Research on the Computer-based Multi-dimensional Ideological and Political Education of College Students

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Abstract

Ideological and political education is an important part of the education system in China. It is of great significance for students to establish correct outlook and promote the comprehensive development of students' comprehensive quality, which is of great significance to cultivate students into society needed high-quality inter-disciplinary talents. In the context of highly developed informatization, students are facing a social environment of more diversified and complex features. Meanwhile, the Internet is filled with a variety of wrong ideas, which has a profound impact on students and has brought great challenges to ideological and political education. Therefore, colleges and universities should reform the traditional mode of ideological and political education, through the infiltration of multi-dimensional ideological and political education ideas, to achieve the purpose of enhancing the level of ideological and political education in colleges and universities and promoting the comprehensive development of the overall quality of students. This paper first analyzed the research results of multi-dimensional ideological and political education in China, and put forward the multi-dimensional ideological and political quality model and evaluation index of college students based on the computer platform. It analyzed the way to reform ideological and political education in colleges and universities from the multi-dimensional perspective, to promote comprehensive development of comprehensive quality of students for their realization of life values.

Keywords: Computer Platform, Multi-Dimension, Ideological and Political Education.

1. RESEARCH OVERVIEW

1.1 Research background

Ideological and political education can effectively establish the correct outlook on life and values for students, and cultivate healthy psychology of students, which is of great significance to students' future development. Reform of ideological and political education system in our country has been carried out for many times. At present, the ideological and political education has become an important part of our education system, and has cultivated a large number of high-quality talents. With the rapid development of modern society, students are facing the increasingly diversified and complicated social environment. In this context, the traditional ideological and political education has been left behind, and the education mode has also gradually exposed the shortcomings that the traditional ideological and political education can hardly play its important role as before. Therefore, universities shall reform the traditional mode of ideological and political education through the infiltration of multi-dimensional teaching reform measures to enable the ideological and political education be more in line with the characteristics of today's development, and enhance the level of ideological and political education.

1.2 Literature review

In the ideological and political education in universities, there are five dimensions, including target dimension, function dimension, system dimension, time and space dimension, and path dimension. Ideological and political education must keep pace with times, and review and plan the traditional ideological and political education through multi-dimensional education, so as to cultivate more qualified inter-disciplinary talents (Xu et al., 2017). Ideological and political education of university students from the multi-dimensional view should regard characteristic and innovation as the core, and reflect the content education, methods and individual characteristics of ideological and political education. In the teaching, spirit of innovation should be always kept to promote the
comprehensive development of students' comprehensive quality (Wu, 2012). Multi-dimensional ideological and political education in colleges and universities firstly sets up the practice of advanced education concept, and secondly builds rich practice education content and curriculum system, thirdly ensures the effectiveness of the practice education, and finally ensures that ideological and political education keep pace with times and is constantly optimized and reformed, to provide better ideological and political education for college students. (Li et al., 2012). In the view of multi-dimensional education, students' evaluation mode should also change accordingly. First of all, in terms of evaluation value, the evaluation model can be turned from the traditional evaluation of students to evaluation for students, so that the evaluation model can start from the perspective of promoting students' development. Secondly, to reflect the diversity of evaluation, only diversified evaluation criteria can meet the multi-dimensional ideological and political education (Chen, 2016).

2. MULTI-DIMENSIONAL IDEOLOGICAL AND POLITICAL QUALITY MODEL AND EVALUATION SYSTEM FOR UNIVERSITY STUDENTS

2.1 Evaluation index of multi-dimensional ideological and political qualities of college students

The ideological and political quality of college students are mainly reflected in the three aspects of moral character, political quality and volunteer service, as shown in figure 1.

![Figure 1. Ideological and Political Literacy Indicators](image)

Among them, moral literacy index mainly refers to the students' behavior norms, civilized manners, care for others, observance of social morality, collective consciousness and so on. The students' moral indicators can be judged by other students in the form of questionnaires, or in combination with students' daily performance (Yang, 2014).

The political literacy index mainly refers to the students' love for CPC and patriotism, ideology, political preference, advanced deeds, and participation in political studies or meetings. The students' political literacy indicators can be judged by examining the attendance rate of students' ideological and political classes, the attitude to the class, the report of ideological and political meetings and their experiences.

The voluntary service index mainly refers to students taking part in various voluntary services, such as poverty relief, voluntary blood donation and volunteer community service. To evaluate students' volunteer service, you can read students volunteer service record report, accumulate the time and check the related certificate or record (Yang and Yan, 2013).

2.2 Comprehensive fuzzy evaluation of multi-dimensional ideological and political quality of college students
Ideological and political quality is an abstract concept. With the traditional evaluation method, it is difficult to handle it quantitatively, which reflects that the ideological and political quality has a certain ambiguity. As a result, the comprehensive fuzzy evaluation method can be used in the multi-dimensional ideological and political quality evaluation of students in colleges and universities. (Huang, 2013).

2.2.1 Establish evaluation index set

According to Figure 1, each index contains several secondary indexes. Assuming that the first level index is 
\[ X = (X_1, X_2, X_3) \] .then \[ X_1 = (X_{11}, X_{12}, X_{13}) \]  \[ X_2 = (X_{21}, X_{22}, X_{23}) \]  \[ X_3 = (X_{31}, X_{32}, X_{33}) \]  are the elements in the main criterion layer B. Assume that the weights of the three are \[ B_1, B_2, B_3, \] and \[ \sum_{i=1}^{3} B_i = 1 \] 

Then, we should set up a set of evaluation of students' ideological and political literacy. Let's say that the set is \[ P = (p_1, p_2, p_3) \] .

2.2.2 Fuzzy evaluating

Firstly, based on the evaluation indexes, establish the fuzzy evaluation matrix \[ A_i (i=1,2,3) \] of ideological and political literacy of college students, and the matrix of each evaluation index is 
\[
R_i = \begin{bmatrix}
r_{i11} & r_{i12} & \cdots & r_{i1m} \\
r_{i21} & r_{i22} & \cdots & r_{i2m} \\
r_{i31} & r_{i32} & \cdots & r_{i3m} \\
r_{in1} & r_{in2} & \cdots & r_{inn}
\end{bmatrix}
\]  \[ (1) \]

Because \[ A_i = W_i OR_i \], the set of first grade of fuzzy evaluation of ideological and political literacy of college students is as follows: \[ A = (a_1, a_2, \ldots, a_n) = B_i(A_1, A_2, A_3) \]

2.2.3 Data processing

After completing the all matrices, the information data should be processed. There are two data processing methods. One uses fuzzy distribution method to analyze comprehensive ideological and political literacy level of students, and another is to carry on the fixed points for all the ideological and political literacy evaluation index, and thus get the final score (Qu and Lv, 2013).

2.3 Hierarchical analysis of ideological and political quality of college students

AHP is a decision analysis method for multiple targets, which is convenient and effective for an accurate conclusion, and plays an important role in ideological and political literacy evaluation of college students. The essence of AHP is to compare the influence factors of the ideological and political qualities of college students with each other, and get several factors with greatest influence, and finally get the weight value of each influence factors according to their importance (Deng, 2016).

2.3.1 Determination of indicators for hierarchical analysis
The evaluation formula of ideological and political qualities of college students is

\[ V(A) = \sum_i w_i V(A_i) \]  

(2)

The evaluation index of college students' ideological and political literacy is shown in Table 1

**Table 1** Evaluation Index of College Students' Ideological and Political Literacy

<table>
<thead>
<tr>
<th>Target layer A</th>
<th>Master criterion layer B</th>
<th>Sub criterion layer C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ideological and political quality of College Students</td>
<td>Moral quality (B1)</td>
<td>Sense of political identity (C1)</td>
</tr>
<tr>
<td></td>
<td>Basic moral quality (B2)</td>
<td>Thought spirit (C2)</td>
</tr>
<tr>
<td></td>
<td>Ideological and political knowledge (B3)</td>
<td>Ideological and political consciousness (C3)</td>
</tr>
<tr>
<td></td>
<td>Key moral quality (B4)</td>
<td>Interpersonal communication (C4)</td>
</tr>
<tr>
<td></td>
<td>Professional moral quality (B5)</td>
<td>Team work ability (C5)</td>
</tr>
<tr>
<td></td>
<td>Developmental moral quality (B6)</td>
<td>Ceremonial image (C6)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Voluntary service (C7)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Personal ability (C8)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Future development (C9)</td>
</tr>
</tbody>
</table>

Set the matrix as

\[ R_i = \begin{bmatrix} r_{1,1} & r_{1,2} & \cdots & r_{1,n} \\ r_{2,1} & r_{2,2} & \cdots & r_{2,n} \\ \vdots & \vdots & \ddots & \vdots \\ r_{n,1} & r_{n,2} & \cdots & r_{n,n} \end{bmatrix} \]  

(3)

The matrix should meet the following content

\[ \begin{align*}
    r_{i,j} &= 1, i = j \\
    r_{i,j} &= \frac{1}{r_{i,j}}, i \neq j \\
    r_{i,j} &> 0, i, j = 1, 2, \ldots, n
\end{align*} \]  

(4)

A_j represents the index of the main criterion layer B, and A_j represents the index of the criterion layer C. Compare the two with each other, you can get r_{ij}.

2.3.2 Calculation and verification of numerical values

The consistency index RI of the analytic hierarchy process is shown in Table 2

**Table 2** Consistency Index RI
Suppose the maximum characteristic value of college students’ ideological and political literacy evaluation index is $\lambda_{\text{max}}$, its formula is $\text{CR} = \frac{\text{CI}}{\text{CR}}$, where CR represents the consistency ratio and CI represents the consistency indicator (Qin et al., 2015). Formulas are as follows:

$$\text{CI} = \frac{\lambda_{\text{max}} - n}{n-1}, \quad \lambda_{\text{max}} = \frac{1}{n} \sum_{i} (\text{Aw}_i) \cdot w_i$$

Equation (5)

Aw represents the scores of the matrix and the eigenvector, and RI represents the mean random consistency index. When CR<0.1, it can be proved that the matrix and college students’ ideological and political quality evaluation indicators are consistent, and the resulting weight results of college students can have a greater impact on ideological and political quality. If CR>0.1, the matrix needs to be readjusted until there is consistency (Liu et al., 2015).

3. REFORM MEASURES OF MULTI-DIMENSIONAL IDEOLOGICAL AND POLITICAL EDUCATION OF COLLEGE STUDENTS

3.1 Target dimension

In teaching system of our country, each subject, teaching link, and teaching content have different teaching objectives, but in essence, the goal of ideological and political education of college students is still to establish a correct outlook on life and values for students, so as to lay students a solid foundation for future development. The goal of ideological and political education in colleges and universities is shown in Fig 2.

Figure 2. The Goal of Ideological and Political Education In Colleges And Universities

Ideological and political education in colleges and universities is to not only make students have the courage to struggle and persevere, but also to cultivate students’ ideological and moral and interpersonal skills, and make students high-quality compound talents. In the ideological and political education in colleges and universities, students can get a more comprehensive education. On the one hand, students can understand the development of the party and the country, and that the life nowadays is exchanged from the great effort of the revolutionary martyrs, so as to cultivate the spirit of party loving and patriotism of students. On the other hand, through the ideological and political education in colleges and universities, students can be cultivated with the collective spirit and team awareness and enhanced students’ interpersonal skills, so that students in the community will have a higher competitiveness, a the long-term benefit for students.

Therefore, when colleges make the program of ideological and political education, it should be based on the core objectives of ideological and political education, and make the objectives throughout the teaching program, so as to provide more comprehensive ideological and political education for students. In addition, the ideological and political education should be combined with the actual life. The traditional ideological and political education
tends to pay more attention to knowledge teaching with lack of combination with real life, resulting in the isolation of ideological and political education from the real life problems. Also, it makes students lose interest in learning ideology and politics, which is not conducive to the ideological and political education of colleges. Therefore, in the ideological and political education of colleges and universities, we should pay attention to the combination with real life, through the connect with current events and other ways, to reflect the role of ideological and political education in life.

3.2 Dimension of function

In the traditional teaching concept, teachers generally believe that ideological and political education is to establish a correct concept of party loving and patriotism for the students, and develop a positive, healthy and progressive ideological spirit. Although this kind of understanding is not wrong, it also has some one-sidedness. Affected by this concept, ideological and political education in China has been in a secondary position for a long time, and students have a low degree of recognition, bringing some obstacles to the development of ideological and political education. Therefore, we must have a clear understanding of the function of ideological and political education, so that students can enhance the recognition of ideological and political education, so as to promote the development of teaching work. The function of ideological and political education is shown in fig3:

![Figure 3: The Function of Ideological and Political Education In Colleges And Universities](image)

According to the figure above, the basic purpose of education is to provide students with a way to acquire knowledge. Through the ideological and political education, students can learn the contents that other subjects cannot offer, effectively broadening the students’ vision and knowledge and laying a good foundation for students' future development.

Up to the high level, ideological and political education in colleges can cultivate the party loving and patriotic consciousness for students.

In the history and current affairs news mentioned in the ideological and political education, teachers can intuitively feel that the party and the government serve the people wholeheartedly, and that the country is increasingly growing stronger, to be a more important voice among the world's great powers. Thus in the process, teachers can cultivate students' sense of national pride and patriotism.

On a higher level, the ideological and political education can improve students' ideological and moral standards. As an ancient civilization with a history of 5,000 years, our country has been praised as a “state of courtesy”. Ideological and moral education as an important part in our education system can effectively regulate the behaviors of students, develop the collective spirit and team consciousness for the students, and improve the students’ interpersonal skills. However, if students lack the necessary ideological and ethical education, it will not only adversely affect students’ future development, but also threaten the security and stability of the society.

The core purpose of ideological and political education is to improve students' comprehensive competitiveness.
In the current social context, only students with high competitiveness can stand out from a large number of talents and realize personal value. The absorption of knowledge, the cultivation of the students’ party loving, the patriotism, and the improvement of the ideological and moral standards of the students can be used to enhance their competitiveness (Du, 2015).

3.3 System dimension

The system dimension of education is shown in fig.4:

![Diagram](image)

**Figure 4. The System of Ideological and Political Education In Colleges And Universities**

According to the figure above, the university's ideological and political education system is divided into four levels:

First, it is the ideological and political education condition system of universities.

The system mainly includes contents related to education facilities, such as the construction of ideological and political faculty in universities, teaching software and hardware construction, teaching environment, etc. This part is the basis of the education of university ideology and politics, and only the perfect education condition can guarantee the sound development of the ideological and political education (Yuan, 2015).

Second, it is the university ideological and political education curriculum system.

College ideological and political courses mainly include classroom attendance, teaching contents, compulsory service, social practice and so on. The construction of the curriculum system is the main body of education of ideology and politics in colleges, and all teaching activities and teaching links should follow the content of the course system (Li et al., 2016).

Third, it is the university ideological and political education management system.

The management system mainly includes the management of the teachers, the corresponding management system, and the establishment of the ideological and political education system. Perfect management system construction is an important means to ensure the sound development of ideological and political education (Zha et al., 2011).

Finally, it is the evaluation system of ideology and politics education in colleges. Education evaluation system mainly includes two parts as evaluation of the teachers and students. Through the teaching evaluation, we can
get intuitive feedback of the effect of ideological and political education, and put forward the shortcomings in the course of ideological and political education according to the feedback for targeted solving to promote the improvement of the ideological and political education level.

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