Research on the Innovation of "Situation and Policy" Curriculum through Computer Modeling and Data Analysis

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Abstract. The significant data era on the Internet is changing our daily life, learning style, working mode, et cetera, at the same time it purposes new challenges and demands for ideological and political education in universities. The research on the innovation of the "situation and policy" curriculum in colleges under the premise of the significant data era can further improve the scientificity of the "situation and policy" curriculum. Under the background of significant data era, The countermeasures of strengthen the situation and policy course effect, standardize the teaching content, gradually realize the significant data of the teaching content; combine the ideological and political classroom with the social classroom; strengthen the training of teachers; establish a scientific curriculum assessment system. Through computer modeling to analyze some factors that affect students' efficiency and grades. For example, the number of courses and assignments are taken as independent variables, and the final course score as a dependent variable, through computer modeling to establish a model of factors affecting student mark. By comparing the importance of different factors to offer a reference for the future education model.

Keywords: Situation and policy; The significant data; Ideological education Innovation.

1. The Background and Meaning of the Research

1.1. The Research Background

The situation and policy is a compulsory course of ideological and political education in colleges. It mainly talks about national plans, current condition, international situation, and global status and so on. What’s more, it stands in different angles to analyze, from our country to see the world, from the world's perspective to see our country. The situation and policy education should adhere to the theoretical guidance of Marxism-Leninism, Mao Zedong thought. The thought on socialism with Chinese characteristics as academic guidance, continue to promote the latest achievements of Marxism in China into the classroom and the textbooks, educating and guiding college students to recognize the domestic and international situation, make college students set up the socialist core values and the socialist concept of honor and disgrace, advance the structure of a harmonious society, and strengthen the construction of our party's new ideas, new view, and new judgments.

1.2. The Research Significance

It is of tremendous and long-term practical meaning to strengthen the use of the significant data in ideological and political education in colleges and promote the effectiveness of the ideological and political culture of college students with the significant data. The study on the innovation of "situation and policy" curriculum in universities under the premise of the significant data era has the following significance:
(1) It is conducive to promoting the scientificity of the course "situation and policy." Under the premise of the significant data era, students can achieve quantifiable performance and unquantifiable information in their study, to further explore the in-depth contents and research fields of ideological and political education courses, and realize the improvement and innovation in the area of ideological and political education.

(2) It is conducive to the growth of college students. Colleges are essential places to cultivate the pillars of society. The rational use of the significant data, which is a powerful technology, helps ideological and political educators make more prudent and reasonable decisions, so that the situation and policy courses can give full play to their effectiveness.

(3) It is conducive to increase the efficiency of ideological and political education in universities, find new opportunities and new challenges in ideological and political education for college students, find corresponding countermeasures to solve problems, strengthen the theoretical and practical basis of ideological and political education in universities.

2. Research Status at Home and Abroad

By December 2019, the total number of critical words searched through China National Knowledge Infrastructure was 1,561, with "the significant data" and "situation and policy" included as keywords, and the search results were 3.

2.1. Status Quo of Domestic Research

With the rapid expansion of the Internet and cloud computing, the significant data has become a hot topic for research and exploration in various industries. Many experts and researchers at home and abroad have devoted themselves to the study on ideological and political education, and the research has also achieved fruitful results.

The connotation of traditional ideological and political education in China ought to be redefined in the context of the significant data era. Liu Lihong (2016) thinks that the effective strategy to strengthen the teaching of situation and policy strategy in the significant data era is to create a scientific and reasonable configuration, construct rich and unified dynamic teaching content, enrich the faculty to meet the demands of the course objectives, strengthen the course examination, create education stereo platform to adjust to the significant data era feature stereo platform, and innovate teaching methods and teaching mode. PangSuo and Wei Xing (2015) hold that collecting, mining, and analyzing the significant data of college students can help to gain insight into the overall characteristics of college students and predict the college students' behaviors from the macro aspect. From the micro aspect, it is helpful to describe the habits and preferences of college students and realize the individuation of ideological and political education in universities. Guo Wenhui (2017) believed that the significant data era provide the requirement for the teaching of statistics in economics major, this paper brings forward such methods as strengthening the application of statistical software, increasing the proportion of practical education and changing teaching evaluation, to provide proper guidance for the exploration of teaching reform.

2.2. Status Quo of Overseas Research

Brookings Institution (the independent research institutions) in the report indicated that the significant data could find out information of students’ performance and learning approach as much as possible, rather than relying on-stage performance, so that teachers can analyze and understand what each student understand, and what is the most useful technology. By focusing on extensive data analysis, the teacher can use more subtle ways to study students' learning situation. The United States department of education in 2012 issued a report called 《Promote the teaching and learning by analyzing and mining education data》. The report shows the application cases and fields of the significant data in American education, and the challenges they face. What’s more, the report illustrates specific educational applications of the significant data by use in adaptive learning systems.
3. Investigation and Analysis of the Situation and Policy Curriculum Reform under the Context of the Significant Data Era

3.1. Overview of Situation and Policy Course under the Background of the Significant Data Era

(1) The significant data in college situation and policy curriculum reform: the ultimate purpose in analyzing the significant data in education is to improve students' learning effectiveness. Excellent students are useful for schools, society, and the country. Some important information in students' assignments and exams is easily overlooked by our regular study. Through the analysis of the important data, we can detect this significant information, and then use these data to provide individualized solutions to improve students' learning results.

The situation and policy course of Xiamen university selects easy classes as online learning platform, which provides a full set of online teaching services based on the Leaching earning Management System. This is an essential innovation in the field of education informatization, and an important measure to increase the development and application of high-quality education resources.

(2) Student status data, access library data, and access control card data, student card consumption data, et cetera. Data on social media, such as QQ, Chat, web, and online comments, stay in the network time data, reading web data, et cetera. Only teachers fully master the data of all aspects; they have a comprehensive grasp of students’ learning and living conditions.

3.2. The Reform Situation of Situation and Policy Curriculum under the Background of the Significant Data Era

University situation and policy course construction is an essential section of ideological work in universities. At present, the structure of ideological and political theory courses in Chinese universities is facing an excellent opportunity for development. However, there are still some difficulties in promoting the reform and innovation of situation and policy courses. Selected the current situation and policy curriculum reform in universities as the research object and carries out the investigation and research on the situation and policy curriculum reform under the premise of the significant data era by using of an anonymous questionnaire survey, individual student interview, and field visit survey. With more than thirty universities, including Xiamen University, Fuzhou University, Fujian normal university as the primary research objects, a study was conducted on the teaching of situation and policy; the schools surveyed are representative and extensive, with high credibility and effectiveness.

(1) Basic evaluation of college students to situation and policy courses

College situation and policy courses: the survey results show that 17.9% of students spend most of their time listening carefully, 63.42% of students listen selectively to what they are interested in, and 17.51% of students almost or never listen and do their things in class.

College students think whether this course will help them: 16.73% believe the help is minimal, 50.97% believe it is general, 4.67% believe it is relatively big, and 0.39% believe it is massive. For personal development, 9.34% believe it is minimal, 7.78% believe it is small, 44.36% believe it is just general, 29.57% believe it is big, 5.84% believe it is massive.

College students’ evaluation on the teaching effect of situation and policy courses in the school: 17.9% of students believe it is very good, 35.8% believe it is poor, and 5.45% believe it is very inferior.

College students think about the factors influencing effect of situation and policy class teaching: 25.68% think insufficient assessment, 74.32% think the curriculum itself lacking attractiveness, 71.6% think that teachers’ teaching method is tedious, 71.21% think they lack subjective value, 1.56% think that the pressure from other subjects is more significant, teachers are unfamiliar to the interpretation of the content, there are fewer opportunities for interaction or experience and so on.

(2) Essential evaluation of teaching forms of situation and policy subjects
The solution to teaching content: Enough attention should pay to it. The way that leaders and experts go into the classroom can use so that they can provide their professional expertise adequately. However, the class can’t be taught as a professional course but can combine with regional characteristics and school history to explain. According to different grades and different majors, the subject should distinguish. What’s more, the question should not depart from students; each particular university subject should have a distinction. Newcomers to juniors can take courses in class, while seniors can take classes online.

The solutions of teaching methods: in the survey, teachers' teaching methods of situation and policy courses include "topic discussion," "watching a video," "multimedia teaching" and "carrying out extracurricular learning and social practice activities," which are the main teaching methods and students prefer these methods. The use of discussion, interaction, and other teaching methods can arouse the enthusiasm of students to take part in-class discussion, an active classroom atmosphere, and help to improve the effectiveness of the teaching process in class.

The solution of assessment approach: 49.03% of students believe that assessment should adopt the method of open book examination. In comparison 2.33% of students believe that closed book examination should be taken, besides 17.12% of students believe that online test should be adopted, 18.29% believe that the project research and achievement display should be adopted, and 11.67% believe that the above forms should be weighted respectively. As for whether should increase the credits of the course and strengthen the assessment, 15.56% of students believe it is essential, 49.81% of students believe the pilot program can be carried out, 21.01% of students believe it has little effect, and 12.45% of students believe it does not effect.

3.3. Students' Suggestions on the Needs of Situation and Policy Curriculum Reform
(1) It is suggest to use the significant data to provide more timely and accurate first-hand information, analyze topics that college students are interested in, and focus on specific explanations in class. The course of situation and policy can’t be understood by the student only once every two weeks. What is needed is students' continuous attention to media information.
(2) The course contents and teaching methods should be more novel. The course of situation and policy can’t be understood by student only once every two weeks, what is needed is students' continuous attention to media information. The course content can be updated on the course website, supplemented by topics on critical points to improve the uptake efficiency of critical points. In the class, the teacher can randomly arrange the group discussion and generate a report at the end. The report records the division of labor and contributions of the members in the group, which are included in the daily scores, so that they improve the necessity and interest for students to pay more attention to information.
(3) The teaching methods should be diversified. Teachers should combine with current events, not only PPT and classroom theory teaching, but also activate the classroom atmosphere, such as flipped classroom and problem-based learning teaching methods. The class can be divided into some discussion groups on specific topics to improve the necessity and interest of students to pay attention to information.
(4) The assessment method is too simple to attract students' attention. Compared with professional courses, situation and policy courses should be diversified and exciting significant data era and the background of artificial intelligence, students can learn more information from the Internet.

4. The Countermeasures to Strengthen the Situation and Policy Curriculum Reform under the Background of the Significant Data Era
Standardize the teaching content and stimulate students' interest: take students' interest and needs as the central aspect of teaching design, tailor the teaching content, base on students' perspective, set the situation, let students participate in the course teaching, not only to make the course meaningful, but also to make students find the class interesting.

Combine ideological and political classes with social classes. Guide students to set up lofty aspirations and become strivers. College students are in the critical stage of forming moral values. College is the last buffer period before young students enter into society.

4
Strengthen teachers' training of situation and policy courses. Teachers play an essential role in the development of ideological and political theory courses. In the process of education and teaching, teachers cannot satisfy the current teaching work by themselves, so giving play to the strength of the teaching team can make this course more effective.

Establish a scientific course assessment system. The assessment form of situation and policy course is relatively easy compared with other compulsory directions, which is one of the reasons why this course does not attach importance to students. Appropriately increasing the exam difficulty of the "situation and policy" course can improve students' learning effect of the course content. Combine the examination, the course paper and the classroom performance to exam students according to the content and form of the course, especially exam students' knowledge of the latest achievements in localization of Marxism in China and their grasp of Xi Jinping thought on socialism with Chinese characteristics for a new era.

Let students go to the platform of education courses. To make college students empathy experience the difficulty of the ideological and political education, make sense of the appeal of the Marxist theory, and pass true values by, let the students go to the stage, from the role of listening to the part of teaching, let students move, and let ideological and political courses alive.

Realize the content of college "situation and policy" courses with the significant data. Big data can always track and record the micro performance of each educational object in the learning activities. In the significant data era, education and teaching evaluation cover not only students, but also schools, teachers, disciplines, and other aspects that have a significant impact on the implementation of education, as well as the weight distribution related to modernization of these aspects.

5. Summary

Ideological and political education course is the work which teaches how to do "people". Those directly get to the depths of students can let students remember genuinely. In the significant data era, only make data become our weapon can get success. Most of the time, what we lack is not how to deal with things, but the ability to identify problems. We can think about whether there is data that can improve our weaknesses, how we can learn to use "assume data is available" to rethink everything around us. The core value of the significant data is that let data is used to process the virtuous cycle of actively obtaining data, so as to launch more data into self-circulation and apply it to various fields. The ultimate goal is how to generate value from the collected data. The significant data technology brings great convenience for the audience who needs ideological and political education. Through the application of the significant data to carry out a comprehensive analysis, students' acceptance of ideological and political education can be understood. Through the significant data technology, we can analyze teachers' information, students' information, and teaching content, to truly implement the quality and effect of three-way education.

This paper relies on the topic: Xiamen University Teaching Reform Research Project 2019 (ideological and political special)"Study on the Innovation of" Situation and Policy "Curriculum in Colleges and Universities in the Background of the significant data Era."

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