

An Analysis of Effective Methods for Cultivating Applied Undergraduate Talents in the Intelligent Era

Jianxin Guo, Changqing Yu, Quanzhu Yao, Canshi Zhu, Qinli Deng

Xijing University, Xi'an 710123, Shaanxi, China.

Abstract : Under the background of the intelligent age, new challenges are raised for undergraduate talent training, requiring undergraduate talent training to become more technical and application-oriented, and to build a characteristic undergraduate talent training model with application-oriented as the core goal. Therefore, this article focuses on the current undergraduate talent training. Starting from the lack of talent training, we will analyze the effective methods and paths of application-oriented undergraduate talent training under the background of the intelligent age for reference.

Keywords : Intelligent Age; Application-oriented; Undergraduate; Talent Training; Effective Methods; Analysis

With the development of the times, my country has also entered the era of intelligence, but the market demand for application-oriented talents has also exposed the existing problems in the current undergraduate talent education, so it needs to be based on the existing undergraduate talent training model. Conduct analysis and reflection, and build a talent training model targeting applied talents.

1. The demand for talent transformation brought about by the intelligent age

With the advent of the intelligent era, artificial intelligence has become the core and driver of industrial innovation, and the overall productivity of society has been greatly improved. Therefore, many IT companies have a huge demand for talents with artificial intelligence and science and technology backgrounds. However, from the perspective of the distribution of talents, the field of intelligent science requires not only high-end academic talents, but also technical application talents with strong practical ability. With the continuous development of network information technology, it will also create the top level of intelligent science. Design technology is applied and extended to production, application and other fields. Therefore, there is an urgent need for a large number of applied talents with professional technical knowledge background and high practical ability. In their positions, they also tend to engineering technologies such as the Internet of things, artificial intelligence, and big data. It also puts forward higher requirements for the quantity and overall quality of talents, and it also pushes colleges and universities to start thinking about how to carry out the reform of talent training, and transform the undergraduate talent training model from academic talents to applied talents.

When intelligent, it represents the integration of various computer networks, communication technology, intelligent control and other practical science and technology. It is the intelligence formed by combining the human brain with technology, and even the machine simulates the thinking of the human brain. This also requires high-end technical application personnel. Intelligent development also requires the continuous integration of technology and subject knowledge, and the promotion of cross-disciplinary innovation. Therefore, in terms of talent demand, it is also necessary for talents to be able to combine knowledge, that is, in addition to subject knowledge in various fields, they must also master various theories and application.

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2. Reflections on the current undergraduate talent training model

2.1 There are problems with the traditional talent training model

Although colleges and universities are actively exploring talent training models and strengthening the practical construction of subject education, due to the influence of traditional education, the teaching model of colleges and universities still stays in the situation where teachers lecture on stage and students sit in the classroom to take notes. Teachers use indoctrination. The method of teaching knowledge is not student-centered, which leads to a decline in students' learning enthusiasm and poor learning results.

With the development of the Internet of things, cloud computing, and big data, a variety of new scientific theories and technologies are constantly appearing, but the teaching of colleges and universities has not been updated in time, and the latest scientific and technological theories have not been introduced, which has caused the teaching content to become more and more out of touch with market demand. The traditional talent training model emphasizes theoretical teaching and neglects the cultivation of students' application of science and technology, which also leads to lack of practical experience of students, insufficient application ability, and weak ability of independent innovation.

2.2 Talent training needs in the intelligent age

With the advent of the era of intelligence, the division of labor in society is gradually refined, and the disciplines are also differentiated. The requirements for undergraduate students not only stay at the level of knowledge, but also require undergraduate students to have a more refined and professional understanding of knowledge. The flexible application of knowledge and the cultivation of applied undergraduate talents have increasingly become the goal of undergraduate education and training. According to this goal, it is necessary to think from multiple perspectives such as curriculum setting, teaching methods, teaching evaluation, etc., and it is required to cultivate application-oriented students as the core. The talents needed in the intelligent age are challenges and opportunities to the existing undergraduate talent training model, positioning the talent training direction, emphasizing applied talents integrating theory and knowledge, technology and application, breaking disciplinary barriers, and forming cross-border talents.

3. Analysis of effective methods for cultivating applied undergraduate talents in the intelligent age

3.1 Optimize the talent training program

The era of intelligence has brought new opportunities and broad development space for talents in various fields, and it has also brought challenges and opportunities to the training of applied talents in colleges and universities. Applied talents are required not only to have professional and solid subject basic knowledge, but also to have certain innovative spirit, strong logical thinking ability and theoretical application ability, etc. This requires that when cultivating applied undergraduate talents, it is necessary to organize key teachers to give talent training plans, and combine with the results of prior investigations on the employment situation and problems encountered by graduated students, and cooperate with enterprise technical personnel, or send teachers go to the enterprise to conduct in-depth investigations, incorporate the latest scientific and technological theories into the subject, and carry out in-depth reforms to the existing talent training programs, including subject curriculum settings, class hours, and class styles. After the talent training program is drawn up. Some experts and scholars can be invited to demonstrate the plan to ensure its feasibility.

3.2 Promote scientific research competitions

In addition to classroom teaching, colleges and universities can also organize students to participate in scientific research projects. The topics of the projects are related to popular applications in the intelligent era, so as to improve students' level of subject theory application and subject knowledge innovation. In the process of scientific research projects, the school selects and excavates students, and conducts in-depth training to speed up the training speed and training effect of the school's talents. In terms of competitions, the school can organize competitions or allow students to participate in related competitions at home and abroad. According to the topics of the competition, students freely form learning and training groups. Through mutual learning within the group, the spirit of cooperation among students is cultivated, and the ability of students to study independently is also improved. Schools can also send professional teachers to guide student groups, promote students to participate in competitions, and provide students with certain guidance and help to stimulate students' inspiration and enhance students' innovative and practical abilities.

3.3 Integration of production and education, school-enterprise cooperation

When cultivating applied undergraduate talents, we should start from market demand, so that students' professional skills can

meet market demand, and students can integrate into their job roles as soon as possible after graduation. Therefore, integration of production and education and school-enterprise cooperation are needed.

The existing teaching focuses on theoretical teaching, although there are experimental teaching, but the content of the experiment is relatively single, which is far from the problems encountered in the actual job position, and the theoretical knowledge used is relatively backward, lacking a certain degree of practicality in actual work.

Through school-enterprise cooperation, professional and technical personnel of the company can be used as part-time teachers of the school and participate in the construction of talent training together, making the curriculum more practical and practical projects closer to the actual work content. School teachers and enterprise technical experts work together to formulate the content of the practical project.

However, it should be noted that if the courses are organized by tasks as before, it is expected that through the way of task completion, let students master the content of the course, it will only allow students to obtain fragmented knowledge and cultivate fragmented abilities, unable to match the system control ability of the intelligent age, so it is necessary to take the complete task encountered in the work as the project, rather than the partial task in the complete task as the learning point of the course, so as to avoid the students from completing various curriculum settings fragmented tasks, but lack the overall cognition and overall application control ability of tasks at work. In the setting of courses, it is also necessary to pay attention to the cultivation of professional ability. Intelligent production requires deep-level professional ability and accomplishment. It cannot just stop at the superficial task description to obtain professional ability, so when setting it. Based on the analysis of the job system, the job vocational ability research is carried out, so as to cultivate the vocational ability that the talents really need to meet the needs of the job when the talents are cultivated.

3.4 Guided study combined with independent study

By cooperating with other universities, we can share resources and complement each other's advantages, and launch online and offline teaching cooperation. However, in the intelligent age, the speed of knowledge update is very fast, and students need to master the ability of autonomous learning, so the method of combining guidance and learning is adopted. For example, choose projects that are suitable for learning, let students do data surveys and make project reports. In the classroom, the students will demonstrate the project, and the teacher will make comments and guidance to enhance the students' ability to learn independently. Through the establishment of study groups, the communication between students is strengthened, and the basic knowledge of the subject can be extended to extracurricular, so that professional knowledge education can be connected with lifelong education, promote lifelong learning of students, and constantly update knowledge and theories.

4. Conclusion

In the context of the intelligent age, through the optimization of talent training programs, the development of scientific research competitions, the integration of production and education, school-enterprise cooperation, and the combination of guidance and learning, the training of applied undergraduate talents can improve students' independent learning ability. Stimulate students' innovative and practical spirit, thereby improving students' comprehensive literacy, and also promote the continuous development of undergraduate applied talents, and provide references for effective training of talents.

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