Informatization Construction and Exploration of Graduate Student Grant Assessment Work

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ABSTRACT: To improve the efficiency of graduate student grant assessment work, better support the reform of graduate student awards system, under the guidance of the overall solution in a new generation of digital campus, various universities have tried to establish grant assessment system for graduate students. With consideration of the characteristics and difficulties of the assessment work, this paper introduces the design, function and main characteristics of the assessment system for graduate students, as well as the positive role it plays in the practical work. At the meantime, the paper discusses the exploration of informationization of graduate student assessment work, and puts forwards some suggestions for the construction of assessment system.

KEYWORDS: Graduate student; Graduate management; Grant assessment system.

1. RESEARCH BACKGROUND

Since 2012, the ministry of finance, the ministry of education issued by the graduate student grants management files, and constantly improve the graduate student education input mechanism, and since the fall of 2014, to all the new entrance into the plans for the national graduate admissions graduate tuition fees, it marks the graduate education of our country has entered a new era. In this background, various universities attach great importance to graduate student grants system reform work, according to their own actual related management measures, in order to better serve the graduate student education in the new period.

In general, the graduate student assessment work for the following characteristics and difficult points:

1.1 Graduate student's achievement and evaluation system are diversified

Modern graduate education achievement exists diverse complexity, such as scientific research project, the design results, publication, patent achievements, personal honor and academic performance, etc. And graduate students' education disciplines still exist many problems, this led to the graduate student's evaluation system must be diverse and complex.

1.2 Explicit grants involve several departments, and there are many information transmission errors

Information by graduate students report first, and then by the school of management audit confirmation report for graduate school, graduate school after the review was carried out on the material to the scholarship evaluation committee decision, complete assessment of scholarship.

In a traditional grant assessment process, material report, is usually a paper or a common electronic document, generally inconsistent information format and standard problems, a material needs at different levels in audit, wrong again and again.

1.3 Explicit grants involve many management system, and its data sharing is difficult

Grant awards need involved in student status management system, the process of performance management system, the paper system, etc. But the data of each system are not through uniform design, different format and representation method, is difficult to realize the sharing of data.

2. SYSTEM DESIGN

Aiming at the problems existing in the process, through the design of specialized for recommendation system, realize to submit application, application for approval, review the application and comprehensive analysis of ranking, etc. This system accords with the actual work needs, solve the defects existing in the traditional management process and informality, with explicit will grant process management automation and standardization.
Graduate student grant assessment system according to the selection process (as shown in figure 1) consists of students, faculty, and graduate school three client, all three have different interface and functional division.

![Figure 1. A graduate student with explicit grants workflow.](image)

2.1 **Student client user side**

Client is open to students specifically for students' independent launch application. Students, after login system will automatically import the students' basic information in student status management system, from the performance management system of import academic performance information, citing the need to provide the information and documents. Normally, students need to provide the following information: Patent, patent number, as well as graphic proof materials

Time, paper, paper, and publication, as well as graphic proof

When student achievement information, the system will automatically from the school paper queries in the system level of their corresponding publication, achievement is maintained, integral calculating the results. All the information by the system, and according to the comprehensive analysis model of real-time analysis of graduate students and students can always view the current analysis results, understand their own state.

2.2 **Department client user side**

Departments client user is related to management personnel, they are responsible for the basic information for students and independent application, research result information for preliminary examination papers and patents, etc. Departments after the user login to declare artificial check student achievement information are consistent, and its graphic proof material for information consistent application can be approved, sent to the graduate school to review; For inconsistent application, materials and information departments client need to dismiss the students corrected to declare; For the disputed results, department managers should fill in after treatment sent to the graduate school for verification.

2.3 **Graduate school client user side**

Graduate school is the system of the end user. Clients contain review graduate school application, real-time view approval progress, comprehensive ranking report, etc.

1. Review application: graduate school is responsible for audit departments after the approval of the graduate student information, as well as to the departments report disputed application organization expert judgments; For the final approved application, fill in graduate school treatment after returned to departments; After final review, the student application will be locked, the system will be based on students' login E-mail notifications, told students to apply for review has gone through.

2. Real-time view the approval progress: in the course of the review, the graduate school can progress view of examination and approval of the school, to facilitate the overall progress control.

3. Comprehensive ranking report: graduate school also can view real-time declare the overall situation and output students ranking report. At the end of the review work, all the students' comprehensive analysis report can be provided to the school management, for the ultimate prize stipend.
3. SYSTEM IMPLEMENTATION

Graduate student assessment system for users, scattered distribution, so the ease of maintenance and upgrade of B/S structure construction. Unlike traditional C/S architecture, the B/S architecture, the client using a Web browser as the client, do not need special maintenance, system management personnel only need to manage and maintain the server.

The whole system is divided into the presentation layer, business layer, data interface layer and data layer. Presentation layer using JSP and Spring MVC implementation user interface, accept and handle the browser client sends an HTTP request.

Recommendation for business layer using the Spring framework implements the business logic. Data interface layer using the Hibernate object persistence, encapsulates the interactions with the database, to the upper provides model based on data access interface. Data layer USES the MySql database, the realization of stable, safe and efficient data storage. The overall architecture as shown in the figure below:

![Graduate student grant assessment system architecture diagram.](image)

4. SYSTEM CHARACTERISTICS AND ADVANTAGES

4.1 Classification management, distinct in liability, promote the standardization of the graduate student grant assessment work

Graduate student grant assessment work by "graduate school -- departments" commonly two levels of management, is closely related to the graduate student I again at the same time, so the assessment system for full consideration the needs of individual users. According to the management responsibilities and characteristics for different users design their management capabilities. Departments user shall be responsible for auditing the students to apply for, the graduate school is to manage all the departments as a whole, is responsible for the review and generate reports.

4.2 Process automation, improving work efficiency

Assessment system for the graduate student awards submission, literature review, collect information, analysis of automation, and other functions. All functions are closely integrated with the actual management. System integrates multiple external system of graduate student related data, data analysis and mining, according to the assessment model, the analysis conclusion, auxiliary graduate management decisions.

4.3 Information sharing and data mining

In order to achieve and information sharing between different management system, graduate student assessment system definition for students and the abstract of a unified information model, and aims at the external system design has realized the data adapter layer, respectively, the transition of the data model. System adopts the unified information model and format to interact and calculation, need across the system access, by the corresponding data adapter module will be translated into corresponding information format for the request of the system.

5. EXPLORATION AND SUGGESTIONS

5.1 Strengthen the construction of information system and improve management efficiency

Grant assessment work in graduate student education, involving large amount of information, data, confused amount is huge, and relationship to the graduate students, mentors and the vital interests of the departments in every way, not to make mistakes. Next, the related management work shall be gradually integrated into the system. Such as "three helps one auxiliary" also exist the automation degree is not high, management process management link, more complicated problems.
5.2 Further improve the graduate student's basic information gathering and analysis model, enhancing management effectiveness

Now grants system data source mainly academic achievement, and papers and patents results directly, with explicit purpose is limited to the grant. But in actual use process, the graduate student's comprehensive analysis model can more directly to guide the student to the academic motivation. By strengthening information gathering, integrating more data, such as the system of check on work attendance, club activities, such as data, further enrich and improve the graduate students of all kinds of analysis model and to build a more solid and comprehensive evaluation system and credit system. At the same time, analysis the evaluation results can through the mobile Internet era of new media, more ways to convey to the graduate students.

5.3 Assist the establishment of evaluation system of teachers, which is based on the graduate student information

University graduate management USES two-wire system of school management and teacher training, teacher professional guidance and support, the school provide a platform and logistics support and constraint and regulate the behavior of the cultivation of the teachers. The advantages of this kind of training system are a clear division of responsibilities, each department of its long, can maximize the use of the resources of the school to complete the cultivation of the students. But the difficulties of two-wire system also lie in the school is bad management and evaluation of the teacher's training effect.

6. CONCLUSION

The system has been launched in September 2015, effectively to optimize business processes, improve work efficiency and work quality, make the evaluation more objective and accurate, but also promote the students' enthusiasm and participation. Multi-sectorial cooperation under graduate student assessment system for construction is beneficial to the important practice and graduate student management work in colleges and universities attempt to reform and daily training of graduate student grants system has very important meaning.

REFERENCES