

Educational Psychology Curriculum Reform Based on the Cultivation Model of Applied Undergraduate Talents

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Keywords: Application Oriented Talents; Educational Psychology; Curriculum Reform; Gaussian Regression Algorithm

Abstract: With the continuous development of the country's economy and the continuous progress of reform, China's all walks of life on the demand for professional application-oriented talent is also growing, the traditional undergraduate college education is usually dominated by theoretical knowledge, to cultivate academic and research-oriented talent as the goal, unable to meet the needs of the current social development. Undergraduate higher education must change the mode of talent cultivation from academic and research-oriented to application-oriented and innovation-oriented. Only in this way can it better adapt to the development of all walks of life and coordinate talent cultivation with the overall social needs. Educational psychology is one of the compulsory courses for education students and occupies an important position in college curriculum. However, the current curriculum of educational psychology is still dominated by traditional theoretical knowledge, and there are many problems in curriculum teaching, which are not conducive to the cultivation of application-oriented talents. Therefore, curriculum reform must be carried out as soon as possible. Based on the cultivation model of applied talents, this paper analyzes the development status of educational psychology and puts forward some curriculum reform strategies of educational psychology.

1. Introduction

The outline of the national medium and long term education reform and development plan (2010-2020) clearly states that modern society faces various challenges, but China's current education and social development are not coordinated, and students' practical application ability and ability to adapt to social work are relatively weak, leading to an urgent shortage of innovative and applied talents [1-2]. Curriculum is the key of talent cultivation and occupies the core position in the cultivation of applied talents. Therefore, college education has begun to change the mode of talent training, and the requirements for talent training are increasingly high, which leads to the cultivation mode of application-oriented undergraduate talents. Training comprehensive and high-quality application-oriented talents is the requirement of The Times [3]. Therefore, colleges and universities must adhere to the learning concept of applying knowledge to practice, always combine teaching with social and economic development, change training direction and methods, and define training objectives [4]. Educational psychology has both strong theoretical characteristics and application characteristics, mainly aimed at the learning of theoretical knowledge of educational psychology, on this basis to solve the practical problems encountered in education and teaching. Based on the cultivation model of application-oriented undergraduate talents, educational psychology should always focus on application and take practical ability improvement as the core goal [5-6]. Compared with the traditional educational psychology curriculum, the educational psychology curriculum reform should always maintain the characteristics of application. However, the current teaching situation of educational psychology in China is not optimistic, with a series of problems, such as outdated teaching contents, backward teaching methods and single teaching evaluation, etc. [7-8]. This series of problems leads to the current educational psychology talent

training model and the training requirements of applied talents run counter to, so we must solve this problem as soon as possible.

At present, with the deepening of curriculum reform in various countries, more and more experts and scholars are paying attention to curriculum reform and have put forward many opinions and Suggestions [9-10]. However, most studies on curriculum reform by various experts and scholars focus on the concept of curriculum reform rather than the scope of relevant subjects and courses, and there are relatively few researches on the specific curriculum reform of educational psychology [11-12]. Therefore, there are some theoretical gaps in this aspect and the research is not thorough enough.

In order to fill this theoretical gap, this paper, based on the model of application-oriented talent training and using gaussian regression algorithm formula, analyzed the development status of educational psychology and proposed some curriculum reform strategies related to educational psychology [13-14]. It is not only beneficial to the development of educational psychology teaching in a new direction, but also lays a foundation for cultivating applied talents. At the same time, it is also of certain reference significance to the curriculum reform of other subjects in the future, and provides a theoretical basis for relevant studies in the future [15].

2. Method

2.1 Applied Talents and Courses

Undergraduate course colleges and universities in the daily teaching process, is intended to cultivate applied talents for the clear target, the whole process of talent training is over demand for applied professional talents for economic development, and academic talents, cultivating talents is more emphasis on practice application, is to combine theoretical knowledge with the actual work need to be together, meet all walks of life with different professional comprehensive quality and the demand of knowledge and skills. In general, applied talents refer to talents with outstanding practical working ability who apply theoretical knowledge to solve various practical problems on the basis of practical career needs and under the guidance of relevant theoretical knowledge.

In order to cultivate application-oriented talents, universities should set application-oriented courses. People generally divide curriculum into broad sense curriculum and narrow sense curriculum. The so-called broad sense curriculum refers to the integration of all subjects set up for the purpose of training, and it can also refer to the integration of activities carried out by middle school students in the process of teachers' guidance. Narrow sense of the curriculum is a specific subject, such as Chinese curriculum, mathematics curriculum. In the author's opinion, the so-called application-oriented curriculum refers to the narrow sense of curriculum which is built by the school around the economic development and the industrial demand and focuses on the cultivation of students' comprehensive ability. It is based on the theoretical knowledge of the subject and emphasizes the cultivation of students' practical application ability. Compared with traditional courses, this application-oriented course emphasizes more on the improvement of practical ability and the application of theoretical knowledge in practical activities. Only application-oriented courses can cultivate application-oriented talents. Therefore, the author believes that the curriculum reform of educational psychology should focus on application-oriented courses.

2.2 Gaussian Regression Algorithm

Gaussian regression algorithm is established on the basis of introducing multiple regression models and reducing the number of data points in each model to reduce the complexity of calculation. This algorithm enables data points to be trained within multiple local models rather than a single model. At the same time, the following formula can be used to allocate the relevant data points:

$$w_i = \exp\left(-\frac{1}{2} \frac{(x - c_i)^T (x - c_i)}{l^2}\right) \quad (1)$$

In the formula, c_i represents the center of the i th model, and w_i is the distance between model I and the set x . Therefore, in order to make the allocation of data points correct, the distance of each data point should be calculated M times, and M represents the total number of local models. Based on this, select the smallest model and then add data points to the model. The distance measurement in equation (1) can be weighted for prediction. After relevant calculation with the above formula, the global predicted value can be obtained by the weighted prediction sum of these models:

$$y^* = \frac{\sum_{i=1}^M w_i y_i^*}{\sum_{i=1}^M w_i} \quad (2)$$

3. Experiment

3.1 Selection of Gaussian Regression Algorithm

Gaussian regression algorithm ensures a smooth transition between models in the absence of comprehensive conditions with only local support. It not only makes the experimental data accurate, but also greatly reduces the complexity of the experimental data. The advantage of gaussian regression algorithm makes it more adaptable to the rapid reform of educational psychology.

3.2 Algorithm Flow

The first step is sample extraction. The questionnaire includes three aspects: teachers, students and workers in various industries. It involves the current investigation of educational psychology courses, mainly including teaching methods, teaching methods and other aspects. The purpose of the questionnaire survey is to comprehensively grasp the problems existing in the current educational psychology. Better propose solutions and Suggestions. Under the current educational psychology teaching situation, students with the same learning level are selected as experimental samples to ensure the consistency of experimental samples.

The second step is sample grouping and data calculation. The students were divided into two groups: traditional teaching group and experimental improvement teaching group. The traditional teaching group does not change the original teaching method, the experimental group changes the teaching method, combines the study and the practice research. The above algorithm is applied to analyze and process the sample data to ensure the scientific and accurate experimental results. The relevant data in the experimental process are substituted into the gaussian regression algorithm formula for calculation.

The third step is to collate and analyze the results. After a period of time, the different groups were tested comprehensively. The test included both theoretical test and practical application test. Record the results of each group and arrange the relevant data. According to the analysis of the data, relevant conclusions are drawn.

4. Discuss

4.1 Analysis of Experimental Results

Through the above experimental results and calculation, we can easily find that the current status of educational psychology curriculum is not optimistic, there are many problems, and is not compatible with the overall social demand model, so to some extent to hinder the further development of the society, so we must carry out the curriculum reform of educational psychology. The specific experimental data are shown in table 1 and figure 1, and the data are the results sorted out by the author.

Table 1. Experimental index results

	wi	y*	Weighted Score	Score
Theory Level	78	95	40%	87
Practice Level	77	93	35%	83
Comprehensive	69	87	29%	89
Final score				86.5
*Data came from the experimental collation				

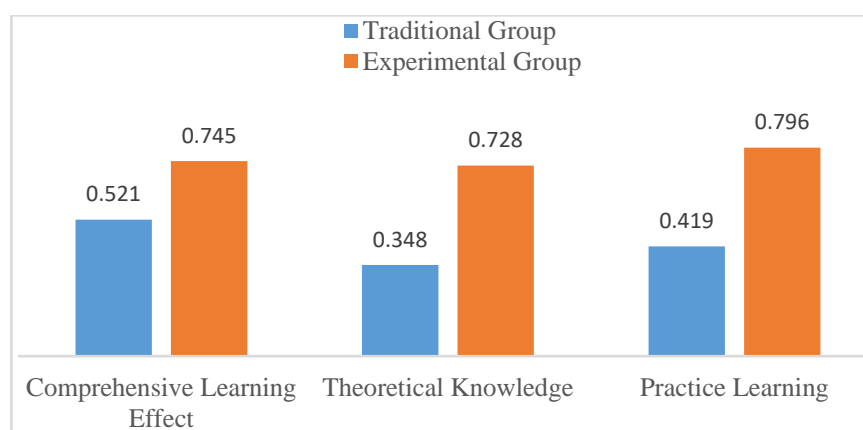


Figure1. Comparison of experimental data

4.2 Development Status of Educational Psychology Courses

At present, most educational psychology still adopts traditional teaching methods. For a long time, the contents of educational psychology courses are complex and diverse, and most of them are divorced from time activities. The teaching effect of educational psychology is always low because of the single teaching method. The course evaluation is relatively backward, with the main performance as follows:

(1) The teaching content of educational psychology is outdated

At present, the traditional psychology courses focus on the study of knowledge learning, moral education and other aspects of psychological theoretical knowledge, and the actual needs of the current education industry is often very different, do not conform to the current trend of China's education reform and the first development of the teacher industry requirements. This leads to the educational psychology curriculum content and the actual primary and secondary school teaching seriously divorced, which makes the educational psychology curriculum become meaningless.

(2) The teaching method of educational psychology is single

The ultimate goal of educational psychology course is to help students build a knowledge framework and guide students to apply it to the future educational practice. However, the current educational psychology still adopts the traditional teaching method, which often presents a kind of knowledge indoctrination learning, emphasizing theory rather than practice. This kind of teaching method not only causes students to lose interest in learning, but also does not help students in their future practical application. In the long run, students will lose all initiative in the course of educational psychology and turn it into a passive forced learning.

(3) Educational psychology has a single evaluation method

At present, there are many obvious problems in the evaluation of educational psychology. For example, too much emphasis is placed on the investigation of theoretical knowledge of educational psychology, but the examination of students' practical theoretical application is ignored. The final results are emphasized, but the teaching process of educational psychology is neglected. Generally

speaking, the evaluation level of educational psychology is single and the evaluation system is relatively narrow. Due to these disadvantages, students' study of educational psychology is still at a relatively simple level of knowledge and memory, and their practical application level is very low.

4.3 Strategies for Curriculum Reform of Educational Psychology

(1) Pay attention to the comprehensive development of students, clear teaching objectives

Based on the cultivation model of applied undergraduate talents, the teaching objectives are further clarified. The knowledge goal, the ability goal and the emotion goal link together, devotes to the practice type and the application type talented person's training. The goal of knowledge is to help students establish the basic framework of theoretical knowledge of educational psychology. The goal of competence is to analyze and evaluate the behavior of teachers and students in practical classroom with the help of the theoretical knowledge of educational psychology. The emotional goal is to help students develop an interest in learning. The combination of the three teaching objectives is conducive to the comprehensive development of students and lays a solid foundation for future practical application.

(2) Change the teaching content according to the characteristics of students

The course content of educational psychology should be adjusted according to the actual situation of students, and the behavior and psychological characteristics of different students should be deeply analyzed, so as to arrange corresponding educational psychology content. In addition, the content should be adjusted according to the current situation of research and education reform, so that students' learning knowledge can be coordinated with the development of The Times. Only in this way can the practical application of knowledge be realized and the overall learning efficiency of students be promoted.

(3) Change traditional teaching methods to enhance students' sense of experience

Teachers should change the traditional teaching method. Educational psychology can change the teaching method according to the theme of each class and try to make the teaching method diversified. For example, in the teaching process, teachers and students can be combined to discuss and encourage students to study independently and explore cooperatively. In particular, the case analysis method can be used to enable students to put themselves into it, so as to obtain more real emotional experience. Once students' experience of educational psychology is enhanced, their interest in learning and learning effect will be improved naturally.

5. Conclusion

Based on the cultivation mode of application-oriented undergraduate talents, the curriculum reform of educational psychology must be carried out. Based on the analysis of the current situation of the development of teaching psychology, this paper also provides some strategies for the reform of the curriculum of educational psychology, which is not only conducive to the improvement of the overall learning efficiency of this course, but also has certain guiding significance for the reform of the application-oriented song city of other courses. However, we must always be clear that the curriculum reform of educational psychology is not a castle in the air, but must be implemented in the actual teaching. As teachers, they should try to explore ways and methods of teaching reform and cultivate application-oriented talents, so that the cultivated students can truly meet the needs of the actual development of today's society.

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