

Research on the Teaching Innovation of Probability Theory and Mathematical Statistics under the Ideological and Political Background

Qike Li, Xinxin Wang, Xinyi Wang

Nantong Institute of Technology Nantong 226000, China

Abstract: Since the 18th National Congress of the Communist Party of China took “cultivating morality and cultivating people” as the fundamental task of education for the first time, curriculum ideological and political construction has become an important content of higher education. In this context, the teaching of probability theory and mathematical statistics in colleges and universities is also in urgent need of new changes, especially to pay attention to classroom teaching, do a good job of ideological and political education infiltration work, build a new normal of curriculum teaching based on ideological and political education, and then guard a section of canals, plant a good field of responsibility, comprehensively improve the quality of curriculum teaching and education, leading students to better study, growth and development. This paper analyzes the teaching innovation path of “probability theory and mathematical statistics” under the background of curriculum ideological and political education, which is only for teachers’ reference.

Key words: curriculum thought and politics; Probability theory and mathematical statistics; Innovation paths

As an important way for colleges and universities to implement the fundamental task of “cultivating morality and educating people”, curriculum ideology and politics is an inevitable requirement for mathematics courses to adhere to the socialist school-running route. For probability theory and mathematical statistics, its high-quality development must focus on the fundamental task of “moral education”, pay attention to students’ relevant knowledge teaching at the same time, fully explore the ideological and political elements in course teaching, guide students to establish correct values and ideological and political literacy, only in this way can better highlight the educational value of this course. Therefore, in the new period, we should grasp the ideological and political connotation and construction significance of the course at the same time, through effective means and scientific methods to build the probability theory and mathematical statistics innovation lecture hall under the “curriculum ideological and political”, to help students learn more, go further and fly higher!

1. The connotation of curriculum thinking and politics

The essence of curriculum thinking and politics is to “cultivate morality and cultivate people”, which mainly refers to the planned, purposeful and methodical penetration of some ideological and political education content in some non-ideological and political courses, so that students can not only learn some professional curriculum knowledge, but also obtain ideological and moral, political awareness and values and other aspects of guidance, to help the development of students’ comprehensive quality. From its conceptual connotation, we can also see that actively promoting the ideological and political construction of the curriculum can effectively improve the quality of curriculum teaching, so that the training value of curriculum teaching can be fully demonstrated, and then train more talents with knowledge, ideals and accomplishment for the society.

2. Probability theory and mathematical statistics teaching into the curriculum ideological and political value implication

1. In line with the “moral education” requirements

“Moral cultivation” is the most direct standard to test the teaching quality of probability theory and mathematical statistics, which also requires that the course teaching should do a good job in the course knowledge teaching, but also actively explore some ideological and political education elements in the course teaching, so that students can learn more knowledge in the classroom and gain more growth. So that they can continue to grow in the direction of all-round quality talents. At the same time, the teaching of probability theory and mathematical statistics is an important basic subject in the university, relying on the teaching of this course to implement the curriculum ideological and political construction can further enlarge the teaching efficiency of the curriculum, which is also of great significance for the implementation of the fundamental task of “cultivating morality and people”.

2. Construct the pattern of “three educates”

Objectively speaking, the integration of curriculum ideological and political construction in the teaching of mathematical statistics is consistent with the concept of “three-whole education”, and the emphasis on the whole process and all-round education is an important way to promote the task of ideological and political education and moral education in the new era. At the same time, we can see that curriculum ideological and political education can promote the effective combination between curriculum education and ideological and political education, create a collaborative education path, create a “chess” type of education situation, and finally build a “three-whole education” pattern, and comprehensively promote the improvement of curriculum teaching and talent training quality.

3. Cultivating “socialist” talents

“What kind of people to train” is the first question to be considered in higher education. Under the guidance of this question, the teaching of probability theory and mathematical statistics should also clarify its own education goals, especially based on the actual situation of the current social construction in China, give full play to its own characteristics and characteristics of education, improve the construction

of “four services”, and strive to train more high-quality and comprehensive talents for the society. The promotion of the ideological and political concept of the curriculum itself emphasizes the cultivation of comprehensive talents, which can lead students to gradually establish lofty ideals and goals and shape good values while learning curriculum knowledge, and then consciously see their own growth and development and national and social construction, work hard in the future, show their own value, highlight the responsibility of socialist successors.

3. The teaching innovation path of “Probability theory and Mathematical statistics” under the background of curriculum ideology and politics

1. Cultivate people around morality and clarify educational goals

Good target construction is the primary condition for promoting curriculum ideology and politics. In this regard, in the teaching process of probability theory and mathematical statistics, we teachers should first do a good job in the clear work of teaching and educating goals, focus on the Angle of “moral cultivation” to design educational goals, optimize educational concepts, and create a new normal of collaborative education. First of all, in the teaching process, we should attach importance to the teaching of curriculum knowledge, and at the same time, actively clarify the goals of emotional education and values education, and actively penetrate the content of ideological and political education into the teaching, leading students to think and improve in class, and educating them to establish good ideological and political literacy. Secondly, we should also start from the perspective of “three whole education” and do a good job in joint work with ideological and political teachers and counselors. For example, we can discuss with them the ideological and political education plan, combine the characteristics of the course to clarify the educational goal, innovate teaching methods, so that the curriculum ideological and political education can be fully implemented and supported by multiple subjects, so as to ensure its actual promotion effect. Moreover, in the teaching process, it is necessary for us to do a good job of in-depth exploration of professional knowledge of probability theory and mathematical statistics, use keen eyes and “smell” to find ideological and political penetration points, and do a good job in knowledge teaching and ideological and political education, so as to promote the high-quality promotion and implementation of curriculum ideological and political construction.

2. Based on the content of the course, dig deep ideological and political elements

There are a variety of ideological and political education elements in the course content of probability theory and mathematical statistics, and digging these elements well in the teaching process is the most basic requirement to promote the construction of ideological and political education in the course. In the past teaching process, many teachers lack the exploration of ideological and political elements of this course, and there is a situation of “emphasizing knowledge, neglecting political and ideological elements”, which also greatly affects the learning effect and growth of students. In this regard, under the guidance of ideological and political education in the curriculum, we must do a good job in exploring the elements of ideological and political education, realize both ideological and political education and curriculum teaching, and constantly improve the connotation, guidance and affinity of curriculum teaching, leading students to better learn and grow. For example, when talking about the knowledge point of “probability”, we can first explain to students the deeds of Xu Baode « \square », the founder of “probability theory” in our country, in combination with the teaching content. For example, in order to study probability theory, he worked hard to translate relevant Russian literature, which laid a solid foundation for the development and research of probability theory in China Seriously ill still insist on the front line of academic research, dedicated life for the cause of mathematics in China, etc., in order to cultivate students’ national confidence, encourage students to establish lofty ideal confidence, cultivate their love of mathematics, love to explore the good habit and good fart. Secondly, we can combine some practical cases about “probability” to educate students and implement the curriculum ideological and political construction, such as analyzing with students that someone is obsessed with buying two-color balls and cannot extricate themselves, fantasizing that one day will win, etc., and then calculating his winning probability with students, analyzing the possibilities, and educating students to base on the field, Through their own efforts and struggle to create wealth, etc., in order to fully promote the curriculum ideological and political construction.

3. Innovate teaching methods and improve ideological and political effects

Practice has proved that the mode and method directly affect the promotion effect of ideological and political education in the curriculum. Therefore, in the teaching of probability theory and mathematical statistics, we should also do a good job in the selection of teaching modes and methods, we should “advance according to time and new according to time”, focus on the use of some students like to see and interested methods and modes, and constantly improve the affinity and interest of curriculum teaching, so as to make curriculum ideology and politics happen efficiently. To be specific, we can start from the following two aspects: First, we can start from the Angle of the Internet to innovate the curriculum ideological and political construction model. “Who wins the Internet, who wins the youth.” At present, we have stepped into the era of “Internet +”, the continuous development of network technology also provides a new opportunity for the ideological and political construction of probability theory and mathematical statistics course. In the teaching process, we can rely on the Internet to introduce some vivid ideological and political education elements, stimulate students’ interest in learning, so that the quality of curriculum ideological and political construction can be effectively improved. For example, we can use micro-lessons to show the “History of the Development of Probability Theory” to lead students to know the outstanding mathematicians in history, understand their life stories, be inspired by them, and gradually cultivate students’ patriotic spirit, the spirit of study and the spirit of exploration. At the same time, we can also combine some media software such as wechat public account and Douyin to build a network education platform, so that online teaching can be carried out. Secondly, we can recommend some modern ideological and political education resources for students, so that

the ideological and political infiltration effect of the course can be improved. Secondly, we should pay attention to creating an “experiential” curriculum ideological and political model, which can trigger students’ profound experience and promote their all-round growth. In the practice of promoting curriculum ideology and politics, we should start from the perspective of students, pay attention to their experience, introduce some project-type and cooperative teaching modes, promote students’ communication and discussion, and lead the improvement of curriculum ideology and politics promotion effect. For example, in the teaching process, we can focus on the topic of “event independence and team power”, guide students to carry out cooperative exercises in probability solving, and jointly analyze the connotation of unity education and team spirit, so as to promote their knowledge learning and cultivation of ideological and political accomplishment.

4. Improve assessment and evaluation to promote ideological and political education

As an important part of the teaching of probability theory and mathematical statistics, evaluation is an important starting point for us to promote the ideological and political construction of the curriculum. However, in the past teaching, some teachers often only pay attention to the assessment and evaluation of students’ knowledge learning, and lack of curriculum ideological and political design in this link, which also affects the promotion effect of curriculum ideological and political to a large extent. In this regard, in the specific teaching practice, it is necessary for us to implement the assessment and evaluation reform based on the ideological and political ideas of the curriculum, so that it can become an important support point for promoting the ideological and political development of the curriculum, and comprehensively guide the cultivation of students’ moral quality and ideological and political accomplishment. To be specific, first of all, we should reform the traditional evaluation standards based on knowledge evaluation, and introduce moral quality, behavioral performance, ideological and political literacy into them, so as to guide the cultivation of students’ ideological and political literacy. Secondly, we should also expand the evaluation subject on the basis of teacher evaluation. For example, we can introduce students themselves, groups, ideological and political teachers, and social organizations into the teaching evaluation to create a new normal of evaluation and evaluation that integrates teacher evaluation, group evaluation, mutual evaluation and enterprise evaluation, so that students can gain more evaluation and guidance, obtain the cultivation of ideological and political literacy, and realize all-round growth. For example, we can lead ideological and political teachers to evaluate and guide students’ learning attitude and learning results, highlight the promoting role of assessment and evaluation in ideological and political education, help students establish good learning plans and goals, and comprehensively promote the cultivation of their ideological and political literacy.

In a word, in the new era, taking curriculum ideology and politics as the focus and doing a good job in the optimization and innovation of curriculum teaching has become an important task for the innovation of probability theory and mathematical statistics teaching in colleges and universities. In this regard, the majority of teachers should base on the characteristics and contents of this course, combine with specific teaching practices, clarify educational objectives, dig deep into teaching content, innovate teaching methods and improve assessment and evaluation, and build a new teaching model of probability theory and mathematical statistics based on curriculum thinking and politics from multiple perspectives, so as to enable students to learn more knowledge and gain more growth in the course. Comprehensively cultivate their ideological and political literacy, so that they can go further and fly higher in the future!

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