

Research and Practice on Comprehensive Reform of Applied Undergraduate Electronic Information Specialty in Normal Universities under the Background of Transition

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Abstract. The electronic information specialty occupies a very important position in normal colleges and universities at all levels in the country. However, based on the characteristics of normal colleges themselves, the main task of normal colleges and universities was to train teachers at all levels. The training programs and curriculum of normal colleges and universities are centered on students' theoretical study of disciplines. The training of educational and teaching skills has formed different characteristics from that of electronic information specialty in engineering colleges in the aspects of teachers, teaching methods and experimental teaching of electronic information specialty. This paper studies and practices some problems in the comprehensive reform of applied undergraduate electronic information specialty in normal universities in the process of transformation, explores the ideas of specialty construction and reform of electronic information specialty in normal universities, and explores the specialty orientation and school-running guidance for the specialty construction adapted to the cultivation of applied talents, the construction of teaching staff, the mode of personnel training and the corresponding management system reform have certain reference significance for the construction of applied undergraduate electronic information specialty in normal universities under the background of transformation.

Introduction

With the development of higher education in our country from "elite" to "popular", many normal universities have added electronic information specialty. In order to meet the needs of the society for applied talents, our university has also added electronic information undergraduate specialty. However, science is stronger than engineering in normal universities. Engineering specialties such as electronic information are greatly affected by the development of science specialty. Teachers and experimental teaching are far less than the foundation of science colleges. The teaching means of such specialties are relatively single and lack a reasonable and effective experimental teaching mode, especially in the field of teaching. and paying little attention to the cultivation of practical ability. This not only affects students' self-development and their employment, but also becomes a stumbling block for the development of electronic information specialty in normal universities. Therefore, under the background of transformation, this paper explores and practices the comprehensive reform of the construction of applied undergraduate electronic information specialty in normal universities, which actively adapts to the needs of economic and social development, takes engineering application as the background, integrates OBE concept, aims at training applied talents, strengthens teaching reform and strengthens practical application ability. Through years of efforts, the electronic information specialty in our university has become an advanced educational concept, remarkable reform effect and distinctive features, forming a training mode of electronic information applied talents with coordinated development of knowledge, ability and quality. At the same time, taking electronic and information specialty as the leader, the demonstration and pulling function of the specialty group has been clearly reflected. The strength of each specialty group has been greatly strengthened, the teaching conditions of specialty have been significantly improved, the performance

of innovative experiment and training base has been further improved, and the knowledge, ability and quality of students have been further improved. It provides reference for the comprehensive reform of the same specialty in the same kind of colleges and universities.

Thought and Orientation of Running a School for Specialty

If there is no orientation for a newly-established specialty, the talents trained will not be recognized by the society and the development of the specialty will be blocked[1-5]. Therefore, the orientation of the specialty and the establishment of the guiding ideology for running a school are the basis for the sound development of a specialty. The construction of electronic and information specialty in local normal universities should focus on the personnel training specifications and application-oriented personnel training mode of "good ideological and moral character, solid professional foundation, strong practical ability and high comprehensive quality".

Construction Contents and Effectiveness

Constructing a Diversified Training System Based on OBE Concept, Reflecting the Scientific, Advanced, Forward-looking and Practical Nature of Talent Training Program

As the guiding document of higher education teaching, undergraduate talent training program is the overall planning and design of the training objectives, specifications, training methods and contents, curriculum system construction and teaching plan. The scientific talent training system directly reflects the advancement, foresight and future society of professional education, and the active adaptability to the future society[6-9]. Therefore, according to the development of economy and society, and from the perspective of quality education and innovation ability training. the electronic information specialty has revised the personnel training program many times. Aiming at the training of application-oriented talents with OBE concept, a "platform and modularization" curriculum system is constructed. The whole curriculum system consists of two platforms of general education and professional education, and three curriculum modules are public foundation, professional foundation and professional direction. The whole curriculum system strengthens the important link of practice and innovation education, and achieves the training objectives of application and innovation. The "platform and modularization" curriculum system ensures the training of applied talents with strong foundation, wide caliber, strong ability and high quality.

Establishment of a "Training and Introducing Simultaneously" and a "International Model for the Construction of Teaching Staff

Constructing a reasonably structured and high-level teaching staff is the key to professional construction. Therefore, we must strengthen the construction of the teaching staff, and build a team of teachers with academic background, professional title, knowledge, skills and age structure, and full of innovative spirit. Through the measures of talent introduction, visiting and further study, orientation training, enterprise training, project development, learning and communication, the overall level of professional teaching team is comprehensively improved, so that the professional teacher team has a high level of professional theory and practical ability, and can be competent for the teaching, practical ability and research and development of applied undergraduate Talents training.

Focusing on the Cultivation of Innovative Ability, Constructing a Hierarchical Experimental Teaching System

In practical teaching, we establish and improve the practical teaching system, construct a hierarchical experimental teaching system of experimental content, strengthen the construction of experimental teaching platform, improve the network information platform, and divide the experimental center into basic experimental platform, professional experimental platform, skill training platform and innovative practical platform, strengthen the construction of professional training room, optimize the resource allocation of electronic information training base, further optimize the content of practice,

improve the performance of practice, and build the electronic information training base to meet the requirements of technical application-oriented personnel training and external technical services. Through the construction, on the basis of the existing practice and training bases for electronic information majors in our college, we build the practice and training bases for electronic information majors with enterprises. Taking the form of guidance, discussion, attempt, exploration and communication, We use modern teaching means, highlighting the student-centered experimental teaching mode, a student-centered learning mode with autonomous, cooperative and research-oriented, increasing the intensity of open experiments, are formed. On the premise of guaranteeing theoretical knowledge, we should focus on training students' design and production ability, adaptability and creative ability. At the same time, we actively organize students to participate electronic design competitions, extracurricular technology production and skills competitions and other activities to improve the professional quality of college students.

Strengthen the Construction and Development of Curriculum and Teaching Resources, and form the Curriculum System of Applied Talents of Electronic Information Specialty which is Suitable for the Professional Training Mode

With the principle of "useful, effective and advanced" as the teaching module and the integration of theory and practice as the teaching means, we have completed the development of the curriculum system and formed the curriculum system of applied talents of electronic information specialty which is suitable for the professional training mode. Focusing on the construction of core professional courses such as Circuit Analysis, Analog Electronic Technology, Digital Electronic Technology, High Frequency Electronic Circuit, Signal and System, Communication Principle, EDA Technology and Principle and Application of Single Chip Microcomputer, it has been built and developed jointly by professional teachers, professionals and enterprise experts for the main courses of applied undergraduate majors. Combining with the construction of campus network and according to the characteristics of curriculum content and students' cognitive rules, a teaching resource platform is constructed, which integrates theoretical teaching, practical teaching and independent learning. It has the functions of guiding, assisting and promoting learning. It provides a platform for students to study independently, promotes the co-construction and sharing of teaching resources. We have expanded the opening of laboratory resources, such as training rooms, to improve the efficiency of the use of high-quality teaching resources, and to expand the benefits.

To Stimulate Students' Interest in Learning and Improve Teaching Effect, and to Establish Diversified Teaching Methods and Means

We adhere to student-centered, implement the idea of subjectivity education, change the traditional teaching concept, teacher-student relationship, teaching methods, and strengthen the spirit of innovation and innovation consciousness. We actively explore project-driven, inquiry-based, discussion-based and participatory teaching, and organize students to participate in subject competitions, the implementation of Undergraduate Practice and innovation plans, and students to enter teachers' scientific research laboratories and participate in research projects to promote the "feedback" role of teachers' scientific research projects in teaching. We have completed the implementation, summary and promotion of the "Research and Practice of the Training Model for Applied Talents of Electronic Information in School-Enterprise Cooperation" and the "Comprehensive Reform of Electronic Technology Course" innovative curriculum reform projects, so as to improve the teaching quality of applied undergraduate courses in many ways.

Renewing the Teaching Management System and Improving the Performance of Teaching Management

By renewing the teaching management concept, improving the teaching management system, improving the teaching evaluation mechanism and other means, the management performance is improved. We actively encourage and support highly educated, highly qualified and enthusiastic teaching staff to take up the grassroots management of the college. The first is to strengthen the

training of management ability and improve the level of teaching management. The second is to improve the system of professional leaders and build a three-level management model of "college-department (teaching and research office) - curriculum leaders". The third is to strengthen the monitoring of teaching quality and adhere to various teaching management systems such as "teaching one vote veto system".

Summary

In order to meet the increasing demand of national economic and social development for high-quality and innovative talents, the construction of specialty is attracting the attention of colleges and universities, especially in the construction of engineering disciplines in normal universities. With the vigorous development of the national science and technology industry, the social demand for electronic information talents has become very prominent. Many normal universities have set up electronic information specialty to adapt to the social development. However, It is an important issue that how to carry out the construction of engineering specialty in traditional normal universities and establish an engineering specialty to meet the economic and social needs. It is of great practical significance to study it. Through the research and practice of the comprehensive reform of the Applied Undergraduate Electronic Information Specialty in normal universities under the background of transformation, this paper will definitely make the orientation of the applied undergraduate electronic information specialty in normal universities clearer, further strengthen the teaching ability, further improve the level of running a school, and further enhance the management level. and the level of management will be further improved. The research of this subject will promote the rapid development of electronic information specialty in our university, and make greater contributions to the construction of a strong province of human resources. It also plays a leading and exemplary role in the construction and development of similar majors and other related majors in local universities.

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