

The value and influence of STS educational thought on the learning results of vocational college students

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Abstract: STS educational thought has an important influence on the learning results of vocational college students. Through the trinity and mutual penetration of science, technology and society, STS educational thought can lay a solid foundation for the growth and development of vocational college students in the new era. The purpose of the strategy of strengthening the country with talents, the think tank for thinking and solving social problems, and the targeting of the basic tone of science and technology together constitute the necessary value of STS educational thought for the learning results of vocational college students. Specifically, it can be fully manifested in enhancing the thinking ability of vocational college students, developing their innovative spirit and promoting their all-round development.

Keywords: STS Educational thought; Vocational colleges; Value meaning; impact

1. Introduction

Scientific and cultural quality is an important indicator to measure the overall development of the people, as well as an important benchmark for national development. It has become the starting point and foothold for a country to formulate and implement the concept of education development strategy. Since entering the new era, the educational circles began to advocate the overall improvement of national scientific and technological literacy. For example, at the Conference of China Association for Science and Technology, the important role of scientific and cultural quality of the whole nation in the overall improvement of education level and level was expounded, and it can lay a solid foundation for the realization of universal education. At present, the academic and educational circles are thinking deeply that what kind of scientific education development model can play a greater role in promoting the scientific and cultural quality and innovation and creativity of the people, so as to form a parallel trend with the developed countries in the world today. Therefore, the country needs talents not only with profound scientific and cultural literacy, but also with superb practical skills, as well as the ability to efficiently coordinate and deal with problems. This is also the expectation for the learning results of vocational college students in recent years, and STS educational thought is an effective solution and channel.

2. A basic overview of STS educational thought

STS educational thought is an advanced educational idea centered on the trinity of Science, Technology and Society, its full English names are Science, Technology and Society.^[1] STS education thought originated in the western educational circle, and now has an important impact on the learning results of Students in Vocational colleges in China. American educators believe that STS refers to the effective teaching process or learning process within the known experience range. Many educators have carried out profound exploration and thinking on the connotation and core of STS educational thought.^[2] For example, Yeager proposed that science teaching method is the ultimate goal of STS education thought, Krom Holt proposed that the key to stimulate students' learning motivation lies in the in-depth practice and implementation of STS education thought, and Bybee explained that STS education thought is conducive to providing methodological guidance and scientific rigorous planning for students' learning path and career.

From the perspective of their own professional knowledge, many scholars and experts have analyzed the profound connotation of STS education thought. Chinese educators believe that STS education is an important concept and profound conception that conforms to the development trend of The Times and can provide strong support for the practical application of science and educational reform. Secondly, its

application point is reflected in the trinity and organic unity of science, technology and society. Based on science as the starting point, it extends to the technical and social level to guide the formulation and implementation of educational routes, guidelines and policies, so as to ensure that education is truly scientific. In a word, STS educational thought can not only train and export high-quality talents with profound scientific and cultural quality under the guidance of this concept, but also pave a solid foundation for high-quality talents to improve their exploring spirit and thinking ability on social issues. Most importantly, under the guidance of STS education, students in today's vocational colleges will have a brand new and profound understanding of the booming science and technology.

3. The value and significance of STS educational thought for the learning results of vocational college students

STS educational thought is of great value to the learning results of vocational college students. It is not only the purport of the talent development strategy, the think tank for thinking and solving social problems, but also the target of the setting tone of science and technology.

3.1. The goal of the strategy of reinvigorating China through talent

Under the background of the new era, the comprehensive implementation of the strategy of reinvigorating China with talents has put forward many new requirements for the development thinking and trend of training talents in the new era, especially for vocational college students who focus on learning practical operation skills. At present, China's economy is still in the situation of high-quality development, and all walks of life are in urgent need of high compound talents characterized by technical application. Vocational colleges of our country education emphasizes the one-stop production, management, construction and service development, at the same time of training senior technicians, also need to ensure that their knowledge and skills, the combination of reaching an omni-directional, multilevel and wide-range development, at the same time, more need to guide the vocational college students' learning effects toward the good direction, Strengthen the dual promotion of professional and technical literacy. The goal of the strategy of reinvigorating the country with talents is to train the new people of The Times to undertake the great task of national rejuvenation in colleges and universities, and to stimulate students' sense of social responsibility and dedication spirit by guiding them to pay more attention to the linear relationship between science and technology and social environment, legal issues, ethics and morality. Therefore, based on the current background of the new era, the training of students in vocational colleges in Our country must conform to the trend of The Times, strive to improve their own scientific and cultural quality and comprehensive quality, and become high compound elite talents required by the strategy of talent power.

3.2. Think tank for solving social problems

The STS educational thought can lead students to think deeply about a series of social problems today. On the one hand, in the field of biology, a series of uncontrolled biotechnology has led to many changes worldwide. For example, the advent of new genetic fertilization or cloning technology has caused governments and people all over the world to think hard about which development model society will eventually evolve towards. Can the emergence of various biological problems become the ultimate hidden danger of the future society? Perhaps STS educational thought provides an advanced thinking concept for vocational college students to learn. On the other hand, the widespread application and development of social informationization has provided a broad hotbed for intelligent crimes. Computer viruses and so on have become public hazards of the society.^[3] Students can have a clearer and intuitive understanding of their learning mission by using the thinking mode of "science-technology-society".

3.3. Science and technology set the target of the keynote

The widespread involvement and application of STS educational thought also plays a targeted role in setting the keynote of science and technology. On the one hand, in the field of nuclear technology, since the advent of nuclear weapons, people around the world have a deep fear of nuclear weapons, from Hiroshima and Nagasaki in Japan in the Second World War, two atomic bombs were dropped in succession, and now the Fukushima nuclear disaster in Japan, resulting in a large number of radioactive elements into the ocean. The frequent occurrence of this kind of accident also plays a warning role in the technical learning of vocational college students. On the other hand, the depth development of science

and technology and frequent changes, also led to the serious damage to the natural environment, including land soil secondary salinization, urbanization construction in the process of modern industrial waste gas emissions and all has a significant negative impact on the sustainable development, thus the STS education thoughts established the fundamental key of science and technology target, Broaden the comprehensive thinking mode of vocational college students greatly.

4. The influence of STS educational thought on the learning results of vocational college students

Under the background of the new era, the impact of STS educational thought on the learning results of vocational college students is mainly reflected in enhancing their thinking ability, developing their innovative spirit and promoting their all-round development.

4.1. To enhance the critical thinking ability of vocational college students

Science and technology are only two important components of STS educational thinking, and should not be the ultimate value purport. The ultimate goal and purpose of mankind's mastery of science and technology is to benefit the world. We must fully respect man's dominant position and give play to his dominant role. With a full understanding of science and technology, we must make the best of the situation, seek advantages and avoid disadvantages, and ensure that the excellent achievements of science and technology are truly shared by the people and the world.^[4] On the basis of rational utilization and allocation of effective resources, the author thinks about the harmonious relationship between science and technology and natural society, and pursues the universal truth of human cognition and transformation of the world with the inner truth. Therefore, vocational colleges students in daily speaking practice and skills in the process of learning, must establish justice, objective and comprehensive manner, the correct understanding of science and technology of the "double-edged sword" influence on the social development, in the process of a series of solid exercise, profoundly cognitive ultimate value orientation of social development, with the power of the scientific growth ability, armed with technical power of the mind at the same time, Learn to use the kinetic energy of the society to shape their own values, through repeated practice and understanding, use STS educational thought to enhance their own critical thinking ability.

4.2. To develop the innovative spirit of vocational college students

Innovation is the process of achieving a new goal on the basis of fully grasping the law of development of things. The goal of talent training requires higher education to cultivate high-quality specialized talents and innovative talents. Therefore, to meet the needs of the overall talents in the society, it has become an inevitable requirement to have certain innovative ability. At present, the demand for talents with innovative ability is more urgent than ever, which is also an important direction for colleges and universities to improve the quality of talent training. Scientific spirit is not only the basis for scientific and technological workers to continuously obtain research results, but also the basic quality that people should have in their work and life, as well as the ideological principles that a country and a nation need to uphold for continuous development. At present, the comprehensive innovation ability of college students in higher vocational colleges is relatively weak, which is mainly reflected in the disconnection between theory and practice, the low ability to solve practical engineering problems, and the low ability to understand and deal with the relationship between technological innovation and natural and social environment in their professional fields. STS educational thought emphasizes the relationship between science and technology and society, and attaches great importance to students' participation in teaching and practical activities, which is conducive to cultivating students' innovative consciousness and practical ability to the greatest extent. Therefore, higher vocational colleges should incorporate STS education into daily teaching work, combine theoretical teaching and technical practice teaching with social production and application, so that students can acquire solid theoretical knowledge and practical skills, and systematically cultivate their theoretical analysis ability and problem solving ability.^[5]

4.3. To promote the all-round development of vocational college students

"Integration of arts and science" is an educational thought put forward by Cai Yuanpei, a famous educationist and scientist in China. He pointed out that there were many differences between the two subjects and suggested that they should be combined as one subject.^[6] The implementation of STS educational concept is one of the important ways to realize the integration of arts and sciences. It is

particularly important to carry out STS education and promote the integration of arts and sciences to cultivate students' comprehensive quality in higher vocational colleges. STS education is beneficial to take social factors into science education, emphasis on cultivating students' quality of science and technology and the humanities quality, train the ability of participation, decision, improve in terms of overall comprehensive analysis problem solving skills, develop knowledge of interdisciplinary knowledge and science technology, sustainable development and environmental protection knowledge and scientific method, Enhance the scientific spirit and scientific ethics and other aspects of cognition, pay attention to the formation of correct social value orientation in decision-making and practice.

5. Conclusions

In the current vocational education process, students need to be guided by STS education thought. On the basis of the reform and innovation of classroom teaching mode, vocational colleges must form an effective open teaching space and a realistic platform for the cultivation of the three dimensions of science, technology and society. The STS educational thought can fully stimulate the enthusiasm, initiative and creativity of vocational college students, form the cultivation of social responsibility and social dedication consciousness, and provide continuous spiritual support and value guidance for the sustainable development of society and the high-quality development of economy.

References

- [1] Pan Hua.(2006). *Discussion on higher Vocational Education and STS Education Thought*. *China Science and Technology Information* (07),266+268.
- [2] Zheng Yang.(2008). *The Enlightenment of American Vocational Education Curriculum Reform under STC Concept*. *Journal of Jiangsu Radio and TV University* (04),86-88.
- [3] Li Huiqin, Li Peihan, Wang Lingxi.(2011). *The Application of STS Education Concept in Yunnan Secondary Vocational Education*. *Continuing Education* (02),29-32.
- [4] Feng Wei, Wang Daben.(2015). *Research on the Training mode of "green Innovative Talents" based on STS Education thought*. *Journal of Taiyuan City Vocational and Technical College* (03),97-98.
- [5] Zhang Ruyi.(2021). *Huang Yanpei's Thought of Vocational Education on ideological and Political Construction of Employment and Entrepreneurship Education curriculum in Higher Vocational Colleges under the background of the New Era*. *Journal of China Multimedia and Network Teaching* (mid-10)(10),189-191.
- [6] Sun Ping.(2019). *The Origin of the Educational thought of "Blending arts and Science"*. *Essays on Modern Education* (03),9-14.