

University Ideological Guidance Education and Student Mental Health Management System Based on Big Data

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Abstract: Ideological and political education is the fine tradition of our party. It is called the lifeline of all the party's work. It plays an important role in all walks of life and has a particularly significant impact on the field of education. With the rapid development of my country's socialist market economy and the continuous penetration of foreign cultures under the background of economic globalization, the spiritual world of college students has experienced unprecedented upheavals and transformations. As the most active and sensitive group in society, college students often have more keen insights into environmental changes and impacts, and these changes and impacts cause the most significant and intense fluctuations in their thoughts, and they are prone to confusion, confusion, and confusion. Feeling at a loss, worrying about one's own ability and future. The purpose of this article is to design and research the college I G E (I G E) and student M H (M H) management system based on big data (B D). This article uses B D to design and research the I G E and student M H management systems in colleges and universities. It can better help teachers in ideological and political education and teaching, and can more effectively guide students' psychological problems and promote students' M H. development of. This research systematically expounds the basic theories and core technologies of B D, and scientifically discusses it on the basis of our country's current college ideological and political counseling education and students' M H. Finally, analyze and research the management system based on B D. This experiment uses logical hierarchy method, era research method and mathematical statistics method to conduct research and analysis, making the experimental research data more scientific and effective. Experiments show that compared with traditional management systems, the application of B D-based I G E and student M H management systems in colleges and universities is more extensive and more feasible.

1. Introduction

In the era of B D, people's production and lifestyle have undergone profound changes. Based on the background of the era of B D, it is imminent to further enhance the I G E of colleges and universities and the study of student M H [1-2]. From the perspective of the B D era, the study of I G E and student M H education in colleges and universities will help enrich and develop educational theories, and provide more scientific theoretical support for the construction of ideological and political education [3-4]. Therefore, it is very meaningful and necessary to develop and realize a comprehensive and scientific college I G E and student M H management information system suitable for modern college students [5-6].

Many scholars have achieved good results in the research on college counseling education and student M H management [7]. For example, Wang Hua of Jiangnan University focused on the study of the relationship between the two educations in his book "Attaching Importance to M H Education and Improving the Effectiveness of Ideological and Political Education". Emphasized that the method of learning from M H education has an important role and theoretical significance for ideological and political education. Jiang Qunhua pointed out that in his "Research on M H Education from the Perspective of College Students' Ideological and Political Education", he pointed out that it is necessary to deeply understand the necessity of combining the two educations of college students to promote the all-round development of college students.

The purpose of this article is to improve the level of I G E in universities and promote the development of students' M H. It aims to use B D technology to design and research the I G E and student M H management systems in universities and colleges. It combines the current ideological and political and student psychological management in universities in our country. The status quo is used for comparative analysis to make the research results more accurate.

2. Research on the Application of Ideological Guidance Education and Student Mental Health Management System in Colleges and Universities Based on Big Data

2.1. Analysis of Ideological Guidance Education and Student Mental Health Management System

(1) Ideological guidance education

The function of ideological and political education in colleges and universities is to use scientific ideological theories to guide students to form a correct world outlook, outlook on life and values, so that they can adhere to the correct political direction and form good ideological qualities and moral concepts. It is mainly concerned with the realization of the social value of students.

(2) Psychological education

The function of M H education in colleges and universities is to guide students to find ways and means to actively adapt to the changing environment, deal with the problems of interpersonal communication, teach them to face various challenges in study and life with a positive and optimistic attitude, and stimulate students' potential. Promote its continuous development. It mainly focuses on the realization of students' self-worth

(3) Complementary analysis

Ideological and political education in colleges and universities has certain limitations: it does not pay enough attention to guiding students how to accurately recognize themselves, grasp themselves, and develop their individuality. Not enough attention is paid to the development of college students' psychological quality and its significance. M H education in colleges and universities mainly

focuses on the development of individual students and the realization of their self-worth, while ignoring the understanding of the social level, and students do not pay enough attention to the realization of their own social values. Ideological and political education pays attention to the development of people from a social perspective, which just makes up for this part. The effective combination of these two kinds of education functions can not only realize the self-worth of students, but also promote the realization of their social values, and the two together promote the all-round development of college students.

2.2. The New Connotation of Political Education for College Tutoring in the Era of Big Data

The era of B D is a new era in the development process of the era of network information. In the era of B D, college counseling political education is an innovation of college counseling political education under the background of the new era. It is not only reflected in the process of counseling political education technology application, but the essence is that educators continue to update knowledge and information and technology to change education. The worldview and way of thinking of the educated and educated, and encourage educators to actively participate in the use of new technologies to discover new knowledge in social practice activities. From the perspective of B D, college tutoring political education is a form of targeted and predictable education for groups or individuals that is based on facts and obtains valuable educational information through B D. Therefore, the content of political education in colleges and universities has been enriched and developed through B D.

2.3. Design of M H Management System for College Students

(1) Analysis of system functional requirements

The main function of the administrator in this system is user management and system management, so the administrator is given a special user role, which can perform all operations in the system and maintain the background. Students and psychological consultants are general user roles. After logging in to the system, they can perform system operations according to the role functions assigned to them by the system. Students mainly learn about psychology knowledge, conduct targeted psychological evaluation and consultation, and psychological self-regulation, etc. Counselors play the management functions of guiding and guiding students to conduct assessments, psychological counseling for students, and psychological intervention to help students' psychological growth.

(2) Analysis of system non-functional requirements

To realize a perfect university system, both the functional and non-functional requirements of the system are indispensable. The non-functionality of the system generally refers to the performance of the system. The performance of the system directly determines the feasibility of the system and is a strong backing for the development and realization of system functions.

1) Practical and easy to use

This system realizes the various functional modules of college students' M H management, and becomes an effective tool for college M H management. To a large extent, it can effectively prevent and solve college students' M H problems. The system is easy to learn, easy to see and easy to use. The system design is centered on user needs. The operation is simple, the interface is clear and practical, and online help is provided, which greatly improves the efficiency of the system.

2) Security

The security of this system runs through the design, implementation and testing of the entire

system to the application, from the user's login to the user's goal to be achieved to the user's exit. The overall process and the content information and data involved are safe and reliable of.

3) Fault tolerance

The database system is a system with a large amount of data, so some errors and errors will inevitably occur. How to eliminate and reduce the impact of database errors to minimize has become a major problem. Fault tolerance is the most basic requirement for the database. The database is fault-tolerant.

4) Innovation

This system breaks through the previous teaching method based on teachers, realizes the advanced concept of students' psychological development, provides students with a platform for active learning of psychology knowledge and solving psychological problems, and effectively solves the hidden dangers of college students.

(3) Database design

The database selected for the psychological education and comprehensive counseling management information system for college students is Microsoft SQLSERVER2012. SQL language is an internationally-used computer language with extremely powerful functions. It integrates functions such as system operation, control, data creation and query. It is extremely easy to master and very easy to learn. Compared with other database software languages, it has a large market share. SQLSERVER2012 inherits part of the functions of SQLSERVER2008, so it has better compatibility with the previous management system, and can also interact perfectly with third-party software. SQLSERVER2012 has extremely high stability and security, and has super-strong data storage and data processing capabilities. At the same time, in order to achieve cross-system and cross-platform operation, this design uses B/S architecture. The ASP.NET programming language used under the previous plug-in technology and service interface technology, and in line with the ASP.NET specification. It can well ensure the safety, reliability and standardization of this system. Because the ASP.NET development platform is more flexible, the designed system stability, portability and scalability are good.

2.4. System Implementation

(1) Psychological programming module

The psychological evaluation module mainly completes the functions, including students selecting the evaluation scale in the system, completing the test according to their actual situation according to the test steps, submitting the scale, and then viewing the test results. The core code is as follows:

```
List<String> types = new UserDao().findAllTypes();
StudentScore studentScore = new StudentScore();
studentScore.setId(request.getParameter("id"));
String typeBody = request.getParameter("typeBody");
String stress = request.getParameter("stress");
String sens = request.getParameter("sens");
List<Info> infos = new ArrayList<Info>();
...
```

(2) Distance psychological learning module

The long-distance psychological learning module mainly completes the functions, uploading relevant learning materials (articles, music, pictures, videos) to the system, and then students can

search by themselves, according to the key words of the question, and design into the form of automatic reply, according to the key of the student's question, the answer is automatically given by the word, and students can choose whether to view it, which saves consulting time. You can browse, view and download the psychology knowledge you are interested in. The core code is as follows:

```
Map map =null;
FileOutputStream fos=null;
BufferedImage bufferedImage=null;
File file,f;
byte[] b=null;
FileInputStream fis=null;
try {
map =new HashMap();
file=new File(filePath,fileName);// Can be any file format
FileOutputStream(file);
b = new byte[1024];
int nRead = 0;
while ((nRead = in.read(b)) != -1) {
fos.write(b, 0, nRead);
}
}
```

(3) Psychological consultation module

The psychological consultation module includes online consultation, online appointment and message consultation. According to their own situation, students can choose the counselor's message consultation, online appointment or online consultation. The core code for establishing a connection with the server is as follows.

```
var websocket = null;
if ('WebSocket' in window)
websocket = new
WebSocket('ws://192.168.1.101:8080/ConnectionWeb3.0/ConnectionWebSocket');
else if ('MozWebSocket' in window)
websocket = new MozWebSocket(wsuri);
else
alert("not support");
// Connection establishment event
websocket.onopen = function(event) {
onOpen(event);
};
// Receive data events from the server
websocket.onmessage = function(event) {
onMessage(event);
};
//event.data Data from the server
function onMessage(event)
{
processConnectionMessage(event.data);
}
}
```

...

2.5. Calibration Estimation Method

Suppose a finite population contains N overall units, and the k -th overall unit is identified by k , where $k=1,2,\dots,N$, then the finite population can be expressed as: $U=\{1,\dots,k,\dots,N\}$

Let y denote a research variable, and y_k be the value of the research variable of the k -th overall unit in the population. Usually, the value of y_k is unknown before investigation. And what we need to estimate is the total value of the research variable y

$$t = \sum_u y_k \quad (1)$$

Or study the overall mean of variable y

$$\bar{y}_U = \frac{t}{N} = \sum_U \frac{y_k}{N} \quad (2)$$

3. Experimental Research on Ideological Guidance Education and Student Mental Health Management System in Colleges and Universities Based on Big Data

3.1. Subjects

(1) In order to make the results of this experiment more scientific and effective, this experiment carried out research on this experiment by going deep into a local university and using a questionnaire survey. This experiment compares and analyzes the college ideological counseling education and student M H management system based on B D with the traditional M H management system to explore the feasibility of the M H education management system based on B D.

(2) In order to further investigate the purpose of this article, this experiment conducted face-to-face interviews with teachers and collected data. The gender ratio of the teachers interviewed this time is equal to ensure the validity of the experimental data. This survey of teachers' satisfaction with the system designed in this article uses a ten-point scoring system, and the satisfaction is proportional to the number. And use the calibration estimation method to get a more accurate value.

3.2. Research Methods

(1) Questionnaire survey method

In this experiment, a targeted questionnaire was set up by asking relevant experts. And adopt a fully enclosed method, the purpose of which is to promote students to fill in correctly.

(2) Field research method

This article analyzes the collected data by going deep into the school, conducting in-depth interviews with teachers and students, and recording. These data not only provide theoretical support for the topic selection of this article, but also provide reliable results for the final research results of this article.

(3) Logic analysis method

This paper compares the traditional and Internet of Things-based college ideological tutoring education and student M H education management system, and then analyzes the experimental logic of the management system functions to get the experimental results of this article.

4. Experimental Analysis of College Ideological Guidance Education and Student Mental Health Management System Based on Big Data

4.1. Comparative Analysis of Management Systems

This experiment compares the college I G E based on B D with the student M H management system and the traditional system to judge the feasibility of the system designed in this article. The results obtained are shown in Table 1.

Table 1. Comparative analysis of management systems

	Practicality	Safety	Fault tolerance	Innovation
B D	78%	73%	88%	67%
Traditional	45%	43%	40%	39%

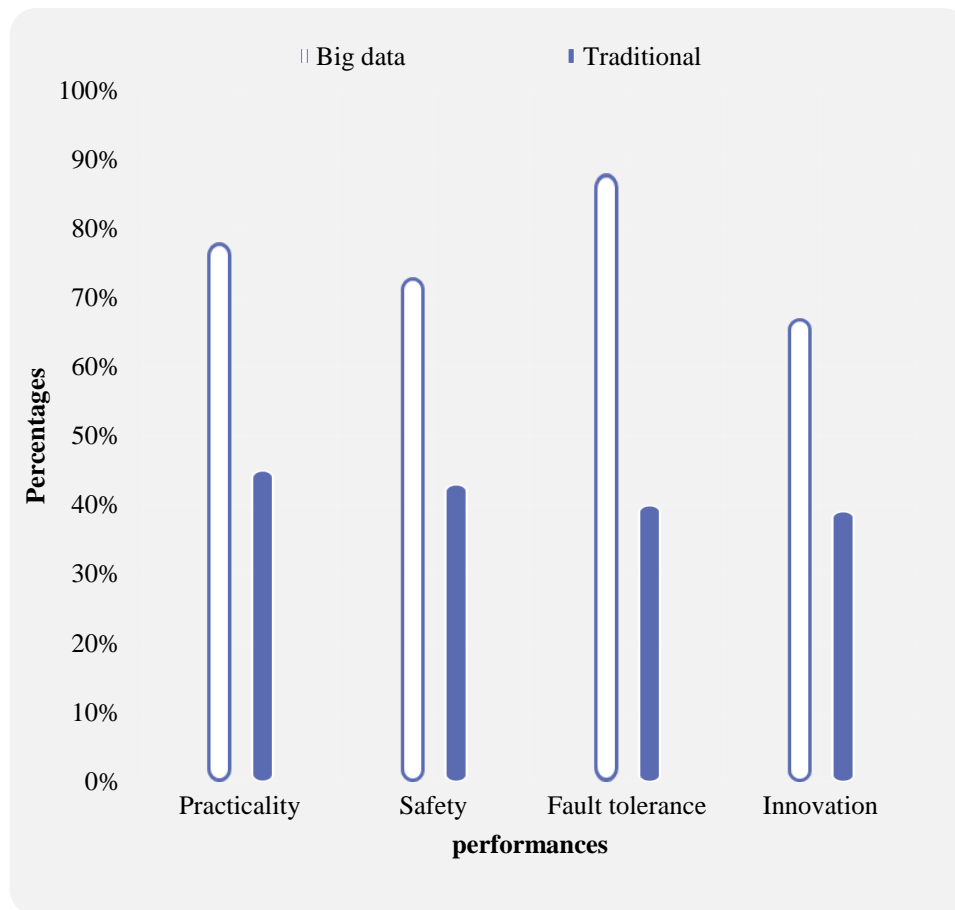


Figure 1. Comparative analysis of management systems

It can be seen from Figure 1 that, compared to the traditional college I G E and student psychological management system, the performance based on B D is more excellent and the uses are more extensive. Among them, the fault tolerance of college I G E and student psychological management system based on B D is more than 40 higher than the traditional one, which fully illustrates the feasibility of the unit's I G E and student M H management system based on B D.

4.2. Function Analysis of College I G E and Student M H Management System Based on Big Data

In order to further analyze the system designed this time, this experiment conducted face-to-face interviews with teachers and recorded the satisfaction obtained. The data is shown in Table 2.

Table 2. System function analysis

	assessment	learning	counseling	Others
Man	7	6	8	5
Woman	8	5	5	5

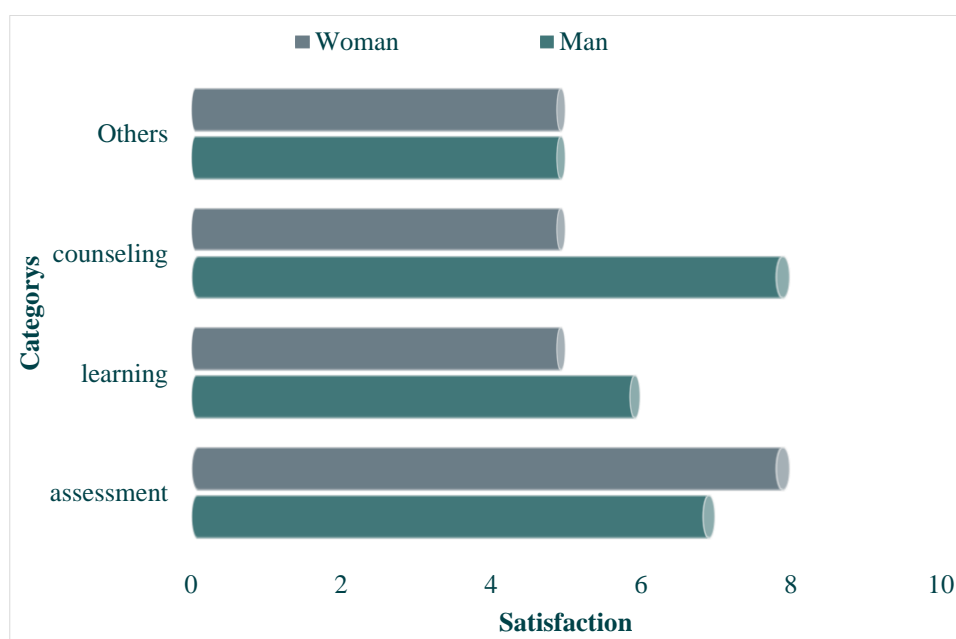


Figure 2. System function analysis

It can be seen from Figure 2 that teachers are generally satisfied with the functions of the application of B D-based I G E and student M H education management system in colleges and universities. Especially for the psychological test module, the overall satisfaction is high, which fully affirms the design based on this time.

5. Conclusion

The high-quality talents needed for social development in the new era must not only have solid professional knowledge, but also have stable psychological qualities and lofty ideals and beliefs. The organic combination of ideological and political education and M H education is the realization of quality education in colleges and universities. The effective way to meet the needs of college students to fully grow into talents. The organic combination of the two not only perfects the content of ideological and political education in colleges and universities, optimizes the methods of ideological and political education, but also innovates the mode of moral education in colleges and universities, and realizes the gradual transformation of ideological and political education from

theory to practice.

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Data Availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

Conflict of Interest

The author states that this article has no conflict of interest.

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