

Research on Constructing Teaching Model of College's Ideological and Political Class Based on Multidimensional Interaction of Information Technology

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Abstract. Information technology is an important support of education modernization, while multidimensional interaction is the essential requirements of ideological and political education in colleges and universities. In view of current teaching situation on college ideological and political education and the teaching pattern of university ideological and political course , the paper brought forward innovation of teaching mode on university ideological and political education ,and it constructed the pattern of university ideological and political course teaching mode which was based on information technology's multidimensional interaction. It constructed the student's individual critical learning potential curve by using the mathematical model. Further, it can effectively analyze the teaching effect and the dynamic changes of the student thought which provided a new research direction and practice path for the college ideological and political teaching theory.

Introduction

At present, ideological and political education in college and university is the important position of national ideological and political education[1]. Only by paying special attention to the college students' ideological and political education, we can better promote to comprehensive ideological and political quality, and socialist countries show their own advantages. With the development of information technology, ideological and political education in college and university must keep up with the times, and keep pace with the times. It incorporated the information technology into ideological and political education in college and university, and it constructed ideological and political course teaching mode based on multidimensional interaction of information technology[2,3]. Some scholars and teachers have certain research and discussion in the field in China, such as Shenali's practice and thinking on multi-dimensional interactive teaching mode in the teaching of ideological and political course class. This paper mainly discusses how to optimize teaching efficiency of ideological and political theory course in college and university, especially in promoting this course's effectiveness under the environment of large class. Through their years of multidimensional interaction teaching mode in practice teaching, it explored the ideological and political theory course of large-sized class teaching, thus it effectively improved teaching quality[4].

Ideological and political situation and cognition of the current university students

A. The current university students' ideological and political situation

In order to understand the current university students' thought condition comprehensively, systematically and clearly, providing the scientific basis for ideological and political education of our present situation investigation[5].The paper has questionnaire survey to the higher education school for different college students ,and it mainly understand the students' superiority embodying in the university ideological and political education study teaching mode . After the questionnaire, in order to make more scientific statistics, the survey used the basic method of separate open hierarchical multiple sampling.The survey questionnaire survey valid data statistics as follows.

TABLE I. THE DATA SHEET OF OBJECT QUESTIONNAIRE SURVEY

		vocational-technical school	A third group of admission	A second Group of admission	A first group of admission
Boys	the ratio %	12.80	12.20	10.85	11.65
Girls	the ratio %	10.15	10.95	12.35	11.55
Total	the ratio %	22.8	23.15	23.20	23.20

In Table 1, statistical structure results showed that men and women each account for 50%.From the data structure distribution, all levels of the college students' total distribution proportion are about 23%,which it is in line with the average distribution rule. The results of the survey can represent the current university students' ideological and political status. Specific data as fig.1 shows.

As Figure 1 shows, the questionnaire survey in multi-angle talks about the political belief, moral concept, current policy, the study status and so on.The results showed that today's college students are very caring about ideological and political sensitivity,and more than 80% of the students have a firm political beliefs, and more than 75% of students' moral are right.They identity mainstream moral value,and the vast majority of students pay attention to current politics. Only 13.7% of the students do not focus on the current politics. In the study and employment, half of the students appeared blind, fuzzy, follow suit and so on,but most students have clear goal.The troubling fact is that college students have life and psychological problems, and 46.7% of the students are surfing online most of the time, and more than 50% of the students think time little.

B. The cognition on ideological and political course teaching of information technology multidimensional interaction

Now, students express their thoughts, attitudes, ideas and their feelings and so on through the network[6].The network is not only creating a good learning atmosphere for students, but also structuring a new platform for the ideological and political education.From the cognition on university ideological and political course teaching based on multidimensional interaction of information technology,they found that many students are still very support on information technology multidimensional interaction teaching mode and ideological and political course teaching integration. Comprehensive survey results are shown as below.

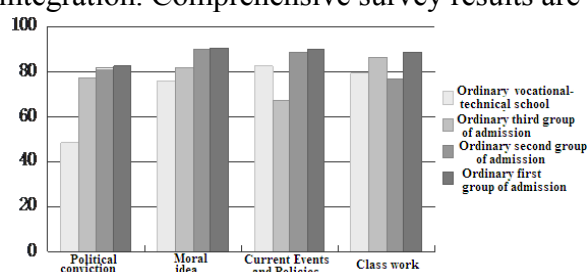


Figure 1. The current college students' ideological and political status

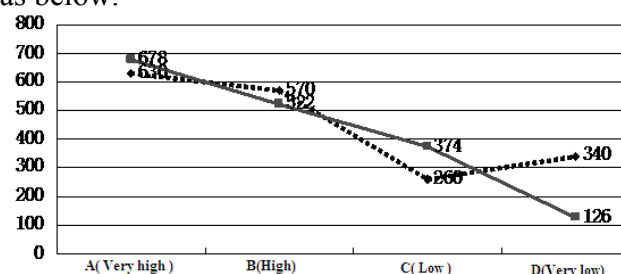


Figure 2. Comprehensive survey results

As Figure 2 shown, the solid line shows that the current college students' cognitive degree are based on ideological and political course teaching mode of information technology to construct multidimensional interaction. Dotted line represents cognitive degree that the current college students are toward to multi-dimensional interactive teaching pattern.

Ideological and political teaching model based on information technology multidimensional interaction in university

The ideological and political education must make full use of the positive, sunshine and health thought,and it fully perceives dominant position which culture occupied. It effectively occupies the lead position, and it pays attention to strengthen the vividness and timeliness of the ideological and political education under the information technology[7]. It integrates the ideological and political education into resource under the information technology,and it constantly strengthens students' ideological and political education. At the same time, the ideological and political education should be to bold breakthrough.It is not only improve the students' goals of ideological and political educational curricula course, but also truly improve college students' ideological and political

level. Then it achieves a level of self education, and it effectively gives full play to its own main guidance in the ideological and political education. Constructing university's ideological and political teaching model of information technology multidimensional interaction are as below.

Figure.3 shows, college's ideological and political teaching model are made up of four parts, identity authentication module, answer module, auxiliary module, management module, which multidimensional interaction are based on information technology.

Analysis of students' critical learning potential curve under multi-dimensional interactive teaching mode

With the passage of time, N is gradually increased. As mentioned previously, political belief, moral concept, current policy, study status, potential curve move up. At this time, when personality thought potential function of one aspects reach 1 first, and it overcomes the relationship of original variable index between the ideological and political education. That can be more comprehensive in the ideological and political education. It is objective and reasonable to evaluate process to determine the weight, and it overcomes the defect artificial weight determined of other evaluation methods.

If $\mu^A \tau^A \leq \mu^M \bar{\tau}^M$, give a group of industry discretionarily h and g , and $h \leq \tilde{H}$, $g \leq \tilde{H}$. If [8]:
 $\{\rho^h > \rho^g \text{ 且 } \tau^h \geq \tau^g\}$ or $\{\rho^h \geq \rho^g \text{ 且 } \tau^h > \tau^g\}$ Among it, $\tilde{\theta}^h \equiv |d\Omega^h(0)/dr|$.

On the whole, given thought condition index h and g , if p and g are less than or equal to ρ^g and τ^g (one of them must be strictly less than), then we say that state of mind "g" are better than "h". In the analysis process of individual student's ideological and political condition, distribution density function will be obtained from ideological and political situation of all kinds of students by coupling factor [9]. At the same time, the probability of the individual characteristics should be known to be convenient to establish an appropriate criterion rules. The student individual critical learning potential curve of its specific constituting are as below.

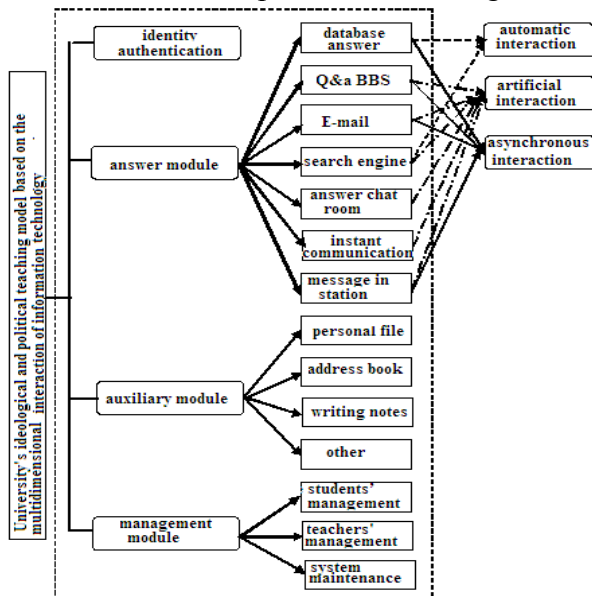


Figure 3. University's ideological and political teaching model based on multidimensional interaction of information technology

As Figure 4 shown, it showed ρ^h influence on students' individual critical learning potential curve which is also named $\Omega^h(r; \tilde{N}^h)$, such as bad information spreads into the college students' view. It creates opportunities for the college ideological and political education, which it is based on the information technology multidimensional interaction for ideological and political course teaching of college students. It can effectively avoid bad effect and negative effect on college students. Three imaginary curve are given in diagram [10]: $\rho^1 = 0.90 > \rho^2 = 0.75 > \rho^3 = 0.20$

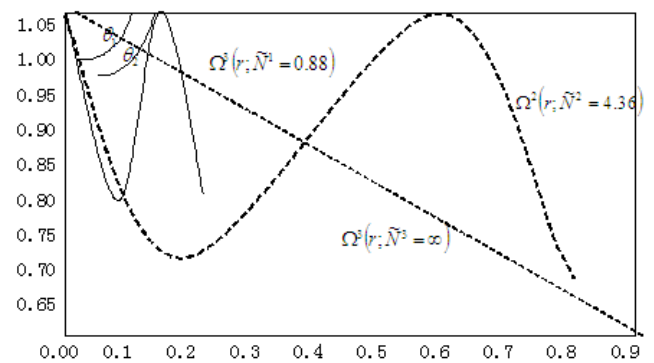


Figure 4. The student individual critical learning potential curve under the multi-dimensional interactive teaching mode

All other parameters are constant, and set to: $\rho^1 = 0.90 > \rho^2 = 0.75 > \rho^3 = 0.20$

All other parameters are constant, and set to $\mu^A = 0.5$ $\mu^1 = \mu^2 = 0.1$ $\mu^3 = 0.3$

$\tau^A = 0.8$, $\tau^h = 1$, for all the h , it was established, $c^A = 0.5$

In the process of monomer composition analysis among all the students, it makes standardization of processing to each student's index, and makes the students in different conditions (different measures index) into the same measure of indicators. It eliminates difference of student's level, and makes great comparability in a student's ideological and political situation. Industry 3 is the industry of highest level, and industry 1's level is minimum. We are very easy to prove that these parameters are at $\tilde{H} = 2$, it meet the following formula[11,12]: $\mu^M(\tau^A + \bar{\tau}^M)/(\tau^A + \tau^h) < \rho^h$, $h=1,2,\dots,\tilde{H}$ and the condition of $\mu^M(\tau^A + \bar{\tau}^M)/(\tau^A + \tau^h) \geq \rho^h$ $h=\tilde{H}+1,\dots,H$ ($1 \leq \tilde{H} \leq H$)

In the picture, we described the three related critical curve, and then get the following critical value: $\tilde{N}^1 = 0.88 < \tilde{N}^2 = 4.36$ $\tilde{f}^1 = 0.40 < \tilde{f}^2 = 1.40$

$\tilde{r}^1 = 0.32 < \tilde{r}^2 = 1.10$, also $\tilde{\theta}^1 = 5.5 > \tilde{\theta}^2 = 1.90 > \tilde{\theta}^3 = 0.25$

Therefore, when the student individual thought factor achieved minimum threshold ($\tilde{N}^1 = 0.88$), the whole teaching effect 1 will reach to 1 at the miximum of $\tilde{r}^1 = 0.32$.

Thus it effectively cultivate students' consciousness of independent spirit, and students are encouraged to ask the question when they accept ideological and political education.

Conclusion

In this paper, the college students' ideological and political education should be cognitive to analyze with characteristics, which it is based on the interaction theory of mechanism research, and it is organic to integrate information technology. It had the current college students personalized features, and it constructed the students' individual critical learning potential curve. It deeply analyzed the practical methods of information technology and multidimensional interaction in ideological and political theory course, and it made the ideological and political teaching to pay attention to interaction on the teachers and students and interaction on teachers and students and human-computer.

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