# Construction of Quality Assurance System for Training Electronic Information Professionals from the Perspective of Integration of Production and Education

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**Abstract:** The integration of production and education is the overall institutional arrangement of national education and teaching reform and talent development, an effective way to improve the teaching quality of applied colleges and universities, and a fundamental requirement for training high-quality applied talents. Based on the perspective of the integration of production and education, this paper puts forward the construction ideas of the training system of electronic information majors and explores the quality assurance system of professional personnel training, aiming at promoting the transformation and development of applied college education in our country.

**Keywords:** Integration of production and education; Electronic information major; Talent quality; Security system

## 1. Introduction

With the development trend of automation in the electronics industry becoming more and more prominent, the traditional electronic information value chain will gradually transform from the current chain to the full intelligent electronic information value chain, and the innovation growth point of the electronic information industry will be more and more, and the service field will be further expanded[1]. In order to adapt to the development of electronic information industry and the construction needs of other industries, it is necessary to promote the transformation and development of electronic information engineering to serve the traditional profession and serve the local industry. Next, we will focus on the training of electronic information professionals in applied colleges and universities, try to build a quality assurance system from the perspective of integration of production and education, enhance the core competitiveness of professional talents, and promote the professional and integrated development of colleges and universities.

## 2. Production and education integration perspective of electronic information professional talent training ideas

At present, China is in the critical period of industrial structure adjustment, and the electronic information industry is an important force driving China's economic development. The high-quality development of China's economy not only needs to train a large number of top-notch innovative talents to break through the bottleneck technology, but also needs to train hundreds of millions of high-quality applied talents[2]. It is necessary to change the traditional "discipline-oriented" professional construction thinking to the "industry-oriented" professional construction thinking, and strengthen the "three chains" of industrial chain, talent chain and knowledge chain. Based on the whole process of the electronic information industry chain, facing the status quo of industrial transformation, technology upgrading and product iteration, optimizing the professional structure around the needs of industrial innovation and development.

## 3. Construction strategy of quality assurance system for electronic information professionals

### 3.1 Develop talent quality training programs

In accordance with the spirit of relevant documents such as the National Standards for the Teaching Quality of Undergraduate

Majors in Ordinary Colleges and Universities and the National Standards for the certification of engineering education, the two sides have set up a professional teaching steering committee to guide the formulation and revision of the personnel training plan, and the teachers of both sides conduct personnel training on the basis of full research Education objectives, training specifications, graduation requirements, curriculum system design. The training plan for application-oriented talents should pay full attention to the cultivation of students' practical ability. By increasing the proportion of experiment and practice in class, increasing the experimental practice modules of core courses, concentrating practice links and setting up experimental courses independently, it can cultivate students' practical ability, strengthen innovative training and comprehensive training, and improve students' ability to solve practical problems with theory[3].

## 3.2 Optimize the curriculum system of information majors

On the one hand, it is necessary to add school-enterprise co-construction modular courses, attract a large number of enterprises to co-build courses in the professional curriculum setting, add engineering application-oriented courses limited selection module, including communication network module, artificial intelligence module and electronic design module, students can independently choose the limited selection module jointly developed by enterprises according to their interests and future development direction. At the same time, the innovation and entrepreneurship course module co-built by enterprises is introduced into the comprehensive quality elective course, and the technical resources of enterprises are converted into teaching resources in time[4]. It can co-build cloud computing courses, machine learning and big data processing courses, and key technology courses of the Internet of Things with communication enterprises such as China Telecom, deep learning technology courses, Python programming and engineering practice courses with software enterprises such as ZTE, and electronic system design courses, sensor and detection technology courses, RFID programming and engineering practice courses with enterprises such as Nobel .

On the other hand, the school-enterprise co-construction of online course resources will be uploaded to the platform and open to students. Students will use online resources to prepare for class and enter the class with online questions. On the other hand, by exploring the enterprise "cloud classroom" to establish an online course resource library, we invite the enterprise's first-line technical experts and technical backbone to share the current new technologies, new processes, new norms, and explain technical difficulties through short videos or live streaming, and share these teaching resources in the "cloud classroom" platform, so that students can play back at any time when reviewing.

## 3.3 Reconstruction of practical teaching system

The school and enterprise jointly build the campus laboratory, and move some production equipment into the laboratory to create a realistic experimental environment, which can let students feel the real process of production. The practical course adopts the "double tutor" system, in which professional teachers and enterprise teachers participate in teaching together. The enterprise teachers introduce the production process and flow, use the problems encountered in the production process as the materials for project teaching, formulate learning goals for students, and professional teachers create a suitable environment for students to achieve their learning goals. Students choose their own learning content according to their learning goals, find ways to solve problems through self-study, and solve practical problems in production in real scenarios. If students encounter problems in the process of learning, they can seek help from teachers, professional teachers can give knowledge guidance, and enterprise teachers can give technical support.

## 3.4 Build a quality assurance system

With engineering education certification as the starting point and first-class professional construction as the guide, we will establish a feedback interactive mechanism for professional teachers, enterprise teachers and industry experts to participate in the revision of professional construction program system, implement the OBE concept of "student-centered, results-oriented and continuous improvement", and follow the characteristic construction plan of integration of industry and education, and strive to achieve the deep integration of professional structure and industrial structure The deep integration of standards and professional requirements, constantly improve and optimize professional construction plans, and strive to improve the training quality of application-oriented talents. Deepen innovation and integration, innovation, create and share the educational ecological environment. Change the pattern of the single connection between students, schools and enterprises, explore the establishment of an ecological cycle of co-creation and sharing between schools, enterprises and governments, and build a four-year training system for students' innovation and entrepreneurship ability.

## Conclusion

Anyway, By revising the personnel training program, optimizing the curriculum system, reconstructing the practical teaching

system, and strengthening the construction of "double-qualified" teachers, we have helped application-oriented colleges and universities to further clarify their ideas for running schools, build a collaborative education mechanism featuring multiple collaboration, openness and sharing, form a multi-participation university governance mechanism, improve the ability of professional services to society, and significantly improve the quality of professional construction .

## References:

[1]Kurdi M H , Denden M , Paul D .A Study on the Challenges of Human-Centric Cyber-Security and the Guarantee of Information Quality[J].Journal of Information Security, 2024, 15(2):14.

[2]Vilkonis A , Antucheviien J , Kutut V .Construction Contracts Quality Assessment from the Point of View of Contractor and Customer[J].Buildings, 2023.

[3]Greere A .Training for quality assurance in higher education: practical insights for effective design and successful delivery[J]. Quality in Higher Education, 2023, 29(2):165-191.

[4]Miyahara S .A Study on Job Requirements for Library and Information Science Professionals in an International Job Advertisement: From the Perspective of Quality Assurance of an Academic Degree[J].Journal of Japan Society of Library and Information Science, 2021, 67(3-4):138-152.

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