

Research on the Cultivation of Craftsmanship Among Students in Higher Vocational Colleges in the Era of Artificial Intelligence

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Abstract

The development of artificial intelligence has triggered profound changes in social production relations and injected new connotations into the cultivation of craftsmanship among students in higher vocational colleges. Pioneering and innovative, collaborative and collaborative, practicing both ethics and skills, and dedicated practice are the proper meanings of the new craftsmanship spirit in the era of artificial intelligence. The needs of the development of intelligent manufacturing and the successful practice of cultivating craftsman spirit in various countries have made the cultivation of craftsman spirit among students in higher vocational colleges in the era of artificial intelligence a necessity of the times. To cultivate students' craftsmanship spirit in the new era, we can strengthen government leadership and improve the guarantee system for the cultivation of craftsmanship spirit; strengthen collaborative guidance to cultivate a team of craftsman teachers with mathematical and intellectual competence; create a new platform for cultivating craftsmanship spirit through the integration of industry and education; Give full play to the main active role and cultivate contemporary craftsmen with both moral and technical skills.

Keywords

Artificial Intelligence; Vocational Colleges; Students; Craftsmanship.

1. Introduction

"Craftsman spirit" is the characteristic and soul of "cultivating people with moral character" in vocational education. Vocational education adheres to "cultivating people with moral character" as its fundamental task, so it must attach great importance to the cultivation of "craftsman spirit". Currently, the new generation of information technology is deeply integrated with the manufacturing industry, creating new production methods, industrial forms, business models and economic growth points. The superposition of the two era keywords "industry" and "internet" is triggering a far-reaching industrial revolution on a global scale. The Internet of Everything has become a trend, and artificial intelligence is already present and creating the future. In this trend and context, who do we want to be? What kind of people should be trained to adapt to the changes brought about by social changes? High-quality and highly-skilled talents with a new craftsman spirit have become a necessity for social development.

2. Craftsman Spirit in The Era of Artificial Intelligence

The development of artificial intelligence has brought about changes in the connotation of craftsman spirit. The connotation of craftsman spirit in the new era is mainly reflected in the following aspects:

2.1. Pioneering and innovative: the soul of craftsmanship

Pioneering and innovative is the soul of the craftsman spirit in the new era and the first driving force for development in the era of artificial intelligence. Only a country and a nation that dares to pioneer and innovate can be truly strong, and an enterprise that dares to innovate can lead the trend and thrive. The development of artificial intelligence has changed the working environment in which people live. While creating many new jobs, it will also eliminate many jobs. "In the near future, all non-innovative jobs may be replaced by machines." [1] If people want to control and command machines in the future development of artificial intelligence, they need to have the ingenuity to pioneer and innovate, and keep up with the times. Advanced innovation consciousness and innovative ability to specialize in research. Through creativity and innovation, we create value that meets the development requirements of the times.

2.2. Collaboration and common progress: the power of craftsman spirit

The era of artificial intelligence is an era where teams win. The development of a series of cutting-edge technologies such as new algorithms, cloud computing, big data, the Internet of Things, and new materials has brought about changes in the mainstream production methods of society. In the traditional sense, one person can create beautiful objects with meticulous craftsmanship. High-quality products and new production methods in the new era can rarely be completed by one person alone. The development of artificial intelligence has put forward higher requirements for team collaboration. On the one hand, it is necessary to use the power of the team to form effective communication and coordination among various departments and units, fully integrate resources, and form a collaborative pull effect. On the other hand, it is necessary to cooperate well with machines, be able to understand robots, apply robots, interact with robots, and achieve human-machine integration.

2.3. Accomplishing both moral and technical skills: the essence of craftsman spirit

The impact of artificial intelligence on modern society has put forward higher requirements for the cultivation of high-quality and highly skilled talents. Craftsmen in the era of artificial intelligence should be craftsmen who are proficient in mastering and using intelligent and professional skills, but also have the spirit of dedication, excellence, meticulousness, and pursuit of excellence. Although artificial intelligence has liberated people and copied human behavior, it cannot copy or surpass human thoughts and souls. And the real masterpieces are works that are integrated with people's thoughts and souls. Therefore, cultivating craftsmen with both moral and technical skills who master high-tech, intelligent, professional technologies and have an extreme sense of responsibility is the meaning of cultivating the craftsman spirit in the new era.

2.4. Practice it with dedication: the core of craftsman spirit

Practice brings true knowledge. No matter how good the plan is, if it is not put into practical action, everything will be zero. No matter how beautiful the dream is, if it is not realized through action, the dream can only become a fantasy. Practice drives people to discover problems, analyze problems, and then solve problems. In the era of artificial intelligence, the most distinctive feature of new craftsmen is their ability to solve problems. The process of solving problems is a process of relearning and applying knowledge and skills. New craftsmen use their existing knowledge and skills to put into production practice, become familiar with the production process through repeated practical participation, and further learn through continuous special research. Improve production technology to create a virtuous cycle of intelligent production processes.

3. The Necessity of Cultivating Craftsmanship Among Students in Higher Vocational Colleges in The Era of Artificial Intelligence

3.1. Intelligent manufacturing requires outstanding talents with craftsman spirit

Human beings are workers, producers and creators of society, and are also the most active elements in productivity. The activities of human society are ultimately realized by human social activities. Once advanced technology is mastered by people, it can bring about the development of productivity and social change. In the era of artificial intelligence, changes in new technologies have brought closer connections between people and between people and society. People are required not only to master the most advanced technology, but also to have a strong sense of innovation and learning ability. They not only need to have a craftsman spirit of excellence and meticulousness, but also a deep concern and high sense of responsibility for a community with a shared future for mankind. This kind of outstanding talents who possess high professional skills, strong intelligence level and high sense of social responsibility are the strongest driving force for the development of human society.

At present, the quality of talents in the country is uneven. Although some people have mastered strong professional skills, they stick to the rules and lack the innovative spirit to keep pace with the times. Some people, although they have a good sense of social responsibility and meticulous craftsmanship, are still struggling in the industry. There is a lack of professional capabilities and intelligent application. The number of talents who combine intelligence, specialization and high moral quality needs to be increased. Taking students in higher vocational colleges as an example, although they have good practical participation ability, they lack a strong sense of self-discipline, active exploration spirit and continuous learning determination. Without reasonable guidance from teachers, they will be more content with the status quo. It is difficult to make new breakthroughs in the professional field, and it is difficult to adapt to the demand for training high-quality and highly skilled talents in the intelligent era.

3.2. Cultivating the spirit of craftsman is the magic weapon for every country to win

Craftsman spirit is an internationally accepted concept. Due to different national conditions, although the craftsman spirit of various countries has different development processes, they have all contributed to the prosperity and development of the country's manufacturing industry. Among them, German vocational education, Japan's thousand-year knife-making skills, British suits, and the Dutch "royal supplier" can be regarded as models, and we can also get a glimpse of the essence of "craftsman spirit" from them. In Germany, vocational education is often regarded as the "secret weapon" for Germany's economic development. The "German craftsman spirit", which is characterized by slowness, expertise and precision, jointly cultivates the soul of Made in Germany. In Japan, the inheritance of craftsmanship spirit is inseparable from the cultivation of craftsmen. Japan's "craftsman spirit" is a product of competition in the industrial age. It specifically includes the connotation of quality and consciousness. It is not only the attitude and quality of excellence, concentration, and dedication, but also the attitude and quality of being good at innovation, having the courage to challenge, and looking forward to the future. sexual awareness. [2] In the United States, cultivating individual creativity is the core of cultivating "craftsman spirit". At present, with the widespread application of Internet technology in manufacturing, service industries and other fields, Western developed countries have stepped up research in high-precision industries such as mobile Internet, 3D printing, cloud computing, and big data. The cultivation of highly sophisticated talents in the field of artificial intelligence has become a national strategy for various countries.

4. Paths to Cultivate Craftsmanship Among Students in Higher Vocational Colleges in The Era of Artificial Intelligence

4.1. Strengthen government leadership and improve the guarantee system for cultivating craftsman spirit

The cultivation of craftsmanship among students in higher vocational colleges is inseparable from the support of the state and society. The state and society should increase institutional, financial, and platform support for talent training in vocational colleges. At the institutional level, through the introduction of a series of policies, we support the high-quality development of higher vocational education, form a benign environment in the whole society that attaches great importance to the cultivation of higher vocational talents, expand the output mechanism of high-quality and highly skilled talents, and enable students to identify with higher vocational education deep in their hearts. Education can also have great potential, forming a vocational education learning atmosphere that respects labor, is dedicated, has the courage to innovate, and dares to fight. In terms of funding, the government has increased its investment in vocational education. The history of education development shows that with the improvement of productivity levels, the state and social groups have gradually increased their investment in education, and education has developed accordingly. [3] The government has optimized the structure of education expenditures and tilted new education funds toward vocational education to safeguard the cultivation of high-quality and skilled talents in vocational education. In terms of platform, cloud education platforms can be used to integrate educational resources by organizing vocational skills competitions and other forms to provide channels for learning, innovation, and skill growth to improve the quality and skills of talents in higher vocational colleges.

4.2. Strengthen collaborative guidance and cultivate a team of craftsman teachers with mathematical intelligence competency

The philosopher Jaspers once said that education is like one tree shaking another tree, one cloud pushing another cloud, and one soul awakening another soul. A kneeling teacher cannot teach standing students, and a teacher without rich knowledge and superb abilities cannot teach high-quality students. The development of artificial intelligence has brought both opportunities and challenges to the teaching staff of higher vocational colleges. In terms of opportunities, the development of artificial intelligence has brought about changes in educational methods and methods, bringing new vitality to education in the traditional sense. Teachers can quickly learn about each student by using big data technology and intelligent equipment. learning situation, and use intelligent learning tools to set learning tasks that suit students' characteristics. At the same time, the use of virtual technologies such as AR, VR, and MR can bring students a more vivid and immersive teaching experience and increase students' enthusiasm for participation. However, the application of all these technologies can only be completed on the premise that teachers are proficient in intelligent technology. Therefore, for teachers, no matter what stage they are at, in addition to rich knowledge reserves, they must maintain sustainable learning capabilities and improve their personal numbers. Intellectual level and application ability are a necessity for teachers in future teaching. In addition, although artificial intelligence has brought about changes in teaching methods and teaching scenarios, it cannot completely replace teachers in completing teaching tasks. The essence of education is to educate people. In the education process, the teacher's personality charm, the teacher's moral and emotional penetration, and the teacher's role in awakening the soul with the soul cannot be replaced by artificial intelligence. The cultivation of students' craftsmanship under the condition of artificial intelligence not only does not weaken the requirements for teachers, but also strengthens the leading role of teachers. It requires teachers to constantly study

textbooks, students, society, majors, new technologies, and be good students. The leader on the road of life.

4.3. Create a new platform for cultivating craftsman spirit through the integration of industry and education

The integration of industry and education is a way for higher vocational education to combine theory and practice. Through the integration of industry and education, creating a new platform for cultivating craftsman spirit requires adhering to the "bringing in, going out" strategy. Bringing in means bringing enterprises into the campus, giving full play to their advantages and craftsmanship. Based on the latest achievements in artificial intelligence, we work with the school to develop courses, jointly formulate talent training plans, and jointly create effective learning scenarios. Going out means allowing students to enter enterprises and practical training workshops, apply the professional theoretical knowledge they have learned in practical positions, strengthen practice and application, and improve students' ability to discover, analyze and solve problems. Students in enterprises In the process of practice, through personal participation, we constantly revise our understanding of theoretical and practical issues and help students form a correct career outlook.

4.4. Give full play to the active role of the subject and cultivate craftsmen of the era who possess both moral and technical skills.

Suhomlinsky said: "Many years of educational experience have convinced me that always treating children as children is a misfortune of school education, especially family education." [4] In the era of artificial intelligence, training students The spirit of craftsmanship needs to be given full play to the active role of students under the correct guidance of teachers. Only in this way can the initiative of the main body of education be stimulated. Otherwise, no matter how good the education is, it will not wake up a sleeping soul. To give full play to the active role of students, first of all, we must stimulate students' subjective consciousness and make students realize that in the era of artificial intelligence, improving personal professionalism and intellectual literacy is a necessity for personal future life. Secondly, through multiple forms of practice, we create learning scenarios, improve student participation, and encourage students to actively explore, be willing to practice, and be brave in innovation. Finally, cultivate students' sense of responsibility and responsibility. The new craftsmanship spirit in the era of artificial intelligence is new in "responsibility". If you lose responsibility, you will also lose rules and order. If the development and application of artificial intelligence in the future lacks this sense of responsibility, it will Instead of people controlling machines, machines control people, and the development of human society will lose sight of the future.

5. Conclusion

In short, the future of mankind depends on technology, the future of science and technology depends on talents, and the future of talents depends on education. The cultivation of the craftsmanship of students in higher vocational colleges requires us to stand in the space-time field of artificial intelligence development, with a sincere heart, and use Make good use of this tool, master this tool, and train students from higher vocational colleges into new era craftsmen with high professional quality and intellectual literacy to serve the bright future of human society.

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