Thoughts on the Construction of Artificial Intelligence Specialty Group in Local Colleges and Universities Under the Background of Modern Industrial Coll

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Abstract. With the rapid development of artificial intelligence industry, the shortage of compound applied talents is becoming more and more obvious. At the same time, in order to combine the supply side of education with the demand side of industry, and find an effective mechanism for the integration of industry and education and school-enterprise cooperation, the Ministry of Education and the Ministry of Industry and Information Technology jointly launched the construction of modern industry colleges in universities. In this paper, through the questionnaire survey of college teachers, enterprise teachers and students respectively, through the method of statistical analysis, the existing problems in the construction of artificial intelligence professional groups. First, the system of modern industrial college construction is not flexible. Second, the teaching method is old, and the teaching content is too far from the real project. Third, the curriculum system is not perfect. Fourth, the education platform is not sound. It is hoped that it will be helpful to cultivate compound applied talents needed by artificial intelligence industry chain.

Keywords: Modern Industrial College · Artificial intelligence · Professional group

1 Introduction

Artificial intelligence has become a national strategy. The 14th Five-Year Plan focuses on the new generation of information technology, promotes the deep integration of the Internet of Things, artificial intelligence, big data and various industries, and promotes the development of the new generation of information technology into a new pillar industry, in which the artificial intelligence industry has broad prospects for development as a key support for the new generation [1, 2]. The Ministry of Education and the Ministry of Industry and Information Technology jointly launched the construction of modern industry colleges in universities [3]. Therefore, it is necessary to consider and choose the construction strategy of modern industrial college suitable for the development of professional teaching according to the characteristics of specialty.

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2 Problems Existing in the Construction of Artificial Intelligence Professional Groups

2.1 Questionnaire Survey

In order to deeply investigate the problems existing in the construction of artificial intelligence professional groups, this paper takes college teachers, enterprise teachers and students as the research objects, respectively designing and distributing questionnaires. After a week's research, we got 348 valid questionnaires.

As for college teachers, 48% of them feel that they had been out of touch with actual projects for too long. 76% of them think that the content needs to be updated. 48% of them want to further build the experimental environment. 80% of them think that it is necessary to cooperate with enterprises to carry out scientific research projects.

As for enterprise teachers, 53% of them think that students do not have a firm grasp of knowledge before comprehensive practice. 70% of them feel that they are not effectively motivated and lack motivation to teach. 90% of them feel that there was a lack of experimental environments to support real projects.

As for students, 85% of them think that teachers' teaching methods do not stimulate interest in learning. 63% of them believe that what they have learned in school is not enough to support their practical work in the future and that further training is needed. 47% of them want to participate in the teacher's research project.

2.2 Problem Analysis

Based on the open questions in the questionnaire and literature review, the following problems are found [4–8]. First, the system of modern industrial college construction is not flexible. The way of management of industrial college, the way of motivating teachers and so on will affect the operation effect of industrial college. Second, the teaching method is old, and the teaching content is too far from the real project. The teacher's teaching method is still mainly lecturing, which fails to arouse students' interest. The teaching content is mainly theoretical teaching, with a certain proportion of experimental content, but the experiment is relatively basic and cannot reach the actual project. Third, the curriculum system is not perfect. The professional group of AI involves a very complex knowledge, including the Internet of Things, communication, big data, algorithm design, system integration, etc. But at present, within the AI group, each major has its own course modules, and there is no intercommunication. Fourth, the education platform is not sound. The practice platform is not sound. The current platform cannot stimulate students' enthusiasm for innovation and meet their needs for entrepreneurship.

3 Strategies

3.1 Institutional Innovation of Modern Industrial College Construction

Modern industrial college is a new type of diversified community, so its management mode is different from that of traditional colleges and universities, which requires institutional innovation with multi-participation and consideration of the interests of all parties

[9]. Under this system, the industrial college has a board of directors and a board of supervisors, whose members come from universities, enterprises, trade associations, parents of students, government departments and other groups. The board of directors is responsible for formulating the charter system, distributing benefits, determining the direction of work and other macro-control work. The board of supervisors is responsible for guaranteeing and supervising the implementation of the work of the college. Under the leadership of the board of directors, the dean is responsible for specific affairs of the modern industrial college. It can also establish a "double main body" council management system between schools and enterprises.

3.2 Reform the Traditional Teaching Methods to Fit the Real Project

The case teaching method or situational teaching method close to practice can be adopted as the teaching method [10]. Full-time teachers are responsible for the theoretical teaching and supervise the implementation of the teaching process, while enterprise engineers are responsible for the practical teaching by giving full play to their professional advantages. University teachers and enterprise engineers work together to select complex engineering cases with strong blending, integrate them into the curriculum content, and then form modules, promote advanced teaching methods such as blended teaching and project-based teaching, and implement modular teaching of school-enterprise team collaboration.

3.3 Construct a Scientific Curriculum System

According to the training goal of professional group talents, we should break the curriculum mode of professional system, develop the curriculum system of professional group according to the requirements of professional post ability, and form the curriculum system of "bottom sharing, middle separation, top mutual selection and top integration" oriented by the post group of artificial intelligence industry chain. It covers four modules: general and basic courses, professional group direction courses, professional group mutual selection courses and comprehensive practice courses. "Bottom sharing" sets up general and basic courses based on the commonness of professional groups to consolidate students' basic abilities, mainly in the first 1.5 years; "middle-level separation" sets up "professional group direction courses" based on the nature of each major, choosing one of the two directions to improve students' special abilities, mainly in 1.5–2.5 years; "Senior mutual selection" sets up "professional group mutual selection courses" based on the cultivation of cross-professional skills, mainly focusing on 2.5–3.5 years, to exercise students' comprehensive ability; "top-level comprehensive" is based on the realization of compound and application-oriented personnel training to set up "innovation and entrepreneurship courses" to cultivate students' innovative ability, which runs through four years of university.

3.4 Create an Open Education Platform Connecting Inside and Outside the School

With the development of school-enterprise cooperation as the main line, we should create an open platform for educating people inside and outside the school. Under the overall

planning of the Industrial College, a shared studio among majors is set up in the school, and students complete basic discipline competitions and patent applications; a practice training base is jointly constructed by schools and enterprises, and complex engineering projects are integrated among majors, and teachers and students complete project applications and project research and development; a university-industry-research service center is jointly constructed by schools and enterprises, focusing on the transformation of scientific research achievements and realizing product incubation. Through the three platforms of "studio, training practice base, production, teaching and research service center", collaborative education is realized. Support college students' innovation and entrepreneurship.

4 Conclusion

In the era of artificial intelligence, the traditional industrial manufacturing economy has been transformed into a service economy, and big data and intelligent machines will increasingly replace the traditional mode of production. Under this background, the high-quality development of higher education and the precise docking of the strategic needs of the development of artificial intelligence in China need to break the thinking pattern, loosen the binding, fully integrate into the new technology of artificial intelligence, open up a new path for the construction of professional groups, and composite applied talents to meet the needs of future development. Help China's supply-side economic structural reform.

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