A New Model for Cultivation of Innovative Talents in Electronic Information Specialty

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Abstract

The higher requirements of Applied Undergraduate College of electronic information specialty for the cultivation of innovative talents, strong professional practice, in order to cultivate students' practical ability and scientific research ability, cultivate wide caliber, high-quality, all-round development and innovation ability with advanced electronic information engineering and technical personnel, quality education in the perspective of new model for electronic information specialty innovative talent training. Optimization of electronic information specialty type and structure, promote multi-disciplinary electronic information and communications professional cross and fusion, expand the teaching scale application, this kind of complex professional and skilled personnel. The cultivation of innovative talents in experimentation area founded independent colleges, reform teaching methods, improve the system of cultivating innovative talents, relying on the Pearl River Delta geographical advantages and conditions, promote the coordinated development of the integration of research, cultivating innovative talents of new electronic information professional schools.

Keywords

Electronic Information Specialty; Innovative Talents; Training; Reform; Integration of Production And Research.

1. Introduction

The electronic information specialty includes electronic information engineering, electronic science and technology, communication engineering, information warfare and related specialized application. And electronic information is a frontier subject of modern society in various fields and people's daily life are closely related to electronic information technology. With the social development of the informationization, businesses are in need of electronic information professionals engaged in electronic product development, communication network design, equipment information system design, application and integration of electronic equipment and information system development and software development. Electronic information specialty is an application of computers to control other modern electronic information technologies and information processing control subjects. These major students should not only learn and master the basic knowledge of the circuit, but also have a higher requirement of using the method of computer information processing, the application of computer and related electronic components. This major must have a solid knowledge of mathematics and Physics knowledge and so on, have a more extensive requirement to operate and use tools, and have a higher ability for talent's innovation ability and practice ability in electronic equipment and information systems application design and development [1].

Electronic information specialty has become a popular professional for broad employment prospects. With the importance of electronic information specialty teaching in higher education, the enrollment of electronic information specialty in Application-oriented College continues to expand. In order to improve the scientificity and effectiveness of electronic information professional personnel training, the training system of discipline construction and innovative talents in electronic information specialty of application College needs improving, talents cultivation mechanism needs reforming, the teaching system of it needs developing healthily, and the comprehensive quality of the professional

ability of undergraduates needs improving[2]. This paper studies the new model of electronic information specialty innovative talent training, from the reform of teaching method and curriculum system structure. The analysis of electronic information specialty talents reform will emphasize on practice teaching, adhere to the cooperative development road of training model, create innovative talents experimentation area, and improve the electronic information professional personnel training system continuously.

2. Target orientation of innovative talents training in electronic information specialty

Applied Undergraduate College of electronic information majors of innovative talents training highlights the importance of electronic information specialty, through the system of undergraduate professional learning, the students will become the master of applied talents of modern electronic technology theory, familiar with electronic system design principle and electronic information system hardware and software development, and graduate students need to have strong computer language, and the corresponding engineering application ability. They can be engaged in electronic equipment, information systems, electronic equipment, new products, signal processing equipment and technology development and manufacture application and development. Therefore, the goal of training electronic information majors with the ability equivalent of senior engineering and technical personnel should be wide caliber, high-quality, all-round development and creative ability. Combining with the professional characteristics of electronic information specialty and the characteristics of discipline construction, based on electronic information specialty learning [3] students are able to master the following knowledge and abilities:

First, based on the electronic information specialty learning, the students can master the working principle of electronic circuit and comprehensive application, systematically grasp the broad field of technology basic theory knowledge, master physics and mathematics knowledge related to electronic and communication, use computer tools for information analysis and programming, through the course of analog circuit, digital circuit, signal and system, the high frequency electronic circuit and principle of microcomputer learning, master circuit design principle of the electronic products with the basic ability of assembling, debugging and design, and adapt to a wide range of work for electronic and information engineering;

Second, in the application of electronic information undergraduate professional learning, training mechanism through the introduction of new innovative talents should pay more attention to the cultivation of electronic information technology based on knowledge and skills. So the students can master the basic principle and design of signal and system, and application of automatic control, communication, signal and information processing circuit and system etc.. In the practice of innovation training of electronic information professionals, the students have the basic ability of analyzing and designing electronic equipment;

Third, through the cultivation of innovative talents, the electronic information majors can fully grasp the theory of electronic equipment and information systems, the basic working principle, master the electronic circuit analysis method and basic skills of communication equipment, household electronics circuit diagram reading analysis and installation, commissioning and maintenance capabilities, and have the capability of the new technology research and development of the new system.

Fourth, through the construction of innovative talents training mechanism and the cultivation of innovative talents, electronic information majors should be trained in the basic operation specification for electronic product design and occupation accomplishment, combined with related project, subject research and innovation. So they can master literature retrieval and information inquiry, have the ability of scientific research and practical work. And the applied talents in solving practical problems are cultivated by the construction of innovative talents training mode of special training in Applied Undergraduate Colleges electronic information majors "students as the main

body, and teachers as the leading" to practice quality education for traction, and improve the professional occupation accomplishment .

Therefore, in the cultivation of innovative talents in Applied Undergraduate College of electronic information majors, first talents need to clear position of electronic information specialty students, from the electronic information specialty teaching plan, curriculum, students' Ideological Education and other aspects. In addition, besides the basic theory and experiment technology, students can also grasp the electronic circuits. To strengthen the new technology knowledge, the importance of knowledge cross different courses, also enable students to understand the basic principles of information industry, policies and regulations, understand the basic knowledge of enterprise management, improve the knowledge into practical ability. At the same time, to build a training model of innovative talents based on the application of personnel training in the experimentation area, innovative talent training model of the application of independent colleges and universities in the specialty of electronic information specialty can be explored.

3. Electronic information professional personnel training status

Applied Undergraduate Electronic Information innovative professional training is of great significance in improving students' innovation ability and broaden the channels of employment, and the current applied undergraduate college of electronic information specialty innovative talent training still exist in wrong target positioning, imperfect mechanism, lack of atmosphere of practice theory, imperfect operating platform and lack of guidance of sex education talents training in [4]. In order to improve the applied undergraduate college of electronic information system and the cultivation of innovative talents, build electronic information innovative professional training in the experimentation area, the "education, teaching, management of" three measures of reform in education system should be actively promoted [5]. At present, the current situation and deficiency of the cultivation of innovative talents of electronic information specialty in Application-oriented Colleges and universities are mainly reflected in the following aspects:

Firstly, the teaching management department does not pay enough attention to the cultivation of innovative talents of electronic information specialty in Applied Undergraduate colleges. In the teaching of professional course of electronic information and personnel training process, the problems exist in the reasonable teaching mode and innovative talent training platform is not smooth, the electronic design knowledge and skill training is less, supporting teaching courses and teaching theory is not perfect, and the discipline transformation theory to practice effectiveness is not obvious.

Secondly, applied undergraduate college of electronic information specialty innovative talent training courses set is not reasonable. Reasonable collocation course supporting design and hierarchical structure design of electronic information specialty characteristic advantage is not significant. There is no significant characteristics for the training of innovative talents. In the construction of teachers and discipline construction, it cannot meet the needs of improving the quality of personnel training, scientific research and social service ability.

Thirdly, the orientation of innovative talents training of electronic information specialty in applied undergraduate colleges is not accurate enough. Based on the disciplines of classroom learning theory--study and test, the development and application of teaching and cultivating innovative talents is still in the initial stage--teaching facilities and equipment are behind, professional hardware is not comprehensive, the supporting electronic information specialty and related laboratory development is still relatively backward. Having not formed a set of effective training mode research integration, it is unable to meet the updating electronic information technology electronic information professional hardware and software equipment, and rapid development demand for applied talents.

Finally, there is a lack of systematic training chain and experimentation area for the cultivation of innovative talents of electronic information specialty. It needs teaching reform and innovation, exploring the cultivation mechanism of teaching training characteristics of electronic information specialty innovative talents based on talent quality training in the professional standard and scientific

electronic information teaching platform. Research and analysis of construction and training is mainly used to carry out the teaching practice the corresponding electronic information innovation talents so as to explore the new mode for Independent Colleges of Applied Undergraduate Teaching of electronic information specialty learning needs.

4. A new teaching reform model of innovative talents training for electronic information specialty

In order to effectively carry out the applied undergraduate college of electronic information specialty innovative talent training, promote innovative training and new mode of teaching reform of electronic information specialty innovative talents in quality education from the perspective of optimization, electronic information specialty type and structure and multi-disciplinary electronic information should be promoted, and the talents training scale can be expanded. Through the cultivation of innovative talents, students can complete the occupation quality requirements for electronic information specialty and professional skills through occupation standardized training. Teaching reform and training points of electronic information innovative professionals focused on the following aspects:

1. Reform the teaching means and methods of electronic information specialty, perfect the training system of innovative talents. A new mode of electronic information specialty innovative talent training needs study for applied undergraduate students teaching mode. In the information learning platform, it can cultivate comprehensive application of classroom knowledge to solve the problem of the electronic information specialty design and related engineering practice. In theory, it should establish the guiding ideology of constructivism teaching theory, highlight the great importance of reform of teaching means and methods, and improve the application procedures, new thinking and new methods to electronic information professional development in education informatization. It should also improve the teaching content of electronic information courses for reasonable planning, and determine the benign development goals. On innovative talents training system, through analysis of the reform and innovation of teaching of electronic information, the reform should be made from upgrading supporting system, and teachers should change from teaching contents, curriculum aspects and teaching methods, research teaching wisdom classroom and other new teaching mode to promote the innovation of teaching methods of professional courses of electronic information.

2. The whole process dynamic learning method is used to optimize the types and levels of electronic information specialty. The application of electronic information specialty undergraduate training is the main engineering applied talents. To innovate and improve the overall quality of talent development, we will explore talent training innovation teaching mode to promote multidisciplinary experimentation area, promote Interdisciplinary fusion with electronic information and communications professional. Combined with the curriculum learned in the electronic information professional stage, we can practice electronic information such as project application to the teaching content. Through the micro learning mode--Flipped Classroom, we can establish three-dimensional communication and exchange between teachers and students, establish information platform of learning and autonomous learning platform, enlarge the scale of training in the application of electronic information specialty type, compound type and skilled personnel should further focus on Cultivating students' practical ability and scientific research ability, so as to improve students' practical ability and comprehensive energy power.

3. Improve the training system of innovative talents, and promote the integration of production, learning and research. In order to improve the electronic information specialty talents of science and rationality, the cultivation of innovative talents in independent college founded in experimentation area, professional teaching from Guangdong University of Technology Huali Colleage of electronics information cultivation as an example, it use the school's geographical advantage--in cooperation with the neighboring information industry park , relying on the geographical advantage of the Pearl River Delta and conditions to promote the coordinated development of the integration of research, and organize teachers at the school holidays to visit students' practice training base. But also teachers

can deeply understand the changes in the requirements of the demand of enterprise and the knowledge structure of talents. Under the guidance of national policy, it will build a chain training application oriented personnel training mode based on the integration of talent, combined with the actual projects, to strengthen the new technology knowledge and focus on knowledge cross different courses in the training mode. In the training mode of the integration of research, it use inspiration of the teaching and counseling by different projects of electronic information class, combined the actual operation and problems solving to cultivate innovative professional talents of new electronic information science.

According to the analysis of the basic idea of the mode of innovative talents of the electronic information specialty training, we can promote the reform of teaching model of personnel training, establish the experimentation area for Application-oriented Universities of applied talents training to improve students' practice and research ability. In the course of the electronic information specialty teaching, we should further expand the correlation between the various courses, grasp a more comprehensive the practical skills to make students more comprehensive and in-depth grasp of knowledge, and actively guide students to find problems and contact the use of new technology to solve problems, improve their social competitiveness, and enhance the employ ability of students.

5. Conclusion

In order to improve the applied undergraduate college of electronic information specialty students' innovative practical ability, improve the professional quality, to better adapt to social development, enhance the level of practice, training mode reform of electronic information professional personnel was analyzed from the starting point which is the real problem facing with the teaching reform of electronic information majors. The emphasis is to improve the quality of teaching, allocate knowledge structure and educational structure rationally with the development of an integrated research model applied teaching mode as the direction of reform. The electronic information professional personnel training is to build the innovation of experimentation area, and solve the problems of teaching design, electronic information specialty curriculum planning, teaching system. Innovate training mode to train the major innovative electronic information engineering technical personnel.

References

[1] Liu Qun, Wang Guoren, Wu Siyuan. Research on the Teaching Model of Research Course [J]. Computer Education, 2013(19):50-53.
[2] Li Yu. Education Informatization under the Big Data [J]. Western Quality Education, 2016 (17): 28.
[3] Zhang Anfu. Reforming Teaching Methods and Researching Teaching [J]. Chinese University Teaching, 2012(1):65-67.
[4] Tan Yuling. On the Influence of Modern Educational Technology on Quality Education [J]. Western Quality Education, 2016(18):5.
[5] Duan Yuanyuan, Feng Wanling. On the Problems of Teaching Materials Construction in Research Universities [J]. Chinese University Teaching, 2008(12):80-83.