

Original Paper

Research on Promoting the Spirit of Scientists among Normal University Students under the Background of New Liberal Arts—A Case Study of Educational Technology

Sun Yue¹

¹ Inner Mongolia Normal University, Hohhot, China

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Abstract

The spirit of scientists is the precious spiritual wealth accumulated by scientific and technological workers in the long-term scientific practice, and it is an important driving force to promote national development and progress. Normal university students are the promising youth who forge ahead and also are the future educators, who are responsible for the inheritance and dissemination of knowledge and spiritual civilization. Only by cultivating the spirit of scientists can normal university students promote the spirit of scientists better, which is profit for the younger generation to cultivate patriotic feelings and strengthen patriotic belief. It is also profit for cultivating the innovative and practical consciousness and gathering strength of enriching the people and strengthening the country. Moreover, it is profit for stimulating the spirit of dedication and coordination of the students, gathering strength for realizing the Chinese dream of national rejuvenation. Only in this way can the spiritual connotation of scientists be sown more deeply and widely in people's hearts. The new liberal arts initiates that colleges and universities should break barriers between disciplines, deepen interdisciplinary integration, and integrate into modern educational technology. Normal colleges and universities should strengthen science education, improve the scientific literacy of normal university students constantly, promote the spirit of scientists throughout the whole process of education. They can break barriers between disciplines in the context of new liberal arts, so that normal university students establish ideals and beliefs, strengthen their convictions, and promote the spirit of scientists better. Educational technology, as a normal major, is an emerging discipline that integrates contemporary educational science and information technology science. It contains both theory and technology and aims to improve learners' information technology literacy and scientific literacy. Advanced information technology is not only an important factor to promote the further development of

humanities and social sciences, but also an important tool of spreading the spirit of scientists. Similarly, the development of educational technology disciplines requires the support of the new liberal arts to avoid falling into the misunderstandings of technology-only theory and application-only theory. This paper takes educational technology, which is a typical interdisciplinary subject of arts and sciences, as an example to explore the path of integrating the spirit of scientists into normal university students' spiritual blood under the background of new liberal arts.

Keywords

new liberal arts, spirit of scientist, educational technology, interdisciplinary integration

1. Introduction

Since the Ministry of Education proposed to comprehensively promote the “Four News” construction of new engineering, new medicine, new agriculture, and new liberal arts in 2018, the new liberal arts has immediately attracted great attention from the educational and academic circles. On April 29, 2019, the “Six Excellences and One Top-notch” Plan 2.0 marked that the construction of new liberal arts and others entered into the policy implementation stage officially. The new liberal arts provides learners with comprehensive interdisciplinary learning. It has the general characteristics of humanities and social sciences, and at the same time shows some new characteristics, such as cross-integration and support of new technologies. Promoting the spirit of scientists needs to depend on the new liberal arts. Because it contains both humanities, social science and technology, besides the formation of science cannot be separated from two major traditions, namely the tradition of scholars and the tradition of craftsmen. In the context of the new liberal arts, it is more conducive to promote and cultivate the spirit of scientists, stimulate the innovative vitality of all kinds of talents, and integrate the spirit of scientists into the spiritual blood of normal university students. Only in this way can we build a global talent highland more effectively. Through the construction of new liberal arts, we can fertilize the soil of innovative culture and cultivate a new generation of people in the times who is full of the spirit of scientists.

There is no doubt that under the background of new liberal arts, normal university students of educational technology major could promote the spirit of scientists better. The concept of realizing the connotative development of higher education was put forward in the 19th National Congress of the Communist Party of China. As a practical application-oriented discipline major in China, the understanding and development of educational technology require a dual vision of “discipline” and “interdisciplinarity”. The train objective of educational technology major, which is a second-level discipline of pedagogy, consists of the cultivation of scientific literacy, technical literacy, and related spiritual connotations. Therefore, taking educational technology major as an example, it is more typical to explore the path for normal university students to carry forward the spirit of scientists in the context of new liberal arts.

2. Literature Review

Zhou Zongwei (1999) proposed that we should not only advocate technological innovation and pursue efficient modern education, but also pursue high-quality education which integrates humanistic thoughts, promotes each other, develops jointly, and reflects wisdom. We should also ensure the healthy development of education, embody the humanistic spirit and attach importance to humanistic care in educational thoughts. Otherwise, we need to promote efficient and high-quality teaching by integrating modern technological means actively, and make educational technology and humanities integrated, so as to achieve a balanced development of science, technology and humanities. The report of the Party's 20th National Congress clearly pointed out that education, science and technology, and human resources are the foundational and strategic pillars for building a modern socialist country in all respects. We will continue to give high priority to the development of education, build China's self-reliance and strength in science and technology, and rely on talent to pioneer and to propel development. We will speed up work to build a strong educational system, greater scientific and technological strength, and a quality workforce. We will continue efforts to cultivate talents for the Party and the country and comprehensively improve our ability to nurture talents at home. All this will see us producing first-class innovators. Liu Tiantian and Li Peiqin (2024) mentioned that the construction of a powerful country and talents training cannot be separated from spiritual support. The spirit of scientist is a valuable spiritual wealth formed by the majority of scientific and technological workers in the long-term scientific practice, which can encourage college students of new era to have confidence, determination and will to climb the scientific peak. Ding Yi (2024) believes that the spirit of scientist is the organic unity of scientific spirit and humanistic spirit.

Through the review of the academic history, it is not difficult to see that scholars have done a lot of researches on various dimensions of the new liberal arts, scientist spirit, and educational technology. However, under the background of the new liberal arts, there are few researches on promoting the spirit of scientist, especially those based on interdisciplinary research are relatively scarce. This paper attempts to take the new liberal arts as background, aiming mainly at promoting the spirit of scientists, by relying on the typical comprehensive discipline-educational technology as an example, to explore an effective path for normal university students to carry forward the spirit of scientists by using interdisciplinary.

3. The Purpose and Significance of Cultivating the Spirit of Scientist among Normal University Students

In all historical periods of revolution, construction and reform, the Communist Party of China has always attached great importance to scientific and technological undertakings, focused on implementing the workforce development strategy, and created a good ecological environment for talents innovation. In May 2019, *the Opinions on Further Promoting the Spirit of Scientists and Strengthening the Construction of Work Style and Study Style*, issued by the Party Central Committee, demands to carry forward the spirit of scientists. The spirit of scientists, with “patriotism, innovation, truth-seeking, dedication, coordination and education” as its core, is the common wealth of the whole society. The connotation of the spirit of scientists embodies the Chinese strength and Chinese value, and supports the long-term development of China’s scientific and technological undertakings as our spiritual wealth and strength. Promoting the spirit of scientists among normal university students is of great practical significance for carrying out the innovation-driven development strategy, implementing the fundamental task of moral education in colleges and universities, and training top-notch innovative talents to deal with the challenges from great power.

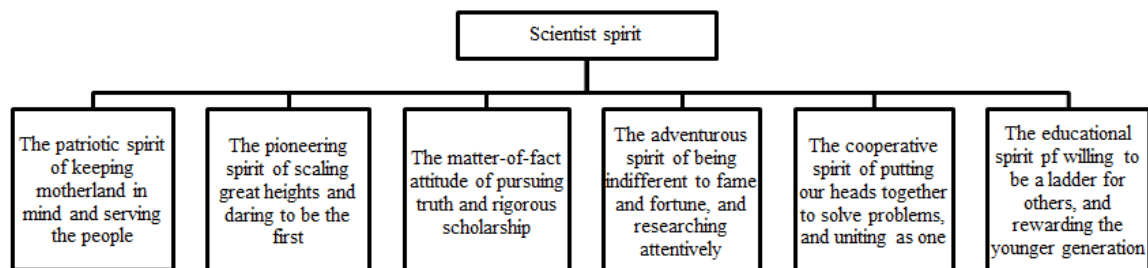


Figure 1. Scientist Spirit

3.1 Promoting the Spirit of Scientists among Normal University Students Is the Fundamental Requirement for the Realization of the Great Rejuvenation of the Chinese Nation.

“The spirit of scientists is a valuable spiritual wealth accumulated by scientific and technological workers in long-term scientific practice”. This is an important speech made by General Secretary Xi Jinping at the symposium for scientists in September 2020. The Party and the state attach great importance to promoting and cultivating the spirit of scientists among normal university students. Normal university students are future teachers who undertake the mission of cultivating talents for the Party and the country. Only by cultivating the spirit of scientists among normal university students can we promote it further, which is the fundamental requirement for the realization of the great rejuvenation of the Chinese nation.

3.2 Promoting the Spirit of Scientists among Normal University Students Is an Effective Path to Implement Moral Education

Promoting the spirit of scientists among normal university students is the Party's educational policy, an effective path to implement the fundamental task of moral education, and an important means to promote the development of education connotation of normal university students in the new era. The training goal of normal university students is closely connected with moral education. Teaching and educating people is the mission of normal university students who need to constantly cultivate talents for motherland. The scientist spirit covers patriotism, innovation, truth-seeking, dedication, collaboration and education. Integrating the systematic and profound spirit of scientists into the cultivation of normal school students can provide theoretical support and practical reference for the continuous and healthy promotion of education work and implement the fundamental task of moral education better.

3.3 Promoting the Spirit of Scientists among Normal University Students Is an Important Part of Ideological and Political Education

As a value and code of conduct, scientist spirit is an important content and method for implementing ideological and political education. The great rejuvenation of the Chinese nation must rely on the development of advanced productive forces which is produced by science and technology. Integrating the spirit of scientists into the ideological and political education of normal school students is conducive to cultivating students' spiritual outlook of scaling great heights and forging ahead, strengthening their ideals and beliefs. Integrating the scientist spirit into the ideological and political education of normal university students is conducive to cultivating students' spirit of climbing the peak and forging ahead, firm ideals and beliefs, filling the gaps in the scientific field with practical actions, and delivering talents with firm beliefs, professional skills and practical ability for the development of advanced productive forces in modern society.

3.4 Promoting the Spirit of Scientists among Normal University Students Is an Important Embodiment of Socialist Core Values

The socialist core values are the core, the highly condensed and concentrated expression of the socialist core value system. We should cultivate and practice the core socialist values. Focusing on cultivating a new generation of people in the new era who are capable of shouldering the great task of national rejuvenation, we should strengthen educational guidance, practice cultivation, and institutional guarantees. We should integrate the core socialist values into all aspects of social development by producing its effect of national education, the creation of spiritual civilization, and the creation, production and dissemination of spiritual and cultural products, thus turn it to people's emotional identity and behavior habits. The patriotism, dedication, truth-seeking, collaboration, innovation and education of scientists spirit are also important manifestations of socialist core values. Promoting the spirit of scientists among normal university students, in other words, is practice of the core socialist

values.

4. The Paths and Methods

The key of educational technology is education and technology. As a secondary discipline of pedagogy, educational technology takes technology as a tool and has a unique theoretical knowledge system in the cultivation of professional talents. It is an interdisciplinary which studies educational technology phenomena and their rules. In recent years, with the launch of the “Education Informatization 2.0 Action Plan” and the deep impact of emerging technologies such as big data and artificial intelligence on educational practice and innovation, new changes have been promoted in the training direction of educational technology talents. On the one hand, we pay attention to training the theoretical research level of disciplinary talents under the guidance of new media, new technology, new ideas and new method. On the other hand, we pay attention to training the practical innovation ability of disciplinary talents. The development and talents training of education technology should be in keep with the goal of the construction of new liberal arts. Meanwhile, relying on advanced means of science and technology and information technology, education technology focuses on the cultivation of the scientists spirit of normal university students. Therefore, taking education technology major as an example, this paper explores the paths and methods of promoting the scientist spirit of normal university students from multiple dimensions.

4.1 A Triple Integrated Model of Constructing Humanistic Consciousness, Strengthening Practical Application and Strengthening Spiritual Construction

The integration of technology and education is an important part of the construction of new liberal arts. The goal of cultivation of education technology students in normal universities is adhered to moral education, devote to cultivate talents who serves for the cause of socialist modernization and promote the development of education. Therefore, the spirit of scientist among normal university students should be promoted from three dimensions—humanistic consciousness, technical practice and spiritual connotation, to build a triple overlapping mode and deeply root the scientist spirit in an all-round way.

4.2 Innovating Educational Methods

To promote the spirit of scientists among normal university students, we should focus on innovating theoretical education methods, deepening their understanding of the main connotation of the scientists spirit, and consolidating the theoretical basis for integrating the spirit of scientists into the education of normal university students. Teaching design, which is the core course of educational technology major, can find a breakthrough point for promoting the spirit of scientists among normal university students, select the teaching content carefully, and integrate the teaching content better. Through teaching media and scientific teaching methods, we can transmit the knowledge point of the scientists spirit, enhance its emotional identification, and promote it better.

4.3 Establishing Multiple Evaluation Mechanisms

To promote the integration of the scientist spirit into the training of normal university students, it is necessary to establish a multiple evaluation mechanism, of which the evaluation should integrate the spiritual characteristics of the scientist spirit. The evaluation of promoting the spirit of scientists among normal university students directly affects the results the integration of the spirit of scientists into students. Education technology pays attention to the exploration and implementation of evaluation mechanism. Therefore, we can establish multiple evaluation mechanisms, fully integrate process evaluation and summative evaluation, formulate targeted evaluation scale, and examine from multiple dimensions such as summary, practice, theory and application. Thus, it will be helpful for forming an effective evaluation mechanism and even incentive mechanism, guiding normal university students to cultivate and promote the spirit of scientists deeply.

4.4 Using Information Technology Means to Open Up the Education Position for Normal University Students to Promote the Spirit of Scientists

The extensive use of information technology has become an important factor to promote the further development of humanities and social sciences. Educational technology, which is based on information technology, makes full use of the progress of modern science and technology to promote the development of itself and the modernization of education. It is a necessary way to carry forward the spirit of scientists by using information technology means to create an educational position in line with the characteristics of contemporary normal university students.

5. Result

The spirit of scientists is the crystallization which is formed in the growth of several generations of scientists and the practice of scientific and technological development of China, and is a concentrated reflection of Chinese excellent traditional culture and the spirit of the era of reform and opening up. Carrying forward the scientist spirit is an important way for promote colleges and universities' moral education, cultivate contemporary talents, adapt to the development of the new era and the all-round development of young people. It will be helpful for promoting the development of science and technology in our country, advancing the country's modernization process, and cultivate new people of the times for the great rejuvenation of the Chinese nation. In the context of the new liberal arts, it is of great significance and era connotation for normal school to promote the inheritance and development of the spirit of scientists and cultivate new people of the times with the spirit of scientists. Only by building the triple fusion mode of constructing humanistic consciousness, strengthening practical application and strengthening spiritual construction, innovating educational methods, establishing multiple evaluation mechanisms, and using information technology means to open up the education position, can we better promote the spirit of scientists among normal university students under the background of new liberal arts.

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