Thinking on the talent training mode of internet of things engineering major in new engineering

Qingsong Li

GuangZhou Railway Polytechnic, Guangzhou 510430, Guangdong

Abstract: The Internet of Things engineering specialty is a new interdisciplinary and interdisciplinary discipline. As a typical new engineering discipline, how to innovate the talent training mode and how to promote the modernization development are in urgent need of clarification and specific practice. At present, China attaches great importance to the training of new technological skilled talents, and has issued a series of "new engineering" policies to support it. It is expected that relevant majors can cooperate with new concepts and technologies to serve for talent training. In view of this, this paper discusses the basic connotation of the new engineering course, and puts forward several innovative strategies on the current situation and problems of talent training of the Internet of Things engineering specialty, hoping to provide more reference for front-line educators.

Keywords: new engineering; Internet of Things project; Talent cultivation; Innovation strategy

introduction

Under the background of 5G era, the application cases of various advanced technologies in education are emerging one after another, which has also laid a good foundation for the innovation of talent training mode of IoT engineering. However, in terms of the current talent training situation of the Internet of Things engineering specialty, there are still some managers and educators who do not attach importance to the application of new technologies and the integration of new ideas, resulting in the "new engineering" has not achieved the expected educational effect, and there are still deficiencies in talent training and innovation. It can be seen that the talent training mode of IoT engineering in higher vocational colleges in China is in urgent need of innovation and optimization. It is necessary for schools to optimize the curriculum and teaching content, and front-line teachers should also actively promote the reform of teaching methods, so as to give play to the advantages of new engineering courses and promote the modernization and comprehensiveness of the talent training of IoT engineering.

1. Innovation and influence of talent training mode for IoT engineering major of new engineering discipline

1.1 Social needs

In the context of vocational education, the purpose of most schools is to cultivate talents for front-line production, technology, service, logistics and other posts. Therefore, schools should also optimize the talent training mode in line with the needs of professional posts and enterprises, so that they can cultivate a large number of outstanding talents with professional skills and core qualities. In this regard, it is necessary for the teaching managers of the Internet of Things engineering major in higher vocational colleges to further optimize and adjust the educational objectives and modes by taking advantage of the new policies proposed by the new engineering discipline, taking advantage of the new educational technology and matching the needs of society and posts for talents; Front-line teachers should also learn advanced technology as much as possible, and integrate professional content, employment knowledge, etc. into the teaching process to ensure that the school running and teaching of this major keep pace with the times, and further improve the professional education level.

1.2 Teaching reform

Under the background of new engineering, the reform of the Internet of Things engineering specialty is crucial. Only with the support of the Internet of Things engineering can we develop smart cities, smart transportation and other industries. Only when the level of talent training in this area is improved, can we benefit from the development of education to build a more intelligent and civilized society. Therefore, in the teaching of the Internet of Things engineering major in higher vocational colleges, teachers should adhere to the concept of lifelong learning, constantly improve their teaching level, and at the same time improve their professional skills and skills, so as to promote the reform and innovation of relevant courses of the major. Among them, micro class teaching, mixed teaching, project-based teaching, cloud class and smart class are all feasible and effective reform methods. Teachers can also guide students to learn and practice in combination with the actual situation, and strive to build a good learning space for the majority of vocational students to help their professional growth and comprehensive development.

2. Current situation of talent training mode for Internet of Things engineering major of new engineering discipline

2.1 The teaching content is repetitive

Under the background of new engineering, some higher vocational colleges have set up the Internet of Things engineering specialty, and are trying their best to promote the innovation and development of the talent training mode of related majors. Not only that, because it is a typical major under the background of new engineering, but also has the characteristics of wide coverage and many knowledge points, including basic theories, various professional technology applications and other specific content, reform and innovation is not achieved

overnight, and needs the joint efforts of schools and front-line teachers to optimize. The first thing we should make clear is that the content is repetitive, and is closely related to the economic level of regions and schools. In the future education reform process, we should fully grasp the content of the Internet of Things project, avoid large duplication and limitations in the content, and strive to introduce new technologies to sort out the context of teaching content, so as to escort the professional growth of vocational college students.

2.2 Unbalanced development of theoretical and practical teaching

In the process of cultivating talents for the Internet of Things engineering specialty, we can easily draw the conclusion that the development of rational and practical teaching is unbalanced, especially in the aspect that the practical teaching fails to achieve the expected effect, which further affects the development of students' thinking ability, innovation ability and comprehensive quality, which is not conducive to their professional level. Therefore, in the future teaching of the Internet of Things engineering specialty, it is necessary to consolidate the students' theoretical foundation, and strengthen their understanding ability, analysis ability, communication ability, etc., but also to focus on optimizing the practical education goals, including ability goals, emotional goals, etc., and pay attention to the cultivation of the practical ability of the majority of vocational students, so that they fully understand the application value of knowledge practice and professional practice. Only in this way can the IoT engineering specialty supported by the new engineering discipline form a whole, and then train students to become professionals who understand theory, understand technology, dare to practice and dare to innovate.

2.3 Insufficient teaching resources

Under the background of new engineering, digital learning is the most effective way of learning, which meets the requirements of education and teaching in modern society. Digital teaching can be guided by theory. On the basis of respecting students' learning differences, it can cultivate students' self-management ability, guide students to participate in learning activities efficiently, and form good learning habits, so as to improve the teaching effectiveness of computer courses. However, the digital teaching design in China is not mature, and the teaching resources of the Internet of Things engineering specialty are not rich enough, which makes it difficult for teachers to promote teaching efficiency and quality, and for students to use resources to carry out efficient and in-depth learning, so that the development of the Internet of Things engineering specialty in higher vocational colleges is slow. In the process of reform and innovation in the future, it is necessary to enrich the teaching resources related to the Internet of Things and lay a good foundation for the development of this major by improving the resources.

2.4 The teaching methods are not innovative enough

At this stage, it is most easy to ignore the individual differences of students in the design of the teaching mode of the Internet of Things engineering major in higher vocational colleges, which often fails to take into account the students' real learning situation, ability and quality, and it is also easy to reduce the teaching efficiency and quality. In addition, in teaching practice, many teachers only pay attention to the teaching of basic knowledge, ignoring whether the content of students' learning is targeted and meets the development needs of the post. In addition, the professional curriculum is lack of rigor and innovation, which makes it difficult for many students to improve their personalized ability in learning and highlight their competitive advantages in employment.

3. Analysis on the Innovation Strategy of Talents Training Mode for the Internet of Things Engineering Major of New Engineering

In combination with the development trend of the Internet of Things technology industry, and referring to the quality requirements of today's society for the Internet of Things technical talents, we will adjust and optimize the talent training mode for the Internet of Things engineering specialty in higher vocational colleges. We hope that related majors can build a new major enrollment platform, and deepen the industry university research cooperation mechanism, laying a good foundation for the professional growth and comprehensive development of subsequent students. In view of the problem that teaching resources are not rich and teaching contents are repeated, front-line teachers should also actively participate in the reform process and enrich teaching contents with new technologies and platforms; In view of the single teaching method and teaching mode, we should also actively promote reform and innovation, and try our best to create a learning platform conducive to independent thinking and independent practice of students majoring in Internet of Things engineering in higher vocational colleges from the two aspects of optimizing the traditional mode and informatization teaching mode. We have mainly completed the following exploration of innovation strategies:

3.1 Build a new engineering enrollment platform

In fact, new engineering is a major direction, not limited to one engineering major for talent training. Therefore, the talent training of IoT engineering must be clear about the niche, and strive to form a connection with industry enterprises and industrial departments by integrating the advantages of engineering and students, so as to achieve "point to point" talent training, and ultimately cultivate skilled talents that meet the needs of industry and enterprises. That is to say, it is necessary for higher vocational colleges to build a new engineering major enrollment platform, build a cross department, cross discipline and cross specialty major enrollment platform, and re-examine the curriculum system of new engineering related majors and disciplines, so as to build a new pattern of talent training for new engineering majors and pave the way for subsequent innovation of related disciplines and practical courses. This has two advantages. First, it can break down the barriers of students' disciplines and majors, so that more students with a good engineering foundation can get as much access to multiple basic knowledge systems as possible. If they can also strengthen their learning of general courses, it is bound to strengthen chemical students' thinking, stimulate their internal potential, and improve their innovation ability and core competitive advantages. Secondly, on the basis of the new engineering discipline, it can cultivate students with strong interests or core advantages, thus avoiding the confusion

when students choose majors, even jobs and posts to some extent, and combine the construction of disciplines with the innovation of talent training scheme, laying a solid foundation for the development of the Internet of Things engineering major of the new engineering discipline in the future.

3.2 Establish the cooperation mechanism of production, teaching and research

The construction of new engineering courses requires the cultivation of skilled talents with industry background knowledge, engineering practice ability and the need to be competent for industry development. Therefore, higher vocational colleges should focus on the above three points, innovate the existing teaching mode and teaching links, and strive to achieve new breakthroughs in education with the support of new technologies and new development trends. The establishment of an industry university research cooperation mechanism can effectively connect with social industries and industrial enterprises, clarify the cultivation of industry background support for vocational college students, enable relevant resources, technologies, funds and manpower to penetrate into education, and support the talent cultivation advantages and teaching mode reform of relevant majors. Not only that, the construction and improvement of the industry university research cooperation mechanism can also build an independent practice platform for students, provide relevant students with a learning platform for independent thinking, cooperative exploration and independent practice, support them to explore interested classes, technical directions, etc., and ultimately achieve the educational purpose of strengthening students' engineering practice. When social forces and enterprise forces infiltrate into higher vocational education, it will naturally enhance students' understanding of new engineering subjects, industry trends and employment directions, and thus effectively strengthen students' professional ability and quality.

Therefore, under the talent training mode of the Internet of Things project in higher vocational colleges, it is necessary for us to integrate regional advantageous industries and enterprise resources, connect school education with enterprise production, provide enterprises with economic benefits and talent reserves, and give our students more opportunities to exercise and develop themselves. In order to carry out the "school local interaction" throughout, organize and carry out skill competitions with students as the training objects, which can effectively exercise the professional skills, communication and exchange abilities, cooperation and innovation abilities of students in the school, and then create an advantageous project conducive to the practical teaching and skill training of the Internet of Things engineering major of the new engineering discipline; Taking teachers as the training object to organize and carry out the "going out" development strategy can effectively exercise teachers' post ability and practical ability, provide a good development platform for teachers, and then pave the way for the subsequent practical teaching reform of the Internet of Things engineering specialty. It is believed that the modernization and comprehensive development of the Internet of Things engineering specialty in higher vocational colleges can be promoted by constantly exploring the characteristic road of combining school enterprises with production, teaching and research, combining local economy to develop the Internet of Things engineering education, and by signing cooperation agreements, sharing production and learning achievements and jointly building cooperative entities.

3.3 Optimizing the teaching resources of the Internet of Things engineering specialty

Optimizing the teaching resources of the Internet of Things project is not easy. First line teachers can not only integrate ideological and political content, patriotism content, craftsmanship, idealism and other training talents, but also use information channels to integrate superior resources, so as to build an Internet of Things project resource platform, and ultimately achieve the goal of enriching the teaching resources of the Internet of Things project. Integrating the content of socialist core values into the teaching of professional courses will help to cultivate the patriotic feelings and great ideals of vocational college students, promote students' cross-cultural communication and interdisciplinary exploration and practice, stimulate students' sense of responsibility and mission, and pave the way for students to further study professional knowledge in the future. The integration of information technology into the teaching process of the Internet of Things engineering major, and the use of online channels supported by information technology to enrich teaching resources, will help improve the efficiency and quality of teaching related courses, but also open the eyes of students to provide resource support for their independent access to information, summary and analysis of materials, which is also the core content of "teaching people to fish is better than teaching people to fish". It is worth noting that in the teaching of the Internet of Things engineering major of the new engineering course, teachers should also optimize teaching resources and teaching models around the students' main body. They should not only integrate advanced teaching content and educational technology into the teaching of the new engineering course, but also truly restore the process of scientific knowledge exploration, stimulate the students' internal potential, and encourage students to dare to question, dare to think and dare to practice. This also means giving vocational college students a new identity, promoting their mastery of professional knowledge, and thus promoting their mastery of more learning methods and skills.

3.4 Innovating the teaching methods of Internet of Things engineering

By creating an effective basic training platform, we can focus on professional skills to cultivate talents, strengthen the professional skills, practical ability and comprehensive quality of vocational college students, and pave the way for better employment of students in the future. It is feasible and effective to build wireless sensor network laboratory, smart home laboratory, embedded laboratory and big data laboratory. Of course, building a laboratory based on the school enterprise partnership can show the team strength and improve the effectiveness of education. Moreover, based on these laboratories, students can also have more opportunities to form interest communities and learning teams under the leadership of the Internet of Things project, which can effectively strengthen the comprehensive ability of students in this major. By creating an effective engineering quality training platform, we can focus on engineering knowledge and practical ability to cultivate talents, strengthen the core competitive advantage of vocational college students, stimulate students' internal potential, and encourage students to forge ahead. Through the development of intelligent cars, the development of the Internet of Things storage system,

Analysis on the Optimization of International Chinese Culture Teaching Strategies Based on the "the Belt and Road" Concept

Enxian Ye

Yancheng Normal University, Yancheng, Jiangsu, 224002

Abstract: In the context of the "the Belt and Road Initiative", it is of great significance to actively promote the teaching of international Chinese culture. The teaching of Chinese language and culture can not only promote the cultural exchanges and development of the international community, but also is one of the important ways to establish the image of China. The teaching of international Chinese culture should play a role as a platform, with the core goal of improving the soft power of Chinese culture, so that Chinese culture can go global, thus enhancing the influence of Chinese culture in a wider space, forming more and deeper social consensus, and transforming it into a national image. There are still many problems in teaching content and teaching philosophy of international Chinese culture teaching. Under the call of the era of "telling Chinese stories well" by the Xi JinpingGeneral Secretary, teachers should combine the characteristics of different learners to carry out effective teaching optimization and reform, so that more people can truly understand and love Chinese culture.

Keywords: the Belt and Road; International Chinese; Culture teaching; strategy

Introduction

In September and October 2013, President Xi, the Chinese President, put forward the cooperation initiative of building the "New Silk Road Economic Belt" and the "21st Century Maritime Silk Road", namely, the "the Belt and Road". In 2015, the National Development and Reform Commission, the Ministry of Foreign Affairs and the Ministry of Commerce jointly released the Vision and Action to Promote the Joint Construction of the Silk Road Economic Belt and the 21st Century Maritime Silk Road, marking the official implementation of the "the Belt and Road", a national top-level cooperation initiative. The "the Belt and Road" is a concept and initiative. It borrows the symbol of the "Silk Road", which has been handed down from ancient times to the present, and shows China's faith and determination to actively cooperate with countries along the Belt and Road for common development. The construction of the "the Belt and Road" requires "language paves the way, and culture goes first." In 2014, Fan Hengshan, Deputy Secretary General of the National Development and Reform Commission, said that the proposal of the "the Belt and Road" concept requires China and countries along the Belt and Road to jointly build a culturally inclusive community. International Chinese language education is not only the promotion of the Chinese language in the international scope,

the development of vehicle mounted media software, etc., higher vocational students can be exposed to more professional projects. At the same time, project based teaching, group cooperation teaching and other ways can further strengthen students' ability to solve practical problems, so that they have a higher level of engineering practice ability. It not only innovates the teaching methods of the Internet of Things engineering specialty, but also enables students to contact with post training and in-depth practical training in advance.

4. Conclusion

In a word, the innovation of talent training mode for the Internet of Things engineering specialty in higher vocational colleges is not achieved overnight. front-line teachers should also actively explore and practice, optimize and improve, and strive to build a learning space conducive to the independent thinking and independent practice of the majority of higher vocational students, so as to fundamentally improve the quality and effectiveness of education. From the perspective of schools, it is necessary to strengthen the comprehensive quality of teachers and lay the groundwork for the subsequent innovation of teaching models and methods of related majors; From the perspective of teachers, it is necessary to optimize all teaching links with new educational technologies, so that new educational concepts can take root in the talent training model of the Internet of Things project, and bring better education to higher vocational college students.

References:

[1] Yu Yuanyu, Wang Jiujiang, Wei Lijun, Qin Yuping, Yang Jining. Research on the Cultivation of Innovation Ability of Students Majoring in Internet of Things Engineering in Local Normal Universities [J]. Computer Age, 2022 (06): 127-129+133

[2] Wang Dong, Zhao Hongwei, Liu Yan. Exploration of talent training mode of Internet of Things engineering under the background of "new engineering" [J]. Industry and Technology Forum, 2020,19 (23): 160-161

[3] Ma Yahong, Fan Xiaojiao, Xing Zhuo, Shi Yun, Lv Lintao, Wu Wei. Discussion on the training mode of applied undergraduate IoT engineering professionals in private universities under the background of "new engineering" [J]. Course Education Research, 2019 (08): 230-231

[4] Planting Trees, Wang Yaxu. Innovation and Realization Path of Ideological and Political Education in Colleges and Universities from the Perspective of New Engineering [J]. School Party Building and Ideological Education, 2022 (15): 80-82

[5] Sun Xiaorong. Research on ESP Curriculum Design in the Context of New Engineering -- Taking Anhui University of Technology as an Example [J]. Overseas English, 2022 (14): 94-95