Exploration and Practice of Integration of Professional Education and General Education in Higher Vocational Colleges

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Abstract. Taking Xi’an Aeronautical Polytechnic Institute as an example, this paper points out the problems existing of general education in Higher Vocational colleges, such as Blindness in selecting courses, low ability of precision docking to specialty, and low learning validity. From the perspective of the integration of general education and professional education, this paper puts forward the exploration and practice of "professional education + general education", and puts forward some suggestions. It is suggested to develop general education from the following aspects, such as optimize curriculum system, and develop localization courses.

Introduction

Promoting the development of general education is one of the major arrangements for national education. The "National education development plan 13th Five-Year " (The People's Republic of China) clearly put forward that "the implementation of Industry-University-Research collaborative education, general education and professional education to explore a combination of personnel training methods, the implementation of modular general education, to promote the integration of literature and science." In June 2014, the National Ministry of Education, Development and Reform Commission and other six departments jointly issued the "Modern Vocational Education System Construction Plan (2014-2020)", put forward the concept of lifelong education, and call for accelerating the process of digitization, information technology, the construction of open vocational education system. Promoting the integration of information technology and general education, developing network general education curriculum has become one of the trends of vocational education curriculum construction.

Problems in General Education

Blindness in Choosing Courses
Based on professional development ability, some vocational colleges have set up a more reasonable system of professional courses, and more reasonable professional curriculum system. Normally, general courses are selected as elective courses. In the selection of choosing courses, most of the students focused on artistic accomplishment, such as film appreciation and thinking training, which are not precise enough to promote the development of professional ability and complement each other. The management department cannot guide the students choose the courses orderly, the classification of courses is not meticulous, and the scope of the courses suitable for each major is not effectively distinguished. Some student has not understood the enterprise pension function, consider the general courses as the “assignment” to cope with the credit of the elective courses. They don't realize the basic function of the courses to the lifelong development.

Dock Poorly with Career Development Capability
The administrative department of higher vocational colleges has little research relationship on the general course and professional courses, analysis of some of the issues involved do not quite right such as job capability requirement, career development needs, and professional basic ability needs,
etc. The analysis of the knowledge, accomplishment and ability required for the main employment posts and posts of professional students is not comprehensive enough, post corresponding curriculum analysis is not accurate enough, each student's personality development needs are not accurate analysis. The establishment and convergence of general courses and professional courses are not enough. Some colleges and universities lack reasonable top-level design in setting up professional curriculum system, thus no correlation or correlation between general education and professional courses, it affects the improvement of students' comprehensive quality and affects the overall improvement of professional quality.

**Lower Learning Validity**

Some students need to improve their effectiveness in learning online courses. Firstly, most students learn general knowledge courses through mobile phones and other APP terminals, disturbed by external environment such as dormitories, learning concentration is not enough, and the learning effect is not good. Secondly, some students appear "hanging instead of learning" phenomenon in the learning process, although network literacy courses are set up, such as 3 minutes of non-interactive video, stop playback and other tips, however, in the process of learning, learners have a certain degree of hanging up and not learning, the content of the course failed to enter the mind.

**Practice and Exploration**

Xi’an Aeronautical Polytechnic Institute is a national demonstration vocational college, and the "first-class college" construction unit in Shaanxi Province. The College attaches great importance to the general education develop, and encouragement and support the student promoting all-round development by specialty, and carrying out various forms of general education, such as student second classroom, student association, network general education, etc. The college established the General Education Institute based on the basic department, and setting up curriculum research group by composition of academic affairs department, general education college, second-level teaching unit and enterprise personnel, choose superstar, intelligent tree and so on as the general knowledge course of college network.

**Establishment of General Education Institutions**

In 2017, the college integrated the advantages of general education resources, established the first General Education Institute in Shaanxi Province, responsible for the top-level design of general education, implementation and promotion. The responsibility of general education college is the management of the network general courses, the design and implementation of the essential quality education module in the personnel training program, and the teaching of the college English, College mathematics, College Chinese and other general courses, etc. The school of general education pays more attention to the professional foundation and general education of teaching and management, actively promote the cross, penetration and integration among different professions of the College. It plays a good foundation for the coordinated development of the major of aviation manufacturing, aviation maintenance, electronic information, aviation service, aviation materials and so on. Since the establishment of the College of General Education, it has effectively integrated all kinds of resources and forces of the school, optimized the students' knowledge structure, broadened their horizons of thinking, enhanced their cultivation feelings, improved their comprehensive quality, and promoted their all-round and harmonious development.

**Promoting the Integration of General Education and Professional Education**

Because the current network general course learning process and professional integration is not very closely, the three objectives of quality, knowledge and ability are not well integrated. The institute takes two specialties of aircraft manufacturing technology and aviation electromechanical equipment maintenance as an example. Taking two specialties of aircraft manufacturing technology and aviation electromechanical equipment maintenance as an example, the project research group is composed of educational administration department, enterprise technicians, professional backbone
teachers, relevant teachers of General Education Institute and members of project group, combining with the core jobs of aircraft route maintenance, aircraft calibration, maintenance of aircraft electromechanical equipment, calibration of aircraft and engine production, assembly, commissioning and production management, etc. Analyze the professional quality, professional ability and professional knowledge required by the post, studying the general curriculum system supporting the core competitiveness of professional development, the general courses can be divided into traditional culture, such as Chinese culture and historical heritage, social and cultural courses. The cultivation of technology and craftsman spirit, such as craftsman spirit cultivation, science and technology, etc. Management and social activities, such as economic and managerial thinking, social etiquette, psychology and art, such as artistic appraisal and aesthetic experience, mental health and EQ education, etc. Career development, such as self and life, career planning, innovation and entrepreneurship, etc. According to the characteristics of professional posts, this paper gives a catalogue of general courses for this major, and forms a "one specialty one suggestion" to improve the ability of general courses to serve students' sustainable development.

**Strengthening System Design**

The college strengthens the top-level design of general education. Firstly, in the personnel training program, general education is divided into two major modules: general course learning and competence education. It is stipulated that the credits of each professional quality education module should not be less than 16 credits. Various forms of extracurricular activities, student associations and quality development should be encouraged to promote students' comprehensive quality and ability in an all-round way. At the same time, it is stipulated that students should take no less than 4 credits of network general education courses during the school period. Students should select courses according to the needs of professional development ability under the guidance of relevant departments of the school. Secondly, formulated the "Xi'an Aeronautical Polytechnic Institute General Curriculum Management Measures", in the form of a system provides for the network of general education curriculum elective provisions, network of general education curriculum learning and assessment methods, network of general education curriculum learning and management standards.

**Developing Online and Offline Blended Learning Mode**

Based on the phenomenon of "hanging up but not studying" in students' network general courses, schools carry out a variety of mixed learning modes. Firstly, arrange the relevant teachers to conduct online tutoring, and interact with students in time. In the process of online learning, students can improve their interest in learning by asking questions online, which is a pass game. Secondly, to explore the online learning and offline examination methods, in view of the difficulties of students' real-name system online identification, the college explores the online self-learning, offline centralized examination methods, in the prescribed time to arrange a dedicated person in the computer laboratory for online open examination of students, a comprehensive check on the effectiveness of students' online learning. It effectively improves the quality of curriculum learning.

**Reflection**

To create outstanding technical talents, we must integrate professional education with general education. Through professional education, to train students meet the needs of society and industry enterprises, combined with general education, to cultivate students' sustainable development ability, the integration of professional education and general education is worth thinking about in higher vocational education.

**Create a Professional and General Training Mode**

Higher vocational education should construct a comprehensive education system of morality, intelligence, physique, beauty and labor, form a high-level training system of technical and skilled personnel, and integrate morality into Ideological and moral education, cultural knowledge
education and social practice education. In the process of personnel training, insist on high moral values establishment as the fundamental task of education, insist on integration of industry and education, combination of schools and enterprises. Strengthen the top-level design of professional system, teaching system, teaching material system and management system. Based on the requirement of vocational ability development and post transfer ability, determine the training target of professional ability talents. Based on general education requirements, we should develop talents training plan for outstanding technical talents. Based on the general education evaluation system, the evaluation model of vocational ability is developed.

**Optimizing Curriculum System**

Combining professional optimization curriculum system, based on national vocational qualification standards, establishing general curriculum and professional curriculum system for docking vocational qualification standards. We should optimize teaching module, reconstructing professional curriculum system, introducing more general qualities such as humanities, aesthetics and art, natural science and practical ability into the professional curriculum system. Combing professional curriculum relationship, establishing professional curriculum system and general curriculum system for docking job competency requirements, attaching importance to compulsory courses and developing basic courses and carrying out online learning can effectively help schools solve practical problems such as "difficult open a larger number of courses". Meeting the needs of students in diversified curriculum contents, meet the needs of students in history, culture, art, science and technology, society and other multi-angle, multi-disciplinary in-depth understanding and mastery of relevant fields of classical theory and cutting-edge achievements.

**Developing Localized General Courses**

Based characteristics and personnel training objectives, constructing a general curriculum system that embodies the characteristics of colleges. In the general curriculum system of Chinese traditional culture, developing courses with local characteristics, encourage and support local field teaching, improving students' interest in learning and classroom teaching effect. In the general curriculum system of science and the world, appropriately increasing professional and professional characteristics of schools, developing related knowledge popularization education with industry characteristics. Combined with the development of the industry, the important concepts, objective matters and related theories of natural science are systematically introduced, focus on strengthening the cultivation and cultivation of craftsman spirit, enhance students' scientific literacy and craftsman spirit.

**Conclusion**

Integration of professional education and general education, it is an important measure to improve students' development in an all-round way. At the same time of curriculum reform and teaching methods innovation, Pay more attention to the development needs of students' professional ability, to meet the development requirements of students' initial jobs and post migration capabilities. Strengthening the overall design of professional education and general education, We should create a professional education + general education training system to serve the development of students' professional ability.

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