics (IIAI-AAI) (pp. 133-139). IEEE.
4. Jia Li. (2022). Research on moral education and its evaluation system based on the pioneering vocational undergraduate education system. Journal of the Party School of the CPC Taiyuan Municipal Committee (02), 72-75.

5. Li Hui. (2023). Exploration on the collaborative innovation method of moral education and ideological and political education in colleges and universities under the new normal. Great achievement (21), 12-13.
6. Qi Ning. (2022). Design and structure study of the moral education quality evaluation system for college students. Electronic Technology and Software Engineering (02), 224-227.
7. Ullrich, M., Houy, C., Stottrop, T., Striewe, M., Willems, B., Fettke, P., ... & Oberweis, A. (2023). Automated Assessment of Conceptual Models in Education: A Systematic Literature Review. Enterprise Modelling and Information Systems Architectures (EMISAJ), 18, 2-1.
8. Li Quanxi. (2021). Problem characterization and system construction of moral education evaluation of college graduate students in the new Era. Research on Marxist Theory Education in Universities (06), 114-119.