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# Research on Teaching Reform of Statistics Combined with Curriculum Ideological and Political Ideas

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**Abstract:** In the early stage, the emergence of moral education as an opportunity has aroused the thinking of cultivating students' character. Among them, ideological and political elements, as an important element to achieve this educational goal, and in line with the curriculum, have become the issue we should pay attention to. This paper first explores the development of curriculum ideology and politics, mainly for the course "Statistics", from the teaching design of teaching objectives, teaching content and other links, the curriculum ideology and politics content through it. Improve the traditional teaching design system, and provide relevant ideas for the explanation of similar courses.

Keywords: Instructional design; Curriculum ideological and political; Statistics

## 1. The development status of curriculum ideology and politics

In 2016, the National Ideological and Political Conference of Colleges and Universities stressed that it is necessary to make good use of the main channel of classroom teaching, improve the affinity and pertinence of ideological and political education, meet the needs and expectations of the growth and development of the society, and make all kinds of courses and ideological and political theory courses walk in the same direction to form synergy. This discussion made all colleges and universities begin to do ideological and political work with moral education as the central link, the basic theory of curriculum ideology and politics quietly emerged, and all colleges began to develop curriculum ideology and politics and put it into action. In 2018, the symposium of Beijing Normal University stressed that it is necessary to internalize moral and moral education into all aspects of university construction and management, taking moral education as the core and moral education as the foundation, deepening the understanding of curriculum ideology and politics. In the same year, the National Education Conference raised this understanding to a new height, suggesting that teachers should focus on the goal of combining teaching system with curriculum ideology and politics, and strengthen the embodiment of the integration of class ideology and politics mechanism and classroom teaching<sup>[1]</sup>.

At present, the development of curriculum ideology and politics is particularly obvious in the education industry. The course of the history of the Communist Party of China in Fudan University gives full play to the advantages of the students as the main body and promotes the optimization of the course in combination with the current political hot spots. Beijing Institute of Technology builds a virtual simulation ideological and political course experience teaching center, using advanced technology to experience real history. Yan 'an University gives play to its regional advantages, and the teachers of ideological and political courses move the courses to the field, empathize with the teachers, exert the teachers' initiative and creativity, and achieve breakthrough progress. The curriculum team of Beihang University has integrated specific aviation stories into the teaching knowledge points to improve the students' initiative. The photovoltaic module processing technology course of Shandong Vocational College of Technology is carried out in the floating photovoltaic power station, and the craftsman spirit is explained by specific practical links, and the construction of ideological and political elements of the course is strengthened. Hunan University School of Marxism teachers teach ideological and political practice lessons, from the Yuelu Academy to seek truth from the plaque, slowly explain the Party's ideological line, causing students to think deeply. University students and teachers in Wuhan have a deeper sense of the importance of ideology and politics through the joint fight against the epidemic, which must be combined with theory and practice. Although the understanding and practice of curriculum ideology and politics have been deepened in college teaching, the application of curriculum ideology and politics and

teaching links is still imperfect and needs to be constantly promoted and reformed, especially the combination with specific courses. Therefore, the combination of the teaching links of specific courses with curriculum ideology and politics can highlight the specific ideological and political elements.

# 2. The combination of teaching links and ideological and political elements of Statistics

#### 2.1 Combination of teaching objectives and ideological and political elements

If we want to integrate ideological and political elements, we need to start with teaching objectives. According to the talent training plan of the school, it is necessary to describe the teaching objectives of statistics from three aspects: knowledge, ability and quality. The knowledge goal is to understand the basic statistical ideas, the basic content of statistics, the process of statistical investigation, the methods of statistical analysis, and the methods of prediction. In the teaching process, we can use the real data of the National Bureau of Statistics on people, finance and things to stimulate students' interest, understand the national development situation, apply the basic knowledge of statistics to analyze these data, and cultivate students' patriotic feelings. Special cases can be introduced into the class-room to learn how to use statistical analysis methods to solve problems in cases and cultivate students' humanistic feelings. The ability goal is to be able to apply knowledge to practice, such as using basic theories to analyze data, using statistical indicators to analyze economic status, using relevant models to judge errors, and using forecasting methods to evaluate the reasonable trend of economic development. It can be heuristic teaching, put forward some problems that arouse students' thinking, and use relevant analytical tools or models to verify the validity of the problems and cultivate students' scientific spirit. The goal of quality is to cultivate noble moral sentiments and good ideological character, cultivate teamwork spirit, and cultivate the spirit of scientific analysis of problems. This series of ultimate goals itself is integrated into the ideological and political elements, a more complete reflection of the importance of classroom ideological and political<sup>[2]</sup>.

Through the combination of ideological and political elements and teaching objectives, the realization of classroom teaching objectives is more three-dimensional, enriching curriculum ideological and political resources, attracting students' attention, and creating a better education environment.

#### 2.2 The combination of teaching content and ideological and political elements

An overview of statistics combined with familiarity with the historical development of China. This unit mainly introduces the basic situation of statistics and the course of its development in China. In the teaching process, it can correspond to the period of time and the process of Chinese historical development and follow the course, guide students to understand Chinese history, stimulate students' patriotic feelings, understand the past, actively adapt to the present and look forward to the future, realize the guidance of values, and achieve the effect of ideological and political education.

Statistical investigation, collation, analysis of indicators, statistical indexes and analysis reports are combined with realistic and pragmatic ideological and political elements. The main content of this unit is based on data, through the calculation of indicators to analyze the economic problems arising in the social development. With the support of data, the results are more accurate and reliable, and closer to reality. Therefore, the data analysis process and results require us to be pragmatic and pursue accuracy in actual learning, so as to enhance students' reliable attitude and cultivate students' rigorous style.

Hypothesis testing, sampling and parameter estimation, correlation and regression analysis are combined with the ideological and political elements of the core values of "comprehensiveness and innovation". This link is mainly the use of relevant models to analyze the problem, more comprehensive and creative. The derivation and application process of the model can stimulate students' thinking everywhere, guide students to learn to use relevant models, connect theoretical knowledge with each other, cultivate students' innovation, and improve students' ability to comprehensively use the model.

Time series analysis and prediction are combined with the ideological and political elements of cultivating a sense of responsibility. This part not only considers the data content that has already occurred, but also considers the future prediction part. Teach students not only to seek truth from facts, but also to learn to predict the future scientifically, increase students' understanding of statistics and extend it, better use the knowledge of statistics to serve the society, and cultivate students' sense of social responsibility.

# 3. Suggestions on ideological and political optimization of Statistics course

### 3.1 Integrate ideological and political elements to improve teachers' awareness of moral education

The appearance of curriculum ideology and politics provides teachers with new teaching ideas in the classroom. The combination of ideological and political elements with course teaching can not only enrich the teaching content, but also change the traditional

teaching mode and create the flexibility of teaching links. In the process of teaching, teachers can also improve the consciousness of moral education, always remember the heart of educating people, take students as the center, and increase the depth of understanding of teaching knowledge<sup>[3]</sup>.

## 3.2 Give full play to students' subjective initiative

The traditional education model is teacher-oriented, and with the development of The Times, it is gradually student-centered. The integration of ideological and political elements can speed up the development of this process and better promote students' main position in the classroom. In the study of ideological and political class, students add more inspiration and thinking, and can think more about the relationship between learning and ideological and political thinking, enrich their moral thoughts, deepen the content of the course, and play the subjective initiative.

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