

Ideological and Political Resources Service System Needs Analysis

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Abstract: The ideological and political education in universities has shifted from political courses to professional courses, and from teacher ideological and political education to full staff ideological and political education. Many departments and individuals at Beijing University of Technology have accumulated a certain amount of ideological and political resources. In order to achieve more centralized management and greater sharing of dispersed ideological and political resources, and to make ideological and political achievements more widely applied, the school needs an ideological and political resource service system. The establishment of a system helps to strengthen the management of ideological and political resources in schools and enhance individuals' knowledge level of ideological and political resources. It is crucial to implement a standardized and practical system and connect it with the ideological and political resources of different departments and individuals. This article focuses on the requirements analysis section of the ideological and political resource system, as requirements analysis is the cornerstone of almost all software design and development processes. Without a complete process of requirements research, analysis, and modeling, it is impossible to construct the basic architecture and functions of the software, resulting in the final designed software not meeting the user's usage requirements. A good requirement analysis will enable developers to have a more accurate understanding of the specific functions of the system, arrange development time and schedule, and thereby improve the usability of the system and the completion efficiency of developers. This article provides an in-depth analysis of the ideological and political resource service system from both functional and non-functional aspects, laying a solid foundation for subsequent design and implementation of the system.

Keywords: Ideological and Political Resources, Service System, Requirement Analysis

1. Introduction

With the development of digitalization in higher education, ideological and political education is gradually becoming more informationized [1, 2]. Some universities have developed ideological and political resource education systems that meet the needs of their own schools. Therefore, they have certain experience in system development and design that can be followed [3-5]. At present, the relevant ideological and political resource education system is mainly divided into two categories based on the target audience, one for fixed university teachers and students, and the other for the national people, mainly for the youth group [6-8].

The ideological and political resource system for fixed

university teachers and students is mainly designed with the participation of universities [9-11]. For example, the ideological and political education subject resource platform designed and used by Changzhou Institute of Technology reads ideological and political knowledge through AI knowledge automation engine and generates a knowledge graph for reference [12]; Based on the characteristics of different professional disciplines, delve into relevant ideological and political resource materials and provide different forms of ideological and political elements of resource materials; Provide ideological and political demonstration courseware for teachers majoring in ideological and political education; Launch course materials for five compulsory ideological and political courses in universities; According to the recommendation of the

Ministry of Education, universities should take the content of ideological and political resources as the main focus, advocating for students to learn from 15 special topics such as collecting century old party history and learning speeches.

The ideological and political resource system for the national people, mainly for the youth group, is mainly constructed with the participation of media websites, enterprises, and the Central Committee of the Communist Party of China [13, 14]. Special topics on learning and implementing the spirit of the 20th National Congress of the Communist Party of China, youth insights, and ideological and political practice, including articles and video materials collected from major online media platforms; Red Dream Project and Online Classroom Project presented in video format [15, 16].

However, since these platforms of ideological and political resources cover a large number of different or interlaced data, while the basic functions of these systems are similar, the specific requirements vary depending on the focus. Therefore, the system will be based on the actual use of schools and ideological and political resources material types, combined with the specific use of scenarios from the functional and Non-functional requirement of the specific analysis, to enable the final system to meet the real needs of the school and establish the basis for subsequent sustainability optimization.

2. Functional Requirements Analysis of Ideological and Political Resource Service System

Functional requirements refer to the specific tasks completed by a software or system. The ideological and political resource service system has determined and summarized the functions required for an accurate system based on the description of various needs of the school and similar system research. It is mainly divided into four modules: basic information management, ideological and political resource management, ideological and political forum, and ideological and political questionnaire survey.

2.1. Basic Information Management Functions

The basic information management module allows users to freely modify personal information, providing data support for subsequent functional modules. The user roles of this module are divided into super administrator users and ordinary users, each with different and similar permissions and operational behaviors that can be executed. The specific description of the functions is as follows.

2.1.1. Login Function

Super administrators log in to the system through the account and password which set by the system and enter the administrator account settings page to create and set the account information of ordinary administrators. Ordinary administrators cannot register and can only log in after creating an account through a super administrator. After an

ordinary administrator obtains his/her account information, he/she logs into the system and enters the user account setting page to add the account information of ordinary users. Ordinary users cannot register and can only log in by setting account information through ordinary administrators to use other operating functions of the system.

2.1.2. User Account Information Management Function

Both super administrators and regular administrators can use this feature to manage the added account information. Super administrators can add, modify, delete, and query basic information of ordinary administrators, such as accounts, passwords, personal information, etc. They can also disable and enable the role of ordinary administrator accounts. Ordinary administrators can perform the same operations on the basic information of ordinary users.

2.1.3. Basic Information Management Functions

All users can personalize and modify their personal information on the basic information management page. Super administrators can modify password information. Administrators and ordinary users can not only modify password information, but also customize personal information, such as self-introduction, age, etc. It is convenient for users to check whether their information is filled out completely and accurately at any time and make corrections.

2.2. Ideological and Political Resource Management Function

Ideological and political resource management is a module where users can upload and download ideological and political resources. There are two types of users using this module, namely ordinary administrators and ordinary users. Ordinary users can be further divided into students and teachers from the Academic Affairs Office, graduate school teachers and students, and ideological and political experts. Ordinary administrators can upload, download, and review ideological and political resources; Among ordinary users, ideological and political experts can review and evaluate ideological and political resources; Teachers can upload and download ideological and political resources, while students can only download and view ideological and political resources. This module aims to help users share and disseminate ideological and political materials, so that more students can learn. The specific description of the functions is as follows.

2.2.1. Resource Upload and Review Function

Ordinary administrators and teachers can upload their own ideological and political resources on the system. Ordinary administrators can upload ideological and political materials without going through review and display them directly; when teachers upload ideological and political materials, they first need to be reviewed by ideological and political experts. After the review by ideological and political experts is completed, it needs to be reviewed by the administrator. After the administrator completes the review, the material can only be

displayed on the system. The uploaded resource categories can be various forms of resources. This is to ensure the professionalism and security of the data.

2.2.2. Resource Query and Download Function

All users can view ideological and political resources that have been uploaded and approved. For teachers and student users of the Academic Affairs Office, they can only view ideological and political resources uploaded by the Academic Affairs Office administrator and teachers; For graduate school teachers and student users, only the information uploaded by graduate school administrators and teachers can be viewed. Users can query the list of ideological and political resources through three aspects: title keywords, uploader names, and resource categories. For the resources you want to view, you can directly click to view them; For resources that need to be downloaded, you can also click directly to download them.

2.2.3. Resource Modification and Deletion Function

For administrators and teachers who have uploaded ideological and political resources, users can modify and re-review the uploaded resources. For ideological and political resources that are outdated or have no learning value, users can also directly delete their uploaded resources from the list without the need for review.

2.3. Ideological and Political Forum Function

The Ideological and Political Forum module provides users with a platform for discussing and sharing ideological and political issues and thoughts. This module is mainly aimed at ordinary administrator users and ordinary users. This function aims to allow users to freely exchange information and questions related to ideological and political education, so that ideological and political learning and communication are not limited to a certain classroom but a larger platform. And teachers, students, and experts can all participate in forum exchanges, breaking down barriers to communication between students and teachers, and improving the efficiency of ideological and political discussions within the school. The specific description of the functions is as follows.

2.3.1. Post Information Management Function

Users can create forum posts related to ideological and political issues on the post management page, fill in the content to be published, and after filling it out, simply click 'publish'. All forum users can browse and view it in the system. The post publisher can click on their own post to view the content of the post. If you need to modify and update the post, you can click on modify and directly modify it. Posters can also freely choose whether to delete posts that have already been published.

2.3.2. Query Post Function

All forum users can see a list of posts sorted by time as the default when entering the forum module. Users can also choose to query and search based on the keywords of the post title, publication time, author, and highest likes, then browse the post based on the search results.

2.3.3. Post Interaction Management Function

After browsing forum posts, all users can choose to click on a like for the post, or leave a comment or answer questions at the bottom of the post. Users can also see the number of likes and all comments for the post they are viewing. Users who like posts can choose to cancel liking, while users who comment on a particular post can choose to delete the comment. If there are issues with the ideological and political content of a certain post or comment, the administrator can directly delete the post or comment.

2.4. Ideological and Political Survey Questionnaire Function

The questionnaire system of the ideological and political survey questionnaire module is published by the teacher role of ordinary users and filled out by the student role. This module aims to provide a methodological approach for teachers to assess students' ideological and political literacy. Teachers can use the setting of ideological and political questionnaire questions to understand whether students have memorized this ideological and political knowledge, and whether their own ideological and political qualities have been improved through this ideological and political learning method, providing data support for relevant graduation requirements. The specific description of the functions is as follows.

2.4.1. Questionnaire Management Function

Teachers can enter the ideological and political questionnaire system to create a new questionnaire, set questionnaire questions and options, and once completed, publish the questionnaire to all students for filling out. Before the questionnaire is released, teachers can check the content of the questionnaire and modify it if any problems are found. After the students have basically completed the questionnaire, the teacher can close the questionnaire, and students cannot access the questionnaire through the link again. After the statistics of this questionnaire are completed, teachers can freely choose whether to delete the published questionnaire and its data.

2.4.2. Query Questionnaire Function

When teachers enter the ideological and political survey questionnaire interface, the list order of questionnaires is displayed by default according to the publication time. After entering the page, teachers can customize the query and browsing of the questionnaire through the keywords of the questionnaire title, publication time, and the number of people filled in.

2.4.3. Questionnaire Filling Function

After the teacher releases the ideological and political survey questionnaire, the questionnaire can be viewed in the questionnaire system list of student users. Students can directly click to fill out the questionnaire, view the content of the questionnaire, and make selections and submissions. After the questionnaire is completed and submitted or closed, student users will not be able to see this questionnaire.

2.4.4. View Questionnaire Results Function

Teachers can view the filling results of the current questionnaire at any time, and the number of people selected for each option in the questionnaire will be displayed in a sector chart for the convenience of teachers' statistics.

3. Non-Functional Requirement of Ideological and Political Resource Service System

Non-functional requirement are features that software must have in addition to functional requirements in order to meet user needs. Non-functional requirement are not necessarily directly proposed by users. They are requirements that developers must consider and can support the features that must be met by normal product delivery. With the exponential growth of software product data and access, non-functional requirement have gradually become one of the important indicators to describe software quality. Combining the actual requirements and application business scenarios of the ideological and political resource service system, the following non-functional requirement that the system needs to meet are proposed.

3.1. Performance Requirements

This ideological and political resource service system can simultaneously meet 100 user requests. When users switch to a certain page or use a certain function, the response time should not exceed 2 seconds; When the demand and concurrency of the system are particularly high, the response time should not exceed 5 seconds.

3.2. Interface Requirements

The system theme is clear enough. For this ideological and political resource service system, 90% of users can be aware of the system's theme within 5 seconds of first seeing it and understand that it provides functional services for students and teachers at Beijing University of Technology. The system interface is concise enough, and the buttons are clear enough. When users use this system, 80% of users will not think that the system interface layout is not clear enough, and the various function buttons of the system are not easily discovered.

3.3. Reliability Requirements

The ideological and political resource service system requires that, under the existing software environment and hardware conditions, the probability of business failure to be achieved due to system problems is less than 5%, without any error operations by maintenance personnel. In addition, if the system crashes due to excessive server load or other reasons, the system needs to be able to restore normal system functionality within 24 hours and the data before the crash can be restored through backup.

3.4. Security Requirements

This ideological and political resource service system will

control user permissions. Except for the super administrator, all other users need to register an account as an administrator for authentication, and different authenticated user roles have different permissions. Users can only access data within their permission range and perform operations within their permission range. Log management, where every operation of the system needs to be recorded in a log, facilitates developers in troubleshooting and analyzing system issues.

3.5. Maintainability Requirements

For this ideological and political resource service system, if a bug is found in the system, 80% of the bug repair time should not exceed 1 working day, and the rest should not exceed 3 working days. If major requirement modules need to be added to this system in the future, 70% of the requirement design and release time should not exceed 14 working days.

4. Conclusion

This article provides an in-depth demand analysis of the ideological and political resource service system. The functional analysis section of the system includes four modules: basic information module, ideological and political resource module, ideological and political forum module, and ideological and political survey questionnaire module; Non-functional requirement include performance requirements, interface requirements, reliability requirements, security requirements, and maintainability requirements. The analysis work establishes a good premise and foundation for the subsequent development of the system. At the same time, it also provides a manageable software platform for theoretical researchers engaged in ideological and political work.

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