

Construction and Application of Network Ideological and Political Education Platform for Universities Based on Cloud Computing

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Abstract. With the assistance of digital technology, the network ideological and political education platform of universities based on cloud computing has become an essential initiative in modern higher education. This kind of platform combines the powerful function of cloud computing and the characteristics of ideological and political education. It provides universities with a novel education mode and teaching instruments. Starting from the analysis of the necessity of the innovation of network ideological and political education in universities at the time of the intelligent era, the cloud platform of ideological and political education in universities is constructed, which includes conceptual elements, data elements, technological elements, and functional elements in one. To study the functional application and optimization strategy of the network ideological and political education platform of universities empowered by cloud computing is of great practical significance and theoretical value.

Keywords. The cloud ideological and political platform, network ideological and political education, precise ideological and political education

1. Introduction

Under the boosting effect of artificial intelligence, big data, mobile Internet, Internet of Things (IoT), and other digital technologies, the education model is undergoing tremendous changes and ecological reconstruction. It helps the penetration, guidance, interaction, experience, and introspection of the basic ideological and action concepts of network ideological and political education [1]. Taking advantage of online educational resources that break the boundaries of time and space based on the cloud computing network ideological and political education platform of universities (referred to as "The cloud ideological and political platform"), the "cloud ideological and political" classroom runs through every link of ideological and political education and radiates to the whole scenario of student's life and study [2]. However, due to the hidden and virtual characteristics of network data, especially the current dilemmas of massive heterogeneity of data structure, one-sided data sources, limitations of data analysis, and unauthorized access to data subjects, the formation of a network ideological and political education

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system for universities based on cloud computing technology can maximize the educational advantages of cloud ideological and political education. It is of great practical significance and theoretical value to study the functional application and optimization strategy of the cloud ideological and political education platform empowering ideological and political education in universities, and to realize the organic combination with the traditional ideological and political education methods.

2. Elements of the Construction of Network Ideological and Political Education Platform for Universities Based on Cloud Computing

2.1. Morality education as the fundamental conceptive element of the cloud ideological and political platform system

The primary task and goal of the network ideological and political education platform is to cultivate people of moral integrity. The "cloud ideological and political education" platform should take "cultivating newcomers of the times who will take up the great responsibility of national rejuvenation, and cultivating socialist builders and successors who are all-rounded in morality, intelligence, physical fitness, and aesthetics" as the root elements. By building a resource integration and digital service platform for ideological and political education, which covers the entire process of talent cultivation and multiple links, it creates an ideological cloud environment, builds an ideological cloud platform, integrates ideological cloud resources, and realizes ideological cloud services [3]. Implement network ideological and political education into the creation of the cloud ideological and political platform and embody the concept of nurturing people in the whole process and multiple links, such as the composition of system elements, the integration of massive resources, the evaluation of ideological and political teaching, and the optimization of ideological and political services.

2.2. Massive data as the source of data elements under the cloud ideological and political platform system

The informatization construction of the ideological and political class is inseparable from the massive data support. The more data the platform gathers, the more learning resources it can provide. The data elements contain the content of courses such as Civics and Politics, which are mainly presented in various forms such as teaching cases, courseware, e-books, website resources, micro classes, and microfilms. The cloud ideology platform builds a massive data governance system with the perspective of information management life cycle, from data collection to data sharing. Firstly, data collection and integration of network data, real-time monitoring data are carried out from PCs, mobile devices, etc.; then data organization is carried out through standardization, data management and integration; and finally, a number of database categories are constructed from students, teachers, ideology and politics resources, university teaching cases, teaching materials, problems, online model courses, important theoretical resources of the Party, etc. The data resource base is organized and standardized through data storage and data flow. Through data storage, data flow processing, data opening, sharing, and utilizing, it realizes the whole process data service of cloud ideological platform system [4].

2.3. Technology convergence as the core energy of the cloud ideological and political platform system

The technical elements mainly consist of multiple digital technologies such as mobile Internet technology, Internet of Things technology, cloud computing technology, big data and so on. Mobile Internet technology and IoT technology are mainly used to build neuron sensing nodes based on terminal devices and make use of ultra-large-scale neuron networks and cloud reflex arcs to realize the identification and collection of physical data as well as emotional and behavioral data: to make the activities of people, objects, and systems highly informatized and digitized.

The core technologies of blockchain, such as smart contract, consensus mechanism, and asymmetric encryption, make it possible to securely record, transmit, share, store, trace, evaluate, and visualize the characterization of all the pedagogical data information across departments and subjects.

Big data technology provides data mining and analysis functions for the cloud ideology platform, matching the behavioral portrait of multiple subjects with the user information portrait, relying on real-time user information data to dynamically monitor the whole picture of the teaching process, and accurately improving the effect of teaching evaluation.

2.4. One and diverse as the chain operation element of the cloud ideological and political system

The cloud ideology and politics platform system fully exert the characteristics of digitization, perception, interactivity, border lessness, and intelligence, and builds a comprehensive integrated system based on the ideology of moral education, based on multi-source heterogeneous data, driven by comprehensive technology, and logically integrating multiple functions. The platform is categorized into basic data layer, technical support layer, functional service layer and user management layer, and the specific system framework is shown in Figure 1.

The basic data layer organically combines and uniformly manages different types of online and offline data resources required by the system, such as the user information database, teaching resources database, ideological administration database, and politics service database.

The technical support layer is mainly based on cloud computing technology, integrating mobile Internet technology, Internet of Things technology, blockchain technology, big data analysis technology and other technologies to build the technical foundation of the cloud ideological politics platform.

Functional service layer primarily relies on data and digital technology, facing universities, teachers, students, education authorities and other multiple subjects, providing them with applications integrating multiple functions such as precise ideological politics, process management, situational awareness, risk prevention and effect evaluation.

User management layer is mainly oriented to the personalized needs or differentiated positioning of government agencies, university organizations, students, teachers, and other diversified subjects in the cloud ideology platform to provide precise ideological and political educations.

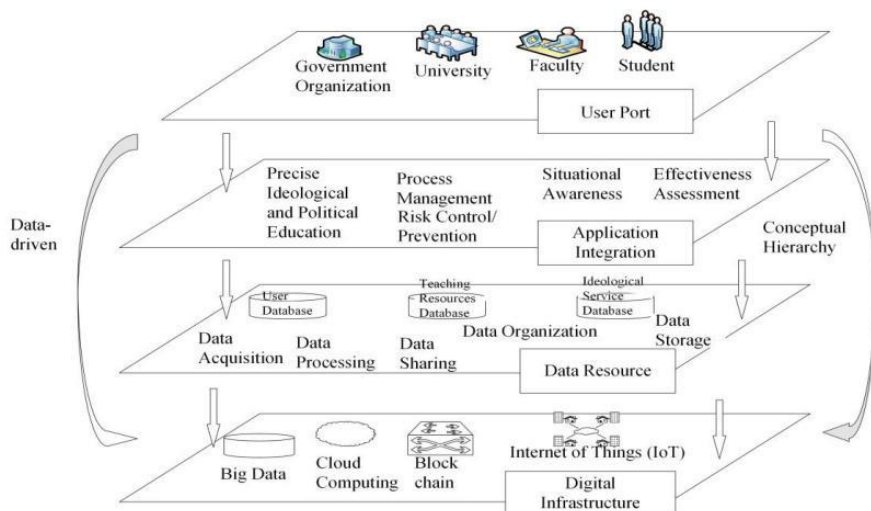


Figure 1. Cloud ideological and political platform system structure

3. The functional application of the network ideological and political education platform Universities platform based on cloud computing

3.1. Realize precise ideological and political education based on cloud platform

The application of network ideological and political education platform in universities requires emphasis on personalized education. The data analysis and intelligent recommendation technology of the cloud computing platform can provide personalized learning recommendations and teaching guidance according to students' learning status and interest preferences. The novel teaching mode of cloud platform + ideological and politics class is guided by the concept of precision, with the goal of precise education, based on the cloud computing platform to realize the whole process of recording, storing, evaluating, and visualizing the characterization of the entire process of ideology and politics class teaching, and to provide a dynamic data analysis basis for the network ideology and politics education. It ensures the precision, intelligence, and personalization of ideological and political education.

3.2. Realization of process management full-cycle ideology according to cloud platform

The service management of the "cloud ideological and politics" platform is not for a certain link or a certain organization, but for the whole process management of all teachers and students. The platform should closely focus on the various stages of the students' four years of university, including the new student enrollment stage, the second classroom education link during the school period, and the precise graduation guidance link during the employment stage. Grasping the key nodes of nurturing, entrenched by the cloud platform to obtain comprehensive, dynamic, and relevant data of the whole process, and storing and comprehensively analyzing the semi-structured and unstructured data; and based on the results of data analysis, designing the ideological and

political solutions for different groups of students in different phases and types, and actively building a personalized cloud ideological and political platform for the students.

3.3. Realization of dynamic assessment of ideology based on cloud platform

Evaluating the effectiveness of ideological and political education is the basis for optimizing teaching, and the results of the evaluation serve as an important reference for teachers to optimize the design of the curriculum, improve the effectiveness of teaching and provide a reliable basis for the reform of ideological and political education. Through the "cloud ideological and political" platform, students' digital life trajectories are tracked in a holographic and chain-type manner. It builds a comprehensive evaluation system centered on result evaluation, process evaluation as well as value-added evaluation, and constantly improves the evaluation system. Relying on the data analysis results of cloud ideological and political platform, it precisely improves the relevant aspects of the work and enhances the quality of ideological teaching.

4. Optimization strategy of network ideological and political education in universities relied on cloud computing

4.1. Highlight ideological leadership and team building of network political education

The core of ideological education is to cultivate students' proper worldview, outlook on life, and values. In online ideological education, it is necessary to focus on thought leadership and guide students to form the correct ideology and value orientation through learning and thinking. Through well-designed course content and teaching activities, students are guided to recognize the characteristics of the times, social needs, and the importance of personal growth. The uniqueness and importance of ideological education should be highlighted on the cloud ideological platform as one of the core values and characteristics of the school. Through well-designed page layouts, theme colors, icons, etc., a strong atmosphere of ideological and political education is created to remind students and teachers of the importance of ideological and political education.

4.2. Exploring new forms of ideological and political education based on the functional characteristics of the cloud platform

Stimulate students' interest and initiative in learning through innovative forms of ideological and political education, such as online seminars, virtual experiments, and social media activities. Cloud computing technology is utilized to break the time and space limitations of traditional teaching, creating diversified scenarios of Civic and Political education, and improving the fun and interactivity of education. At the same time, it needs to be combined with teachers' teaching concepts and teaching methods to ensure the achievement of educational goals and the cultivation of students' critical thinking ability, innovative spirit, and sense of social responsibility.

4.3. Enriching ideological and political education content based on massive data foundation

Teachers can provide multimedia teaching materials such as celebrity speeches, historical event reenactments, and real-life case studies to present the core content of ideological and political education in a vivid and imaginative way, and to stimulate students' interest and understanding. It is also possible to understand and grasp the changes and trends of hot social issues through the analysis of massive data and combine them with the concepts and principles of ideological and political education to provide students with updated education. It can provide in-depth analysis and interpretation of current social issues and guide students to think and participate in social practice. By cooperating with other universities, educational institutions, and experts, we can share and pool the resources for ideological and political education in the wealth of data to provide richer learning content and learning opportunities.

5. Conclusion

The "cloud ideology and politics" platform is a new form of network ideological and political education based on information technology. Starting from the analysis of the necessity of the innovation of the teaching mode of ideological and political courses in colleges and universities in the era of intelligence, the construction of a cloud platform for ideological and political education in colleges and universities, and the clear positioning of the function of the cloud ideological and political platform are of great significance to the promotion of the innovation of the ideological and political teaching mode in colleges and universities.

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