

Research on the Construction of Practical Curriculum System in Application-oriented Undergraduate Colleges

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Abstract: Under the background of new liberal arts and new engineering, this paper considers the main problems existing in the professional talent training and practical curriculum system of applied undergraduate colleges, such as the realization of talent training goals to a certain extent, the construction of practical curriculum system needs to be further optimized. The cooperation with practical units and departments needs to be strengthened. On the basis of clear professional personnel training objectives, in view of the above outstanding problems, It is proposed that application-oriented undergraduate colleges should strengthen the guidance of professional thought with the core of "moral cultivation", improve the practical curriculum system, cooperate closely with employers and departments, actively carry out experimental and practical training work under the background of big data, and increase the application ability of science and technology, innovative personnel training and other new paths of practical curriculum system construction.

Keywords: Practical; Curriculum System; Applied; Characteristic

1. Introduction

Under the background of new liberal arts and new engineering, following the development goal of "conformal high-quality characteristics", based on professional construction and in-depth thinking, combined with the practical investigation to the employer and the actual situation of their own practical courses teaching and training, It mainly studies the main problems existing in the talent training and practical curriculum system of applied undergraduate colleges and universities, as well as the new path of how to build a high-quality practical curriculum

system.

2. The main problems existing in the practical curriculum system of application-oriented undergraduate colleges

The Curriculum system refers to the system which combines each component element of the curriculum organically and makes it achieve the goal under certain curriculum concept. [1] The core idea of teachers' curriculum teaching should be "people-oriented and practice-oriented", [2] theoretical knowledge does not automatically lead to appropriate actions.[3] Therefore, we need to lead the curriculum reform with practice orientation. For application-oriented undergraduate colleges, it is necessary to cultivate application-oriented specialized talents. Practical courses are the core content of education and teaching for application-oriented talents.[4] It should be said that after the construction and reform of practical teaching in recent years, colleges and universities have made some achievements in developing and actively carrying out practical courses. However, through the field investigation of employers and departments, combined with the revision of professional personnel training programs, students' practice and graduates' feedback, from the perspective of adapting to and meeting the needs of various majors in the new era, there are still some major problems in the professional personnel training and curriculum system construction of application-oriented undergraduate colleges.

2.1 There are Some Deficiencies in the Realization of the Goal of Personnel Training

"Applied" often emphasizes professionalism, and professional personnel training has two dimensions: social and personal, that is, through the development of personal practical ability to meet the needs of the society for

professional personnel. Specifically, the training objectives set in the professional personnel training program of application-oriented undergraduate colleges are generally to cultivate high-quality application-oriented specialized personnel with basic theories, knowledge and skills of each specialty, with professional core competence, certain research and innovation ability, and competent for the work of employers and departments. In general, after years of practical teaching construction and reform, practice research units are satisfied with the performance of interns and graduates in most majors in all aspects. Students have rich and solid professional knowledge, high comprehensive quality, and certain practical application ability, which can basically meet the needs of employers and departments. Of course, starting from higher standards and requirements, teachers' enthusiasm to carry out practical teaching as well as their ability to design, organize and implement needs to be further improved; The students' theoretical level of professional knowledge, innovative research ability, and application ability of science and technology need to be strengthened, especially the only child of the post-00 generation has begun to work, and there are some problems such as weak sense of work service, insufficient emphasis on self and social experience, and weak ability to carry out practical work.

2.2 The Construction of Practical Curriculum System Needs to be further Optimized

The curriculum system construction of application-oriented undergraduate colleges should pay attention to vocational characteristics, emphasize practical consciousness, and reflect it in the aspects of course content, form, method and means.[5] Most employers and departments believe that the current professional talent training program of applied undergraduate colleges is revised in a timely manner, the curriculum system in the program is relatively complete, the curriculum level is clear, the course structure and the credit ratio are relatively scientific, and basically can meet the needs of professional knowledge and talent ability training. Of course, taking the traffic management engineering major of our college

as an example, in the field research work, some comrades of the employers and departments have also put forward a lot of useful opinions or suggestions on the construction of the curriculum system from the actual needs of traffic management work. For example, according to the demand of traffic management work under the condition of big data, there is a certain degree of insufficiency in the number of required courses of computer and information technology and big data application. At the same time, the difficulty level of the national or Jiangsu Provincial computer rank examination in graduation requirements is generally low; Highway safety management and traffic organization and control of large-scale activities are very important in the current traffic management work, while the existing professional courses on highway safety management, traffic organization and control of large-scale activities are relatively brief, which cannot fully meet the actual needs of current traffic safety management work. It is suggested to set up independent courses or enrich the corresponding chapter content; The proportion of practical courses is small, the number of hours of experimental and practical training courses, the proportion of credits of practical teaching, the quality and standard degree of practical teaching need to be strengthened. Compared with a six-month professional internship, a two-week internship is shorter, and the experience and feeling of practical work are limited. Strengthen the grasp of legal knowledge and the training of law enforcement ability, necessary mental health and counseling.

2.3 Cooperation with Practice Departments Needs to be Further Strengthened

At present, no matter from the school level or from the department level, some schools and departments have established some practice teaching bases and joint laboratories, and continue to invite practice tutors or practical instructors from cooperative units to give lectures, carry out practical training courses, participate in the revision of talent training programs and the construction of courses and textbooks. However, there are still shortcomings in the focus of cooperation direction, the richness of cooperation content, the scientific nature of planning and the

normalization mechanism, and the closeness of cooperation such as laboratory construction and scientific research projects need to be further strengthened, and the intellectual support function for practical work has not been fully utilized. Specifically, the first is the failure to build a normal cooperation mechanism with employers and departments. At present, the cooperation with employers and departments is scattered and not systematic. Although some employers and departments have signed cooperation agreements, they are limited to the paper agreement itself, which does not constitute a tight cooperation mechanism; Some employers and departments are far away from the school, which also brings inconvenience to the daily teaching exchange work, and the landing of cooperation activities are relatively few. Second, the content and form of cooperation with employers and departments are relatively simple. Due to the influence of various factors, the cooperation with employers and departments is often limited to scattered lectures and individual practical training course exchanges, and there is no normal all-round cooperation in professional personnel training and course construction, and the overall effect is not obvious. Third, the lack of practical teaching resources. The lack of practical teaching resources is reflected in excellent instructors and teachers, excellent practical teaching bases, practical training equipment and equipment, technical means, etc. For example, most teachers still use traditional teaching methods, only pay attention to the teaching of knowledge points,[6] and ignore practical teaching, so the practical ability of teachers and students needs to be improved.

3. The New Path of Practical Curriculum System Construction in Application-oriented Undergraduate Colleges

First of all, it is necessary to clarify the professional talent training objectives of application-oriented undergraduate colleges and universities, "to comprehensively improve the quality of independent talent training, and do a good job of education that the people are satisfied with." The problem of education is fundamentally a practical problem, such as Schwab believes that the meaning of education

is to train students to have the ability to solve problems when facing new practical problems.[7] At the same time, new liberal arts and new engineering emphasize interdisciplinary integration. Under the background of new liberal arts and new engineering, application-oriented undergraduate colleges need to meet the demand for talents with new technologies and new forms of business, and cultivate comprehensive high-quality talents with cultural heritage, scientific spirit, innovative and entrepreneurial thinking and ability.

3.1 Strengthen the Professional Ideological Guidance with the Core of Building "Moral Cultivation and Cultivating People"

The fundamental purpose of universities is to educate people. Integrating the idea of "educating people" into all courses has become an important goal of teaching reform in colleges and universities.[8] In the process of promoting professional courses education in application-oriented undergraduate colleges, there are prominent problems. How to fully tap the educational resources contained in the course teaching and how to apply the knowledge has become the key to carry out the curriculum education work in depth. Therefore, we should build a multi-dimensional teaching system of professional curriculum education, effectively improve the core strength of professional curriculum teachers' education ability, enrich the potential connotation of professional curriculum education, explore the teaching mode that students can easily accept, and innovate the methods and paths of curriculum education. The realization of the school, social teaching practice base and network teaching platform curriculum education "three-dimensional". To be specific, it is necessary to abide by the fundamental task of "educating people", create a whole-person, whole-process, whole-process education model, and strengthen professional education construction planning; The educational factors should be incorporated into the whole process of education and teaching, such as personnel training plan, teaching syllabus, classroom teaching and textbooks. In-depth implementation of the tutorial system, together with the student management, strengthen the education inside and outside the classroom, invite advanced workers from all walks of life

to hold special lectures for students, in-depth implementation of "educating people" education into all aspects of professional teaching practice, and cultivate high-quality applied professionals.

3.2 Improve the Practical Curriculum System under the Background of New Liberal Arts and New Engineering

After further clarifying the training objectives of professional talents under the background of new liberal arts and new engineering, we should reconstruct the professional curriculum system under the background of new liberal arts and new engineering on the basis of thorough investigation of practical application departments and jobs. While further improving basic courses, core courses and elective courses, it is also possible to combine the characteristics of big data analysis and data processing methods to scientifically study the reconstruction of course content and system under the background of information technology, make corresponding fine-tuning of professional course outline and teaching content, and add innovative teaching content related to information technology and adapt to the current social development. For example, courses such as "Community Policing" and "Public Security Order Management" can be appropriately added to the content of community policing and order management under big data policing, so as to better meet the social needs of public security management talents under information technology.

For another example, in order to meet the relevant requirements of the current traffic management department's emphasis on data guidance and intelligent policing, it is suggested to appropriately increase the required courses related to computer and information technology, big data application and informatics, and consider increasing the graduation requirements of the national or Jiangsu Computer Rank Examination level level difficulty; In view of the serious situation of highway traffic safety and the actual needs of traffic control and safety protection work, it is suggested to increase the special course of "highway traffic management" and the related content of traffic safety control for large-scale activities; To master the legal knowledge more solidly, strengthen the situational training of

law enforcement standardization, increase the hours and credits of practical teaching, and enrich the content of practical courses. Pay attention to the study of college students' mental health and traffic psychology courses, strengthen the study and training of traffic police's mental health and counseling, and improve the anti-pressure ability of traffic police work.

3.3 Close Cooperation with Practical Units

Based on the orientation of application-oriented universities, we will further promote the reform of practical education and teaching under the background of new liberal arts and new engineering. On the basis of established good cooperative relations, we will strengthen cooperation mechanisms such as "integration in the same city", introduce external practical teaching resources, strengthen cooperation with employers and departments, and keep closer contact with "school-enterprise" and "school-bureau" to develop ideas. Innovate the work. For example, experts from actual combat departments are invited to give cutting-edge high-level lectures on smart policing, traffic safety governance and modern police reform; Continue to improve the experimental teaching conditions, strengthen the comprehensive practical training of professional ability, invite more employers and department personnel to enter the classroom, strengthen the immersive and situational on-site law enforcement and accident handling simulation training, improve the quality of practical teaching and training, and effectively improve the students' actual police combat ability; According to the academic background of teachers and the actual work needs of employers and departments, focus on the direction and content of cooperation, increase the intensity of laboratory construction and scientific research projects, and solidly promote the effectiveness of cooperation between schools and bureaus. Specifically, in view of the above main problems, combined with the research situation, the following measures can be suggested. First, build a tight teaching and training cooperation mechanism, the whole process of school-bureau cooperation or school-enterprise cooperation talent cultivation. In order to improve the training quality of application-oriented

professional talents, the college and the employer shall, on the basis of signing the co-construction cooperation agreement, comprehensively establish and implement the close-type cooperation mechanism. The employer and department shall participate in the whole process of talent training, especially the formulation and fine-tuning of professional talent training plan, so as to adapt to and meet the talent needs of the employer and department in real time. The second is to select an excellent team of teachers and instructors to enrich the contents and ways of co-construction. It is possible to implement the practice system of double-change of teachers and instructors, select teachers and instructors, set up teaching teams of various courses, strengthen the construction of teachers and instructors, and promote two-way exchanges in various forms, such as the implementation of actual combat instructors in school, regular practical training of teachers, and the practice of teacher and instructors changing positions, so as to effectively improve the design, organization and implementation ability of practical teaching of teachers and instructors.[9] Third, increase the intensity and breadth of cooperation and co-construction. Strengthen the quality control of practical training and practice links, improve the quality of comprehensive experimental practical training, internship, internship and other work, such as appropriately extending the work hours of internship, establishing demonstration practice bases, selecting excellent instructors from the internship bases to serve as students' internship instructors, increasing the frequency of teachers going into actual combat departments, and promoting the improvement of teachers and students' professional ability in actual combat.

3.4 Deepen the Experimental and Practical Training under the Means of Information Technology

Application-oriented undergraduate colleges need to pay attention to improving students' ability to discover and solve practical problems, that is, how to make practical courses provide students with knowledge and skills needed in real work.[10] Taking the majors of public security and traffic management engineering for example, under the background of the widespread application

of information technology such as big data, the first is to build a virtual simulation platform and develop experimental and practical training projects. We should investigate the information technology needed for current public security management and traffic management, think about the professional core competence that public security and traffic police should have, combine the curriculum teaching reform, actively develop and implement the experimental and practical training projects required for curriculum teaching, and constantly strengthen the cultivation and training of students' practical ability. Second, integrate teaching resources inside and outside the school. We need to explore how to integrate the practical resources of practical application departments into the practical teaching resources of schools, establish a normal mechanism of cooperation and co-construction, advocate "school-bureau cooperation" and "school-enterprise cooperation", and jointly build an experimental teaching platform and training base for resource sharing, so as to improve the level of practical teaching. Third, we will enrich practical teaching methods. Realize the complementation and utilization of experimental and practical training resources, implement a variety of teaching methods and methods such as case teaching, situational teaching and on-site teaching, reflect the situationality, authenticity and practicability of practical courses, and truly guide and serve practice; In addition, it can also use information technology such as the Internet and the construction of virtual teaching and research rooms to promote the integration of teachers' practical teaching knowledge and experience, support teachers to carry out online discussions and sharing, better carry out practical teaching, and consolidate the core of professional talent construction.[11]

3.5 Strengthen the Application Ability of Science and Technology and the Training of Innovative Talents

For application-oriented undergraduate colleges, students' learning should be a self-learning process of active exploration, active summary and improvement, and improve their practical ability in thinking and solving problems.[12] At the same time, under the background of new liberal arts and new

engineering, emphasis is placed on the integration of various disciplines and majors, and the cultivation of students' practical and innovative ability to solve complex practical problems.[13] Therefore, we should attach importance to practical courses, the opening of the second classroom, the training of innovative and entrepreneurial projects, the training of outstanding talents, increase the application of science and technology ability of students and the training of innovative talents, and focus on solving practical problems encountered in real work. First, focus on cultivating students' interest in the application of science and technology, emphasize the application ability of modern science and technology means and technology, increase the class hours and quality requirements of experiment and practical training teaching, enrich and strengthen the training of various professional comprehensive projects, such as the safety protection training of traffic management engineering, the scene survey of UAV and the emergency traffic control training; In addition to professional practice, increase the internship time to one to two months, and strengthen the organization of the internship work. Second, on the basis of offering courses related to various professional talent training programs, for students with modeling foundation or interests, consider setting up professional training courses on model construction, setting up a team of excellent teachers, and focusing on training and building, which can not only actively participate in relevant big innovation projects and discipline competitions, but also train relevant specialized talents for employers and departments.

4. Conclusion

In short, we should start from the requirements of the development of new liberal arts and new engineering and meet the actual needs of employers and departments for professional personnel training, strengthen the training of high-quality talents, gather professional characteristics, strengthen the construction of professional connotation and characteristic development, strengthen the close cooperation with employers and departments, improve the quality of professional personnel training, and adapt to the actual work faster and better. To serve the social construction with higher

quality of personnel training.

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