

Research and Exploration of Ideological and Political Construction of Communication Principle Course

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Abstract: Communication principle is a core professional basic course for electronic information majors. Ideological and political education in the course is an effective way to realize "knowledge imparting, ability training, value shaping", and is also an inevitable requirement to complete the fundamental task of moral education. Based on the analysis of the characteristics of communication principle course and the objectives of the ideological and political construction, this paper deeply excavates the ideological and political elements contained in the course, and gives the ideological and political construction ideas of communication principle from four aspects of teaching objectives, teaching content, teaching methods and teaching evaluation. The ideological and political construction of this course provides reference for the ideological and political teaching of electronic information professional courses.

1. Introduction

Ideological and political education curriculum is the new requirements put forward by the Party and the state to the education work of colleges and universities in our country. It is an important concept of college education in the new era. As the core course of electronic information majors, communication principle is an important position to carry out curriculum ideological and political education.^[1] To explore the ideological and political elements contained in the course of communication principle, take the classroom as the carrier, aim at establishing morality and cultivating people, and realize the organic combination of "knowledge imparting, ability training, value shaping" through the way of "silently enriching things", so as to improve the teaching effect and teaching quality.

2. Characteristics of Communication Principle and the Goal of Ideological and Political

2.1. Characteristics of Communication Principle

Communication principle is a compulsory basic course for electronic information majors, and also a compulsory subject for postgraduate entrance examination of communication and information in many schools. The characteristics of this course are mainly reflected in the following aspects.^[2]

2.1.1. Strong Theoretical

The prerequisite courses of communication principle are advanced mathematics, analog electronic technology, digital electronic technology, signal and system, high-frequency electronic circuit and other basic courses, which require students to have a solid mathematical foundation and strong theoretical characteristics. In teaching, there will be a large number of complicated mathematical formulas and derivations, which need to be modeled and calculated by mathematical theory.

2.1.2. Strong Practicality

The course of communication principle focuses on the actual communication system, teaches the composition, principle and analysis method of communication system, pays attention to the combination of theory and engineering practice, and has the characteristics of strong practicality. The teaching emphasizes the application of knowledge and principles, and emphasizes the cultivation of students' engineering practical ability and innovation ability.

2.1.3. System Synergy

Communication system is an organic whole composed of source, channel and sink. In the design of communication system, the realization of each functional module and the optimization of overall performance should be taken into account, and the cooperation of different modules should be emphasized.

2.1.4. Develop Rapidly

The following courses of communication principle are specialized courses such as mobile communication, satellite communication, optical fiber communication, and computer communication network. On the one hand, it is necessary to effectively transfer the basic knowledge of communication principle to the study of subsequent professional knowledge. On the other hand, with the rapid development of communication technology, teaching needs to constantly absorb new communication technology on the basis of traditional teaching content to keep pace with the times.

2.2. Ideological and Political Construction Goals of Communication Principle

The Guiding Outline of the Ideological and Political Construction of the Curriculum in colleges and Universities points out that engineering professional courses should focus on strengthening students' engineering ethics education, cultivate students' craftsmanship spirit of excellence, and stimulate students' national feelings and mission of serving the country with science and technology. Based on the comprehensive analysis of the characteristics of the communication principle course and the requirements of ideological and political construction, the objectives of the ideological and political construction of the communication principle course are as follows.

- Improve students' engineering practice ability, integrate theory and practice, cultivate students' ability to correctly understand problems, analyse and solve problems, and strengthen students' engineering ethics education.
- Master the comprehensive design of communication systems and the optimization method of system performance, strengthen students' overall awareness of analysing problems from the perspective of the system, and cultivate students' craftsmanship spirit of excellence.
- Enhance students' ability of knowledge extension and transfer, understand the bottleneck of emerging technology and existing technology in the industry, cultivate students' sense of responsibility and mission to explore the unknown, pursue the truth, and climb the peak of science and technology, and inspire students to serve their country and their mission.

3. Ideological and Political Elements Contained in the Communication Principle

The principles and technologies taught in the communication principle course are the condensed essence of the development history of electronic information technology, reflecting the promotion and impetus of contemporary science and technology to social development, and containing rich ideological and political elements.

3.1. Sense of Mission to Serve the Country with Science and Technology

The history of communication technology development is an important teaching content of the introduction of communication principles, based on the technical route, focuses on our country since its inception, after several generations of scientists and engineers in the field of communications unremitting struggle, get rid of the communications industry depends on the

development of technology introduction and equipment import, making it the world's output power communication technology and equipment, cultivate and establish students' national confidence, increase students' sense of identity to the major, stimulate students' patriotic enthusiasm and feelings of serving the country.

3.2. Engineering Thinking in Practice

As an important professional basic course of electronic information, communication principle is the basis for solving all complex communication engineering problems. In the process of solving complex engineering problems, it is necessary to start from the whole engineering, integrate piecemeal knowledge, comprehensively consider the relationship between each module in the engineering, to achieve the optimization of engineering problems.

3.3. Craftsmanship Spirit of Excellence

Communication principle teaches the basic principles of the communication process and is the root of all new technologies and ideas. The study of basic principles, the practice, improvement and innovation of basic technologies, and the extension, transfer and reproduction of knowledge embody the connotation of the craftsman spirit, which is to cultivate a new generation of talents with moral quality, value pursuit, industry goal and fighting spirit.

3.4. Scientifically Rigorous Systems Theory

Communication system is a unified system composed of source, channel and sink modules. All modules work and interact with each other to meet the performance requirements of communication system under different conditions. In teaching, students should understand the negotiation, coordination, cooperation and collaboration between different modules from the perspective of the system, so that students can understand the thought of system theory while learning knowledge, so as to apply the thinking mode and methodology of system theory to practical learning and life.^[3]

4. Ideological and Political Construction Ideas of Communication Principle

Based on the characteristics of the communication principle, the ideological and political construction objectives of the course and the ideological and political elements contained in the course, the ideological and political construction ideas of the communication principle are given from the aspects of teaching objectives, teaching contents, teaching methods and teaching evaluation, as shown in Figure 1.^[4]

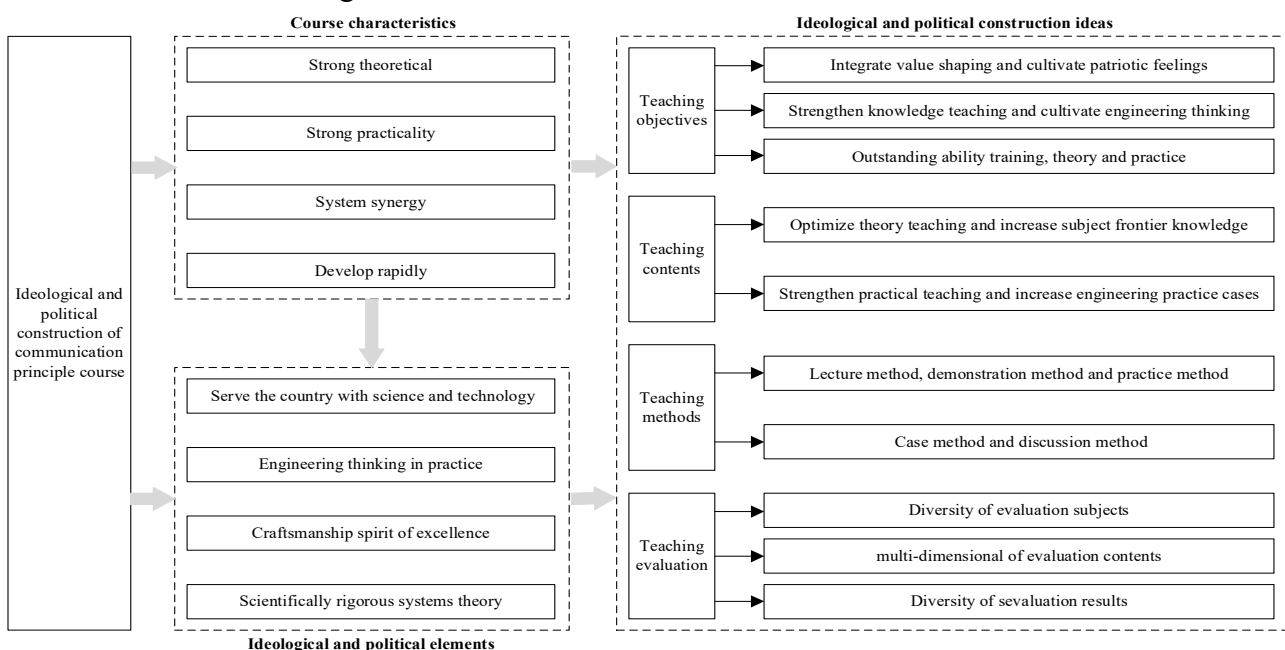


Figure 1 Ideological and political construction ideas of communication principle.

4.1. Teaching Objectives

The teaching objectives of the communication principle should be guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, adhere to the unity of knowledge and thinking training, ability and quality training, and skill and self-cultivation improvement, and fully integrate students' moral education goals such as thinking training, emotional cultivation, and habit formation into the teaching goals.

- Integrate value shaping and cultivate patriotic feelings. Ideological and political education in curriculum should put moral education at the top of the teaching objectives, and advocate and practice the core socialist values and patriotism.
- Strengthen knowledge teaching and cultivate engineering thinking. The course of communication principle is highly theoretical, and effective knowledge teaching is the foundation of ability training and value shaping.
- Outstanding ability training, theory and practice. The cultivation of the ability to solve complex engineering problems in the field of communication is included in the teaching goal of communication principle, and the cultivation of engineering thinking is continuously deepened through the engineering cases in class and the practical homework after class.

4.2. Teaching Contents

Communication principle is a rapidly developing course. The teaching content should keep pace with the development of the discipline and keep pace with the times. At the same time, we should actively relate to practical engineering problems, so as to apply what we have learned.

- Optimize theory teaching and increase subject frontier knowledge. Combined with the teaching content, the frontier of disciplines is introduced into the classroom, and the content of interdisciplinary, cross-field and cross-industry is appropriately increased to reflect the depth, breadth and challenge. It is helpful for students to master the frontier dynamics of the discipline, and can fully cultivate students' cultural self-confidence.
- Strengthen practical teaching and increase engineering practice cases. By adding engineering case teaching, students can use professional basic knowledge, related scientific principles and modeling methods to analyse and solve complex engineering problems in the field of communication. Through the practical teaching of curriculum experiment, curriculum design and comprehensive experiment, students' scientific thinking ability, practical innovation ability and team cooperation ability were cultivated.

4.3. Teaching Methods

Communication principle adopts online and offline hybrid teaching methods, which organically combines blackboard teaching, multimedia teaching, specialized software simulation, visual teaching platform, micro-lessons, Rain Classroom, MOOC and other teaching methods in teaching, in addition to traditional teaching methods such as lecture method, demonstration method and practice method, it also adopts case method and discussion method.

4.3.1. Case Method

Rich teaching cases are adopted to slowly penetrate the value content contained in the communication principle. Enable students to experience the close connection between communication technology and daily life, correctly understand, use and contact communication technology, especially mobile communication technology brings convenience and lifestyle change. At the same time, we should also recognize the problems existing in the development of communication technology, and should not treat it one-sidedly. We should adhere to the dialectical materialism. Teach students to discover the essence of things through phenomena, and imperceptibly penetrate the ideological and political elements of ideology and morality in the process of discovering the essence, so as to achieve the goal of moral education.

4.3.2. Discussion Method

Combined with the teaching content, appropriate discussion topics were set up, including theoretical analysis, simulation analysis, new technology tracking, etc. Students completed project analysis, report writing and discussion individually or in groups. In the discussion, students were guided to exchange their research experience, ask difficult questions, and evaluate and compare the research results. Through discussion, students can get a full understanding of the same problem from different perspectives, put forward multiple solutions to the same problem, and learn from each other, promote each other, and improve together.

4.4. Teaching Evaluation

Teaching evaluation is the process of judging the actual or potential value of teaching activities. The teaching evaluation of ideological and political education is to consider whether a course can penetrate the correct values and the view of success into the whole teaching process. In teaching evaluation, multi-dimensional evaluation system is adopted.^[5] The evaluation subjects are diversified, and multiple evaluation methods such as teacher evaluation, student evaluation and learning partner evaluation are adopted. The evaluation content is multi-dimensional, including four dimensions of knowledge mastery, skill application, process participation and performance attitude. The evaluation results are diversified, and both qualitative and quantitative methods are adopted.

5. Conclusion

This paper studies the ideological and political construction of communication principle. Firstly, the characteristics of the communication principle course and the goal of the ideological and political construction are analysed. Secondly, it deeply excavates the ideological and political elements contained in the course. Finally, the ideological and political construction ideas are given from four aspects: teaching objectives, teaching contents, teaching methods and teaching evaluation. Through the ideological and political construction of communication principles course, students can constantly improve their comprehensive innovation ability and engineering practice ability on the basis of mastering the basic principles of communication system, and become successors with certain professional quality, craftsman spirit and social responsibility.

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References

- [1] Zhang Xiaoying, Ma Dongtang, Wei Jibo. Research on the Construction of ideological and political material System and Case construction of Communication Major courses. *Industry and Information Technology Education*, 2022, 9, 48-52.
- [2] Yu Tianqi, Cao Honglong, Hu Jianling. Theoretical Research and Practical Exploration of Ideological and Political Construction of Communication Principles Course. *Journal of Higher Education*, 2022, 22, 92-98.
- [3] Sun Jiajia, Du Bing, Zhang Haijun. Research and Exploration on Ideological and Political Construction of Communication Principles Course. *Computer Education*, 2021, 1, 85-88.
- [4] Sun Sibao, Tan Qi, Zhang Guangpu. Ideological and Political Practice of Communication Principle based on the "Trinity" Education Concept. *Journal of Higher Education*, 2022, 5, 19-22.
- [5] Wang Yunrui, Wang Weibing, LI Juan. Reform of First-class Course Content and Evaluation System under the Background of Informatization Technology. *Popular Standardization*. 2020, 18, 180-181.