International Journal of Intelligent Information and Management Science
ISSN: 2307-0692, Volume 7, Issue 6, December, 2018

Research on the Model of Personalized Remote Ideological and Political Education based on Internet Information Dissemination

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Abstract: Traditional remote ideological and political education lacks personality and creativity seriously, overemphasizes the role of teachers and ignores the initiative of students. Meanwhile it emphasizes on overall integration, treating all students as a whole. There is little analysis of individuals to understand their individual characteristics, so it is very difficult to teach students in accordance with their aptitude, and there is a lack of education acceptability, Therefore, the personalized remote ideological and political education is proposed. Internet information is relied on to discover students' characteristic information, and base on the characteristic information, the workflow of the personalized remote ideological and political education model is designed, realizing the design of personalized remote ideological and political education model based on internet information dissemination. The model research is realized by data processing and analysis. Through the simulation experiment, it is proved that the personalized remote ideological and political education model based on internet information dissemination designed in this paper can fully display the personality characteristics of students.

Keywords: Internet Information; Personalization; Ideological and political education; Learning initiative

1. Introduction

The rapid development of internet information has brought a revolution to teaching methods, and network teaching has become a trend. In the process of accepting education, students have differences and particularity, and traditional ideological and political education cannot achieve personalized education, the existing network ideological and political education system lacks understanding of students' personalized needs, and it also cannot meet the students' personalized needs, therefore, personalized remote ideological and political education application is appeared. It is a new ideological and political education method generated with the spread of internet information, and it can customize targeted education methods according to students' different situation, making students more active in learning. Personalized remote ideological and political education model, by understanding the characteristics of the students, conducts character analysis, then it processes data and combine XML technology, realizing the study. In order to ensure the effectiveness of the proposed remote ideological and political education method, testing environment of remote ideological and political education is simulated. Two different ways of remote ideological and political education are used to conduct simulation experiment of education receptivity, and it can be concluded that the proposed education methods have higher education receptivity.

2. The Construction of Personalized Remote Ideological and Political Education Model Based on Internet Information Dissemination

2.1. Internet information is used to discover students' characteristic information

With the development of internet information, personalized on-demand learning has become a new teaching trend. Internet information is used to discover students' characteristic information, and the huge information base of the internet can provide personalized remote ideological and political education service for students, realizing "people-oriented science and technology".

Through the dissemination of network information, web pages visited and knowledge searched by students, the structure between web pages and various data are mined to obtain potentially and useful characteristic information. The essence of personalized remote ideological and political education is to respect the difference of students and study their behavior habits and interests, so as to choose more needed teaching mode for students and provide better ideological and political education service [1]. The so called personalized remote ideological and political education is a situational teaching mode, which through

internet, combining with multimedia information processing technology, taking teaching theory as the guidance and using online virtual class. Personalized remote ideological and political education can support students' online learning and improve learning enthusiasm. The most prominent feature: student can learn independently through online virtual classes and become the subject of learning [2]. Personalized remote ideological and political education also requires teachers to create problem scenarios through course design, so that students can engage in online project discussions, then the teacher summarizes and conducting evaluation and motivation on students' performance. Personalized remote ideological and political education can stimulate students' learning interest, provide students with learning motivation, enable students to understand and master the knowledge system, and thus carry out in-depth learning.

Because the personalized remote ideological and political education based on internet information dissemination is a complex, huge information system with low controllability. Therefore, it is necessary to conduct design workflow of education model based on the mined feature information, divide each link of teaching into several subproblems, and arouse students' interests in learning as much as possible. Meanwhile, according to the changes of learners' interest, adjust the teaching method timely to achieve personalized remote ideological and political education.

2.2. Workflow design of personalized remote ideological and political education model

Based on the mined characteristic information, the workflow design of personalized remote ideological and political education model is conducted. And this model is mainly composed of teaching resource database, the student model database, the background management interface, the network user interface A, and the personalized processing engine. These components are relatively independent, but they also communicate with each other through the internet. The personalized remote ideological and political education model is shown in figure 1.

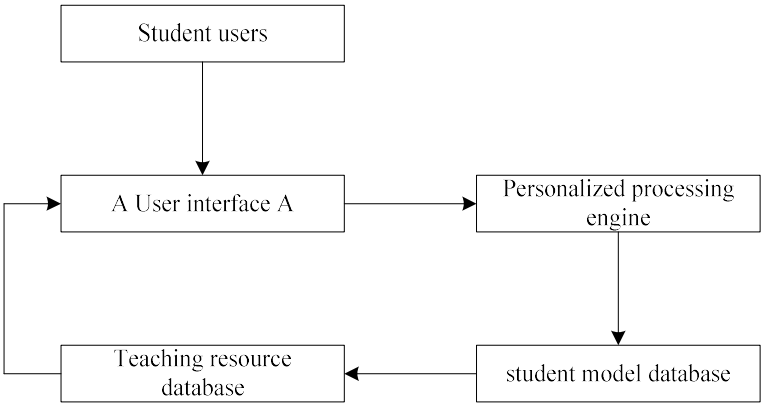

Figure 1. Personalized remote ideological and political education model

Students log into the personalized remote ideological and political education system through user interface A, and choose course freely. At this moment, the request from user interface A will transfer the education information learned by students to the personalized processing engine. After receiving information, personalized processing engine enter student model database, then student model database begins to schedule various learning tools. The personalized processing engine relies on various learning tools to access the teaching resource database, and finally the education information learned by students is returned to user interface A. The process students obtaining knowledge is a continuous cycle of user interface A and personalized processing engine [3].

Teachers log into the personalized remote ideological and political education system through the background management interface, and they can view the student model database to see the learning content and learning process and their reaction to this learning. They also can monitor students' learning process and guide students on knowledge points they don't understand. Teachers also need to obtain relevant teaching knowledge information on the network, adjust and expand the knowledge base of the personalized remote ideological and political education system, helping students with personalized learning.

In the personalized remote ideological and political education model, the knowledge points that students can learn are no longer the same, and students can choose the learning content in the personalized learning environment independently. At the same time, students' learning progress and homework completion can be recorded, and teachers can correct homework and answer the questions of students. The lists, conversations and knowledge points of students, teachers' evaluations and the papers they have done are all personalized settings, according to students' characteristics, and learning interface logged by

different students will be very different [4]. Meanwhile, the entire learning process from login to exit will be recorded and stored in the corresponding student model database. Once students log in the personalized remote ideological and political education system again, the last learning record will pop up for reference.

3. The Realization of Personalized Remote Ideological and Political Education Model

Based on the completion of personalized remote ideological and political education model design, and the model is realized through data processing and data analysis. Because the model is designed based on internet information dissemination, therefore, it can be applied to all development environments and supporting environments based on internet mode. The browser is used as the primary platform for the model. Using ASP technology to establish the application platform, ASP technology can make the running platform function of personalized remote ideological and political education model enhancement, and home more dynamic. ASP technology can well solve the problems of network data interaction and real-time transmission.

As for the realization of personalized remote ideological and political education based on internet information dissemination, the first is to preprocess the data, process the original browsing information of students, get the size of the page visited, the time spent on the page, the visiting URL, requested time, internet domain name, server status and students' state and other variables. The process of personalized remote ideological and political education model for data preprocessing includes: clean and delete irrelevant redundant items in the network data summary, keep the user IP address and user ID; for identifying student users, heuristic rules is used to conduct reasonable user identification, during the identification process, if the operating system changes or the client-side browser software changes, it will be considered as a new student user; For session identification, students may visit a site multiple times on the internet information with a large span of time, but a single site contains multiple web server logs, so for session identification, a site is split into multiple single sessions. Namely, set browsing time, if the browsing time, that is, the page request time exceeds the set time, the system will open a new browser page automatically.

After finishing data preprocessing, data analysis is carried out, data mining algorithm is used to obtain the learning patterns and learning rules of student users. For example, sequence pattern mining algorithm, clustering algorithm and AIS algorithm, all of these algorithms can conduct secondary analysis on the preprocessed data to determine the accuracy and effectiveness of the data. Then OLAP technology or Web path diagrams is used [5]. The learning patterns and learning rules of the acquired student users are analyzed to learn the learning patterns and rules that students are interested in, of which, interesting degree of students can be measured by interest function, so that students' interest can be displayed in a visual way.

Through data processing and data analysis, the study of this model is realized. Personalized remote ideological and political education model based on internet information dissemination can better reflect the change of students' interest in learning, so as to provide good personalized remote ideological and political education.

4. Simulation Experiment

In order to ensure the effectiveness of the research on the personalized remote ideological and political education model based on the internet information dissemination proposed in this paper, the simulation experiment analysis is carried out. Different remote ideological and political education courses are used as experimental subjects to conduct simulation test of education receptivity. The characteristic information, student status and the learning environment are simulated. The traditional remote ideological and political education is used as the test object for simulation test.

4.1. Test data preparation

In order to ensure the accuracy of test, two remote ideological and political education methods are put into the same experimental parameters for the simulation test of education acceptability, the simulation test parameter setting results of education acceptability are shown in table 1.

Table 1. The simulation test parameter setting of education acceptability

Items	The scope / parameter	Notes
Student group	Junior high school, senior high school, university	50 students are taken to analyze and select mean value
Learning ability of students	0.4~0.9	mean value selected from 10 students on each stage
Difficulty of ideological and political education	Simple, moderate, more different	Distribution according to students' group

4.2. Analysis of test results

During the experiment, two different remote ideological and political education ways are used to work in the simulation environment at the same time, analyzing the

change of education acceptability. In order to ensure the accuracy of data processing, XSN-14 data processing platform is adopted, and we just make a statistical analysis aiming at education receptivity changes of different remote ideological and political education way and obtain experimental results, the simulation result curve of education acceptability is shown in figure 2.

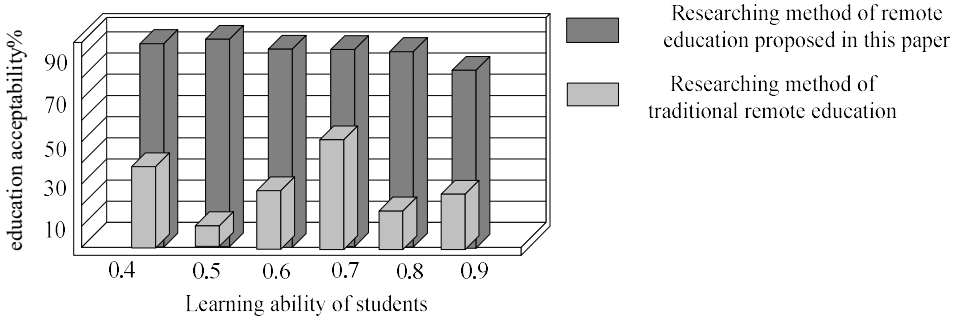

Figure 2. The simulation result curve of education acceptability

According to the test curve result, using the XSN-14 data processing platform, the proposed remote ideological and political education mode and the education receptivity of traditional remote ideological and political education are carried out arithmetic weight processing, it can be concluded that the education receptivity of the proposed remote ideological and political education way increases 53.45% than that of traditional remote ideological and political education way, which is more suitable for the development of remote ideological and political education.

5. Conclusions

In this paper, data mining technology is applied to network education, and it proposes a personalized remote ideological and political education model based on Web usage mining, and analyzes the technical methods used in its main modules. This model can be used in education system to teach students according to their aptitude. Web mining technology in the network education is still a new field, and it is still in research and development. With the further research of Web usage mining in China, personalized remote ideological and political education will have a brighter future.

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