Innovative Models of Online Ideological and Political Education in Higher Education Institutions under the New Media Environment

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Abstract

With the rapid development of new media technology, traditional ideological and political education in universities has gradually revealed a series of problems such as weak interactivity, relatively limited coverage, and serious lack of individualization in terms of content supply, dissemination efficiency, and student participation. In order to effectively improve the precision and effectiveness of online ideological and political education, this article adopts the integration of big data analysis, algorithm recommendation technology, and new media dissemination methods to build a pilot system for online ideological and political education that integrates online behavior collection, learning portrait generation, and personalized content push. This study relies on modules such as online discussion forums, virtual communities, and cross-border live streaming to capture students' learning behavior characteristics in real-time. Through introducing cluster analysis and hybrid recommendation systems, the interests and preferences of the students are identified in a fine-grained manner and as a result, dynamic matching and accurate distribution of the educational material are reached. Based on the pilot findings, it is possible to note that the participation level, the level of interaction, and cross-cultural comprehension of ideological and political materials among students have greatly increased. Meanwhile, the satisfaction of learning experience has reached its maximum as well, and the successful reach rate and participation stickiness of educational content have been found to have a substantial growth tendency as well. This fully demonstrates that the network ideological and political education model based on new media technology and algorithm support can play a positive role in enhancing content attractiveness, strengthening learning participation, and optimizing educational dissemination effects.

Keywords

Online Ideological and Political Education; New Media Technology; Big Data Analysis; Algorithm Recommendation; Cross Border Live Streaming

1. Introduction

In the context of the comprehensive penetration of digital technology into social life, new media has become a key and important channel for college students to obtain information, express their own views, and participate in public affairs. Therefore, the content form, dissemination methods, and audience characteristics of ideological and political education in colleges and universities have undergone profound changes. Traditional ideological and political education, due to a series of problems such as a relatively single transmission path, insufficient interactivity, and relatively limited content attractiveness, makes it difficult to effectively match the media usage habits and cognitive styles of contemporary college students, which in turn limits the effectiveness of education to a certain extent.

Although existing research has focused on the trend of new media empowering ideological and political education, there are still certain shortcomings in the dynamic generation mechanism of educational content, the adaptability of algorithm recommendations to the ideological and political field, the specific ways of integrating cross-cultural materials, and the construction of student participation mechanisms. Based on the above situations, this article constructs a pilot platform for online ideological and political education, integrates big data analysis, user profile generation, algorithm recommendation, and interactive new media tools, actively explores innovative models of online ideological and political education in universities, aiming to improve the precise reach of educational content, enhance student participation and recognition, and provide practical basis and path reference direction for further deepening the reform of ideological and political education in the era of new media.

2. Related Works

In existing research, scholars have conducted multi-level explorations around how new media technology empowers ideological and political education in universities, forming diverse paths from system architecture optimization to teaching mode innovation. Li et al. proposed an efficient network education management system based on cloud computing. By improving information management and classification algorithms, optimizing online education processes, it can help promote the physical and mental development of college students, enhance the effectiveness of ideological and political education, and adapt to the trend of networked higher education in the new era [1]. Qi et al. proposed a Deep Learning-Based Integrated Teaching Framework for Ideological and Political Education (DLIEF), which combines online and offline teaching modes, and utilizes video on demand, database, and network technologies to improve the quality of public course teaching for teachers. They emphasize the main role of students in learning, aiming to optimize classroom teaching effectiveness through technological means and achieve the ideological and cultural education goals of ideological and political education in universities [2]. Gao and Yasin analyzed the current situation of ideological and political work in colleges and universities and the new characteristics of the Internet era, pointing out the practical problems faced by teachers and students in the teaching process. They aim to clarify development strategies and directions, optimize work details, enhance the pertinence and effectiveness of ideological and political education, promote the sustainable development of ideological and political work in universities in the new era, and achieve talent cultivation goals [3]. Zhang et al. proposed a Multimedia-Assisted Ideological and Political Education System for Higher Education Based on Deep Learning (MIPE-DLT), aiming to improve the quality of education and students' ability to access information. This system optimizes the teaching process through multimedia technology, improves the dissemination effect of ideological and political education, narrows the educational gap, and has the advantages of high precision, high processing efficiency, and low latency. Compared with traditional methods, its performance is significantly improved [4]. Although existing research has made some progress in system construction, teaching integration, and technology application, there are still bottlenecks such as fragmented methods, insufficient scene adaptation, limited depth of technology application, and low real student participation.

3. Methods

3.1. Innovative Models of Online Ideological and Political Education in Higher Education Institutions

College online ideological and political education is an extension and expansion of ideological and political education in the online environment. It relies on Internet technology to carry out activities with ideological and political education as the core through network platforms and resources. Compared with traditional ideological and political education, education in the online environment has the characteristics of rapid information dissemination, wide coverage, and strong interactivity. It breaks through the limitations of time and space, enabling educational content to be conveyed to students more quickly and widely. Meanwhile, the openness and interactivity of the internet provide students with more opportunities for participation and expression, which helps to enhance their learning initiative and enthusiasm[5-6].

In terms of educational methods, emphasis should be placed on innovation and increasing student participation. This article collects and analyzes student participation through big data, adjusts teaching strategies in a timely manner, pushes relevant courses based on interests, and improves the personalization and attractiveness of education. The application of modern information technology, such as online education platforms, social media, and virtual reality, has added vividness and interactivity to educational activities. Firstly, online education platforms can be used to carry out blended learning between online and offline, combining live and recorded forms to break the limitations of time and space, allowing students to participate in learning anytime and anywhere. Secondly, interactive discussions and sharing of learning experiences can be carried out through social media to promote communication and cooperation among students. At the same time, online discussions, case analysis, virtual role-playing and other interactive activities can be added to stimulate learning interest. Finally, relying on new media to promote and organize rich practical activities, such as volunteer service, social practice, and cultural exchange, to enhance students' sense of social responsibility and comprehensive quality, making ideological and political education more vivid and concrete[7].

3.2. The Application Value of Cross-Border Live Streaming in Ideological and Political Education on University Networks

Cross border live streaming demonstrates multidimensional value in ideological and political education in universities, mainly reflected in three aspects: content, dissemination, and interaction.

In terms of content, cross-border live streaming has enriched online ideological and political education resources. As an emerging form of communication, it provides cross-cultural, real-time, and interactive content supplements for educational resources. For example, the "Hyperthyroid Brother" China Tour showcases real cross-cultural scenes, not only breaking through the limitations of traditional ideological and political resources in time and space, but also enhancing the supply and form of educational resources[8]. The integration of cross-cultural elements has expanded the boundaries of educational content. In live broadcasts, foreign anchors present Chinese culture from a unique perspective, using symbols such as the entertaining interpretation of Shaolin Kung Fu and the display of high-speed rail technology to break down language barriers and concretize ideological and political elements through familiar interactive methods of digital natives, providing materials for multicultural exchange in education.

In terms of dissemination and personalized recommendations, universities enhance the effectiveness of education by building online ideological and political education platforms and algorithmic recommendation systems[9]. Firstly, the platform collects students' online behavior data, including learning activities, social interactions, and interest expressions, through online discussion forums, virtual communities, question and answer systems, and content sharing modules, providing a foundation for personalized education. Secondly, based on data analysis and deep learning techniques, a user profile of college students is constructed to depict each student's personality traits, interests, preferences, and study habits, accurately identifying potential needs. Again, combining collaborative filtering, content-based or hybrid recommendation algorithms, select suitable recommendation models to provide personalized learning content for students. Finally, regularly optimize the algorithm recommendation system, adjust the model

and recommendation strategy according to changes in user behavior and learning needs, improve the accuracy, relevance, and personalization level of recommendations, thereby enhancing students' user experience and platform stickiness [10-11].

4. Design Pilot Studies

4.1. Research Object Selection

The present study is aimed at college students as the primary research participants, choosing the sample groups of students of various grades and professional background to make the sample representative and diverse. The test group and the control group were split into two categories of research participants. The experimental group engaged in ideological and political education activities over the online platforms, whereas the control group was given the traditional education models.

4.2. Construction of Network Platform and Algorithms System

An ideological and political education platform in the network can be built in the pilot study, which is supported by an algorithm recommendation system. The platform has such features as online discussion, virtual communities, question and answer systems, and content sharing modules, with the help of which the data about the learning behavior and interests of the students are gathered. The user profile of college students is built based on the clustering analysis, association rules, and deep learning techniques in order to obtain the personalized content push. The algorithm recommendation model identifies collaborative filtering, content-based or hybrid algorithms to suit the learning requirement of various students, and in ensuring accurate recommendation and system flexibility, the system is optimized on a regular basis.

To address the learning objectives, the teaching intervention must be planned as follows:

The experimental group adopted a blended strategy, which involves online and offline learning involving live courses, recorded materials, online discussions and virtual role plays to increase the level of participation and initiative among students. Simultaneously, using cross-border live streaming, online reality, and multimedia techniques to enrich the learning material and make the process of education even more entertaining and engaging.

4.3. Results Discussion

(1) Learning Participation and Experience Feedback

This way of discussing while watching live broadcasts is much easier than listening to teachers in class, and I would be more willing to actively participate.

The barrage interaction is very timely, and I feel like I am truly involved in the learning process, rather than passively accepting it

It's very interesting when multinational anchors talk about Chinese culture, which makes me more willing to continue watching and more willing to speak

(2) Content understanding and feedback absorption

Using real-life scenarios to explain ideological and political content is easier to understand than pure theory, and I can immediately associate it with my own life

When foreign anchors talk about Shaolin Kung Fu or high-speed trains, I am actually more serious because these contents are fresh and more intuitive

I used to think that the examples of ideological and political courses were far away from me, but now through live streaming, I can see more specific pictures and situations.

(3) Cross cultural cognition and value attitude feedback

When I see others looking at China from a fresh perspective, I will rethink which cultural points I have overlooked myself

The reaction of foreign anchors makes me feel proud of my culture

I will also start paying attention to how other countries introduce their own culture, and become more interested in cross-cultural communication

(4) Learning methods and platform experience feedback

The content recommended to me does align with my interests, for example, if I watch a lot of kung fu, the system can continue to push it to me, which I find very convenient

"Sometimes the interaction is too fast and I can't keep up with the pace, but the overall experience is good";

"I prefer this form of audio-visual and interactive learning, it doesn't feel like a rigid learning task";

According to student feedback, the platform and cross-border live streaming have shown significant positive effects in three aspects:

(1) Significant increase in learning engagement

Students generally believe that interactive and real-time feedback based learning methods are more attractive. The live streaming and barrage mechanism breaks through the one-way transmission of traditional classrooms, allowing students to actively express and participate in a relaxed atmosphere. This indicates that new media forms can effectively improve the problem of insufficient participation in traditional ideological and political education.

(2) More concrete and life oriented understanding of content

Student feedback indicates that authentic, concrete, and lifelike situations in cross-border live streaming help enhance the comprehensibility of content. Cross cultural narrative, life examples, and visual presentation make abstract ideological and political concepts easier to accept and internalize, lowering the threshold for learning.

(3) Cross cultural perspectives have been expanded, and cultural identity has been enhanced

Students re-examine Chinese culture through the perspective of others during live broadcasts, and generate emotional resonance, thereby enhancing cultural confidence. At the same time, cross-cultural content also stimulates students' attention and interest in different cultures, promoting the formation of inclusive and open values.

(4) Personalized recommendations make learning paths more tailored to needs

Students generally recognize the recommendation function of the platform, believing that it improves learning convenience and content matching. This indicates that the algorithm can improve the learning experience to a certain extent, but further optimization is still needed in terms of rhythm control, interactive load, etc., to better adapt to students with different learning styles.

5. Conclusion

This article focuses on the innovative model of online ideological and political education in universities in the new media environment. By constructing a pilot platform that integrates behavior data collection, user profile generation, algorithm recommendation, and multimedia interaction modules, the effectiveness of new media technology in improving accurate delivery of educational content, enhancing student participation, and expanding cross-cultural cognition is verified. The above findings indicate that new media technology can become an important driving force for promoting the reform of ideological and political education in universities, and help to build a more attractive, interactive, and personalized network ideological and political education system. However, this study still has limitations such as limited pilot sample size, further expansion of data dimensions, and insufficient validation of the long-term effects of algorithm recommendations in the ideological and political field. Future research can promote system testing on a larger scale, improve multi-source data fusion technology, and explore intelligent push and content generation mechanisms that are more suitable for the characteristics of ideological and political education, in order to further enhance the depth, breadth, and sustainability of online ideological and political education.

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