

# **The Implementation Path of Ideological and Political Teaching in the Information and Computing Science Major Course Integrated into Taishan Culture**

Jing Lei<sup>1\*</sup>, Jia-Qing Song<sup>2</sup>, Bo-Ye Li<sup>1</sup>

*School of Mathematics and Statistics, Taishan University, Tai'an 271000, China<sup>1</sup>*

*Experimental Teaching Management Center, Taishan University, Tai'an 271000, China<sup>2</sup>*

*\*Correspondence Author*

**Abstract:** Taking Taishan culture as an example, this paper selects the materials of Taishan Feng Zen culture, red history and culture, celebrity culture and Taishan spirit, innovates teaching methods, integrates Taishan cultural elements into the introduction and participatory teaching methods, and studies the entry point and process of the integration of local culture and ideological and political teaching in colleges and universities.

**Keywords:** Ideological and political teaching, Taishan culture, information and computing science, training, reform

## **1. Research background**

Cultivating new talents to take on the great task of national rejuvenation is the goal of educating people with Chinese characteristics in the new era put forward by General Secretary Xi Jinping in the report of the 19th National Congress of the Communist Party of China. In September 2018, the Ministry of Education issued the "Opinions on Accelerating High-level Undergraduate Education and Comprehensively Improving the Ability to Cultivate Talents", which officially elevated curriculum ideology and politics to the level of China's characteristic higher education system [1]. In May 2020, the Ministry of Education issued the Guiding Outline for the Ideological and Political Construction of Curriculum in Colleges and Universities, which proposes that comprehensively promoting the ideological and political construction of college courses is a strategic measure to implement the spirit of the National Education Conference and implement the fundamental task of cultivating morality. For the ideological and political education of college students in the new era, the traditional teaching concept and single teaching mode are difficult to meet the needs of teaching in the new era. In the context of the new era, college students are affected by different concepts and social trends, and they still have many doubts and incomprehensions about the judgment of right and wrong of things and the shaping of human values. In addition, the mutual integration of society and culture also has different degrees of influence on college students in the new era, and how to give full play to the unique cohesion and leading force of socialism with Chinese characteristics and strengthen the interpretation of socialism with Chinese characteristics on many social

practical issues is a new problem arising from the ideological and political education work of schools. Since the Ministry of Education set up the major of information and computing science in 1998, hundreds of colleges and universities across the country have opened the major, and after years of development, the major of information and computing science has cultivated many professionals for the country. However, with the development of the economy and the progress of the times, the competition for talents has entered a white-hot stage, and how to cultivate professionals who love the country and the party, have a high sense of social responsibility, good professionalism and strong innovative spirit in various majors of colleges and universities (such as information and computer science) is a special concern of the party and the state. In order to better integrate the ideological and political education concept of the curriculum with the major of information and computing science, this project will systematically study the practice path of ideological and political teaching of information and computer science integrated into Taishan culture by combining the characteristics of the major and regional culture.

## **2. Research status**

Ideological and political research aspects of the curriculum. In September 2017, the "Opinions on Deepening the Reform of the Education System and Mechanism" issued by the Party Central Committee called for the improvement of "the system and mechanism of educating people in three aspects, fully exploring the connotation of moral education in each course, strengthening the moral education curriculum, ideological and political curriculum, focusing on subject moral education, and curriculum ideological and political education", which is the first time that the Party Central Committee has included "curriculum ideological and political" in the document [3]. Since then, colleges and universities have carried out teaching research, reform and practice of curriculum ideology and politics. Qiu Renfu [4], Zhao Jiwei [5], Qiu Weiguang [6] and others studied the connotation of curriculum ideology and politics, and agreed that curriculum ideology and politics is a new and comprehensive curriculum concept, and the functions of knowledge transfer and value guidance of various courses can be realized under the guidance of this concept. Yu Lijuan summarized the experience of curriculum ideological and political reform initiated by Shanghai, such as formulating a series of work such as the value standards for comprehensive literacy curriculum construction, professional curriculum norms, and evaluation standards [7]. Taking their college as an example, Zhang Junling et al. combined the characteristics of engineering students and courses, grasped the ideological and political contact point of a scientific and technological power, and proposed that educators must be educated before educating students [8]. Wei Xiaoxiao and Zheng Jihong took optical engineering as an example to put forward the necessity of combining ideological and political education with professional education [9]. Curriculum moral education [10], implicit education [11], value education [12], and subject moral education [13] proposed by foreign scholars have essentially played the function of ideological and political education in terms of educational content and form, and reflected the importance of school curriculum teaching to the function of educating people. However, at present, there are still few studies on the ideological and political teaching of information and computing science courses.

Ideological and political research in the major course of information and computing science. The major of information and computing science is an interdisciplinary major of information science and computational mathematics, which requires a large number of mathematics and computer-related courses, many of which are highly specialized, with many concepts, many theories, and abstract contents, which make many students

daunted and lack enthusiasm for learning. According to the characteristics of the major and the actual situation of students, if the ideological and political elements can be seamlessly integrated in the curriculum and teaching links, it will have positive practical significance to stimulate students' enthusiasm and motivation for learning, improve students' ideological and moral level, and improve the comprehensive quality of college students in the new era. Nie Duxian et al. conducted research and exploration on the ideological and political construction of information and computing science courses from the aspects of overall training objectives, curriculum setting, teaching plans, teaching contents, and assessment standards [14]. Heng Meiqin and Zhao Shiyin took the advanced mathematics of information and computer science in Suqian University as an example to discuss the path of integrating ideological and political education, and put forward five ideas for ideological and political construction [15]. Shu Qiaojun discussed the methods and significance of ideological and political teaching in the bilingual teaching of "algorithm analysis and design" in the major of information and computing science [16]. There are certain differences in the implementation of ideological and political courses in science and engineering majors compared with those in the humanities, the form of ideology and politics is not rich enough, the content form sometimes seems boring, there will be dull and unnatural phenomena from professional knowledge to course ideology and politics, and the fascinating expression of ideological and political teaching has not yet formed a system.

Regional culture is integrated into ideological and political teaching. The close integration of ideological and political teaching content with social life is one of the effective ways to improve the effectiveness of ideological and political teaching, regional culture, as a synthesis of people's thinking patterns and behavior patterns, can have a significant impact on people's thoughts and behaviors, and it is an important part of Chinese culture, and the content of the value level has a wide influence and plays a significant role. Therefore, it is of great significance to integrate regional cultural values into ideological and political teaching to improve the effectiveness of ideological and political teaching. Wu Wei analyzed the connotation of effectively integrating regional culture into ideological and political teaching in colleges and universities, and proposed an effective way [17]. Starting from ceramic culture, Sun Zhanlin expounded how to inherit and carry forward ceramic culture and promote ideological and political education in colleges and universities [18]. Hu Yan discussed the value of integrating Dongpo culture into ideological and political teaching, target positioning, path selection, and achievement solidification [19]. Taishan culture is an important part of Chinese traditional culture, and for colleges and universities in Thailand, the integration of traditional Chinese culture into the classroom should first consider integrating Taishan culture into the curriculum, so as to improve the pertinence and effectiveness of college students' ideal and belief education.

Taishan culture is integrated into the ideological and political aspects of the curriculum. Dongyue Taishan group of peaks arch dai, forest and dense streams, not only the natural scenery is magnificent, but also rich in cultural relics, has important historical, scientific and artistic value, played an important role in the formation of the Chinese nation for thousands of years, and gradually formed the Taishan culture with the spirit of Mount Tai as the core, covering Feng Chan, religion, architecture, folk customs, stone dangdang, Taishan pine, Taishan jade, Taishan tea, celebrity poetry and literature, mountain pickers, red cultural revolution sites, etc. [20]-[24]. Shi Hui developed the school-based curriculum of "Taishan Culture" from the aspects of Taishan's geology and landform, historical evolution, religious art, celebrities and sages, folk customs, and spiritual connotation, and used it in Tai'an No. 1 Middle School [25]. Wang Shujun explored the essence and application

practice of integrating Taishan culture into the teaching of ideological and political courses in colleges and universities [26]. Liu Minghe and Li Qingwei put forward the significance, necessity, and path of integrating the spirit of Taishan's "mountain picker" into the cultivation of newcomers of the era [27]. On the one hand, it can be seen that the rich spiritual connotation contained in Tai'an culture has been valued and appealed by some scholars, and it has also been integrated into the ideological and political teaching of the curriculum. On the other hand, we also see that it is far from enough to integrate the spiritual connotation embodied in Taishan culture into the research and practice of ideological and political teaching in the curriculum.

To sum up, teachers in local colleges and universities should closely combine real life with moral cultivation, closely combine regional culture with curriculum ideology and politics, solve the key issues of what to cultivate, how to cultivate, and why to cultivate, improve the ideological and moral quality of students, and make the course ideological and political teaching not only have theoretical depth, but also practical strength, and more emotional temperature. This project will conduct in-depth research on the integration of Taishan culture into the ideological and political education of information and computing science courses, and carry out practical application in teaching, improve the quality and efficiency of ideological and political teaching, and deepen the reform of ideological and political teaching in the curriculum.

### **3. Research implications**

The Ministry of Education proposed that comprehensively promoting the ideological and political construction of college courses is a strategic measure to implement the spirit of the National Education Conference and implement the fundamental task of cultivating morality and cultivating people, and colleges and universities should strengthen the reform of education and teaching, tap the ideological and political resources of various courses, give full play to the role of each course in educating people, and comprehensively improve the quality of talent training [2]. Therefore, the reform of ideological and political teaching in colleges and universities is the need of the country to cultivate new talents in the era, the need to improve the ideological and political curriculum of colleges and universities, and the need to implement the ideological and political curriculum of information and computing science. On the one hand, the research on the implementation path of ideological and political teaching of information and computer science courses integrated into Taishan culture is a kind of integration and innovation of traditional culture and ideological and political education of the Chinese nation, which can not only enrich the ideological and political theory research of information and computer science courses in colleges and universities, but also improve the ideological and political research of other disciplines, explore the teaching methods of effective combination of regional traditional culture and ideological and political education, and provide theoretical support and reference value for the reform and development of ideological and political education in college courses. On the other hand, the application of ideology and politics in the teaching practice of the information and computer science major course integrated into Taishan culture is helpful to stimulate students' national pride and patriotism, enhance students' character quality of courage to take responsibility, dare to challenge, and perseverance, cultivate students' professional ethics of dedication, honesty and trustworthiness, and enhance students' vigorous, love of nature, respect for laws, Cultural self-confidence and other humanistic accomplishments promote the all-round development of students, provide specific and feasible reference schemes for the ideological and political education of information and computing science courses, and accumulate practical experience for discipline construction.

#### **4. Research content, objectives, and problems**

##### **1) Research content**

In order to further deepen the reform of ideological and political teaching in the curriculum, and integrate the excellent traditional Chinese culture into all aspects of ideological and moral education, cultural knowledge education, and social practice education, this project will take the ideological and political education of information and computer science courses in local colleges and universities as the research object, and take the "potential curriculum theory" and "constructivist theory" as the theoretical basis, deeply excavate the value of Taishan culture in the times, and explore the effective implementation path of integrating Taishan culture into the ideological and political education of information and computer science courses and its application in practice.

##### **(1) Investigation and analysis of the current situation of ideological and political teaching in the major course of information and computing science in the university**

In order to integrate Taishan culture into the ideological and political teaching of information and computer science in a deep, strong and warm manner, this project will first investigate the implementation of curriculum ideology and politics in the teaching of information and computing science, and then analyze the current problems in the course ideological and political teaching.

##### **(2) Fully excavate the ideological and political elements in Taishan culture**

In order to seamlessly integrate the ideological and political teaching of Taishan culture and information and computing science courses, this project will conduct a full and comprehensive study of Taishan culture and deeply explore the ideological and political elements in Taishan culture. According to the problems existing in the students' current learning and the need for ideological and political teaching to guide and educate according to the "potential curriculum theory" and "constructivist theory", the meeting point between the ideological and political elements of Taishan culture and ideological and political teaching is designed in detail, so as to integrate Taishan culture and ideological and political education silently.

##### **(3) Research on the implementation path of ideological and political teaching in information and computer science courses integrated into Taishan culture**

According to the ideological and political concept of the curriculum, combined with the current situation and existing problems of the ideological and political education of the information and computer science major of the college, and according to the "potential curriculum theory" and "constructivist theory", the implementation path of curriculum ideology and politics integrating Taishan culture was studied from the aspects of teaching objectives, teaching contents, teaching methods, evaluation systems, teaching plans, teachers and students.

##### **(4) The major of information and computing science is integrated into the ideological and political practice and development of Taishan cultural courses**

Relying on the professional course education platform system of the information and computer science major of the college, the talent training plan is revised, the ideological and political content integrated into

Taishan culture is implemented into the implementation path, the teaching and evaluation mechanism integrated into the ideological and political teaching concept is constructed, and the content, methods and means of curriculum ideological and political education are improved and improved, so as to promote and develop the reform of curriculum ideological and political teaching.

To sum up, under the guidance of the ideological and political teaching concept and guided by the promotion of ideological and political teaching reform, this project will study the implementation path of the ideological and political curriculum of information and computing science integrated into Taishan culture (see Figure 1 for the overall framework), construct a teaching system for integrating information and computing science into the ideological and political curriculum of Taishan culture, and continuously improve the content and method of ideological and political teaching in the course integrating Taishan culture in practice.

## **2) Research objectives**

Under the guidance of the idea of cultivating new talents of the era who are responsible for national rejuvenation, this project investigates the current situation of ideological and political teaching in the information and computer science major course of the university, analyzes the problems existing in the ideological and political teaching of the related professional courses of information and computer science, and proposes the implementation path of integrating Taishan culture into the ideological and political teaching of the information and computer science major course. In terms of the evaluation system, the teaching reform of ideological and political education in information and computing science courses will be realized, the quality and efficiency of ideological and political training of innovative talents in the new era will be improved, and the implementation path of ideological and political teaching will be provided for other colleges and universities to refer to and learn from.

## **3) The key issues to be solved**

- (1) Solve the problem of how to fully and comprehensively understand the current situation of ideological and political teaching in information and computer science courses. Only through detailed and patient investigation, systematic integration, and comprehensive analysis can we deeply explore the practical problems existing in the ideological and political teaching of information and computing science.
- (2) Solve the problem of seamless integration between the ideological and political elements in Taishan culture and the existing problems of teaching and learning. It is necessary to deeply study the content and scope of Taishan culture, fully excavate the ideological and political elements in Taishan culture, and accurately refine the value of Taishan culture, so as to seamlessly fit the ideological and political elements in Taishan culture with existing problems.
- (3) Solve the problem of the effectiveness of the ideological and political implementation path of the information and computing science major course integrated into Taishan culture. Only by applying the theoretical results to teaching practice and continuously revising and updating them according to the feedback problems can the ideological and political teaching path of the information and computer science course integrated into Taishan culture be improved, so as to improve the effectiveness of the implementation path of the ideological and political teaching of the information and computer science course integrated into the Taishan culture.

## **5. Reform programs and solutions to problems**

### **1) Reform plan design**

Reform of the overall design idea: This topic will start from the level of the integration of Taishan culture and the ideological and political teaching of information and computer science courses. Firstly, the literature method was used to sort out the related research on ideology and politics and Taishan culture in the major course of information and computing science. Secondly, questionnaire surveys, mathematical statistics, interviews with teachers and students were used to investigate the current situation of the implementation of ideology and politics in the information and computing science major of our school, find out the problems, and analyze them in depth. Then, based on the current situation and problems of the ideological and political implementation of the information and computing science major course, the ideological and political implementation path of the information and computing science course integrated into Taishan culture was constructed. Finally, through the application of ideological and political education in the practical teaching of information and computer science courses integrated into Taishan culture, and continuous feedback, modification and improvement, the ideological and political teaching system of information and computer science courses integrated into Taishan culture is continuously developed.

Reform content: With ideological and political teaching as the core, based on the school's professional positioning and professional characteristics, the content of the ideological and political teaching reform of the information and computer science major course integrated into Taishan culture mainly includes: teaching objectives, teaching content, teaching methods, evaluation system, teaching plans, teachers and students.

Reform process: Taking the four-year undergraduate training time of students as the axis, the ideological and political teaching of the curriculum integrated into Taishan culture as the core, and the theoretical courses of professional courses, experimental training courses, student competitions, graduation internships, social practice, career education and other training processes as the direction of integrating ideological and political education, the ideological and political education runs through the whole process of students' undergraduate training.

### **2) Ways to solve the problem**

#### **(1) Documentary Method**

According to the research needs of this topic, this paper searches and consults the literature on the curriculum ideology and politics, information and computing science major course ideology and politics, Taishan culture and other aspects on CNKI and other network resources to understand the latest research results of curriculum ideology and politics. Classify the collected literature, summarize and organize to find the theoretical basis of the research, develop the research ideas, and refine their own views on the basis of learning from other research results, so as to make the arguments for the research of this topic more sufficient and more convincing.

#### **(2) Questionnaire Method**

On the basis of reading and summarizing a large number of literature, according to the research purpose and research content, and focusing on the principle of questionnaire design, the teacher questionnaire and student questionnaire were designed from the aspects of basic information, teachers' and students' understanding of curriculum ideology and politics, and the implementation of ideology and politics in information and

computing science, and the survey results were analyzed in combination with the questionnaire.

### **(3) Mathematical Statistics**

The questionnaires were recovered, the invalid questionnaires were selected, the valid questionnaires were statistically analyzed, the questionnaire data were tabulated and classified, the generalized data were calculated and the phenomena reflected in the data were described and described in the form of charts, and the phenomena reflected in the chart data were described and analyzed, which were used in subsequent research.

### **(4) Teacher-Student Interview Method**

According to the main content of this study, the interview outline was designed, and the teachers and students of the relevant courses of information and computing science were interviewed by telephone, Internet, face-to-face interviews, etc., to ask about the relevant views on the ideological and political theory of the course, and to consult the teachers, students, and experts on the suggestions of the ideological and political teaching of the information and computing science major course, so as to provide support for the writing of the paper.

### **(5) Logical Analysis**

According to the existing problem orientation summarized by the previous investigation and analysis, through logical deduction, the results produced after data analysis are inferred, and the implementation path of ideological and political teaching integrated into Taishan Cultural Information and Computer Science Professional Course is proposed, and the feedback information in practice is continuously improved and developed.

## **6. Innovations and expected results**

### **1) Innovation**

**Academic Thoughts:** At present, there are few studies on the ideology and politics of information and computing science courses, but this project systematically studies the teaching implementation path of ideology and politics in information and computing science courses with the excellent traditional Chinese culture as the guiding ideology of ideology and politics.

**Academic viewpoint:** This project innovatively proposes the ideological and political elements integrated into Taishan culture in view of the implementation path of ideological and political teaching in the major of information and computer science, which effectively promotes the integration of the excellent traditional Chinese culture with the existing problems in the teaching of information and computer science, and plays the purpose of ideological and political education.

**Research Methods:** Not only the methods of theoretical research are used, but also the methods of empirical research are used to promote the effectiveness of the research results of this topic and improve the value of their popularization and application.

### **2) Expected Effect**

This project will construct the teaching implementation path of ideological and political education in information and computer science courses that integrate Taishan culture, provide strong support for the

ideological and political reform of information and computer science courses, further deepen the reform of ideological and political teaching in science and engineering courses, enhance the overall effect of ideological and political teaching reform of science and engineering courses, and highlight the main role of colleges and universities in the cultivation of innovative talents. The research results of this project have strong reference value for the research and application of ideological and political education in information and computing science majors, and have certain reference significance for the reform of ideological and political teaching in other science and engineering majors that integrate regional culture and excellent traditional Chinese culture.

### **7. Summary**

The application of Taishan culture in the ideological and political theory courses of colleges and universities shows that the local culture makes the ideological and political theory courses change from "gray" to vivid and lively "green". Students can empathize with the specific and vivid local culture, and then improve their ability to observe and deal with social problems, and greatly improve their enthusiasm, initiative and sense of innovation in studying ideological and political theory courses. Integrating the traditional local culture of the Chinese nation into the classroom is undoubtedly of great significance and exploration value to the ideological and political courses of colleges and universities.

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