Известия Гомельского государственного университета
имени Ф. Скорины, № 5 (158), 2026

УДК 377.3 EDN: QAKKKA

Peculiarities of training students of vocational schools for innovative activities

HU ZIQI, E.E. KOSHMAN

This article analyzes the literature on innovation in China, as well as systemic innovations in higher vocational education from the perspective of developing highly qualified personnel in three main areas. Research on the innovation activities of students in vocational schools is systematized. It is found that the research is primarily divided into two independent areas, preventing a comprehensive and systematic approach. The role of educational institutions in preparing students for innovation is analyzed.
Keywords: student, vocational school, innovation, innovative activity, research, education.

В данной статье анализируются литературные источники по инновационной деятельности в Китае, а также системные инновации высшего профессионального образования с точки зрения воспитания высококвалифицированных кадров по трем основным направлениям. Проведена систематизация исследований по инновационной деятельности обучающихся в профессиональных училищах. Выявлено, что исследования, в основном, распределены по двум независимым направлениям, что не позволяет получить комплексного и систематического подхода в их изучении. Анализируется значение образовательных учреждений в подготовке обучающихся к инновационной деятельности.
Ключевые слова: обучающийся, профессиональное училище, инновация, инновационная деятельность, исследование, образование.

The Chinese Party and government place a high priority on the cultivation of highly skilled workers, and many higher vocational colleges focus on the cultivation and formation of personal and professional qualities of students. However, in the process of formation and development of various qualities in the educational process of the college, there are many unresolved theoretical problems that affect the quality of education and preparation of students for innovative activities. For example, there is no policy to support innovative activities; the evaluation system of higher vocational colleges is unreasonable; the policy for constructing dual qualifications for teachers is unclear; there is a lack of support for enterprises necessary for the training of highly qualified personnel; there are no conditions for the training of highly qualified personnel in higher vocational educational institutions; there is insufficient equipment and teachers necessary for the training of highly qualified personnel; the system of higher vocational education is inflexible; a unified academic education cannot meet the needs of society in the training of professional personnel [1]. On the one hand, these problems hinder the development of higher vocational education, on the other hand, they also hinder the training of highly qualified personnel.

Researcher Douglas K. North, having studied the course of economic growth in the United States, Great Britain, and other countries in depth, discovered that, assuming constant technology, institutional reforms can improve production efficiency, thereby achieving the goal of promoting economic growth [2]. Similarly, the education system is an extremely important educational resource, capable of reducing transaction costs in education and defining the scope of educational interests. Therefore, fundamental educational reform depends on the reform of the education system.

Institutional innovations are the source of higher education development, and the institutional environment is a critical environmental variable influencing behavioral decisions, resource allocation, and the management effectiveness of higher education institutions, and plays a role in facilitating or hindering the development of higher education. Educational system factors are increasingly recognized as a key factor in the development of modern higher education. To address the challenges facing the development of higher education and the training of highly qualified workers, it is necessary to begin with a systemic study and introduce innovations into the existing higher education system so that it can meet society's needs for the training of highly qualified employees.

Although innovations were initially used primarily in economics, some researchers have also applied them to higher education research. How can we understand systemic innovation in higher education? According to systemic innovation theory, the education system influences the effective-

ness of education and is a key factor in the development of higher education. An effective education system can facilitate the development of higher education, and a higher education system corresponds to the level of effectiveness of higher education development. It should be noted that the superiority of one higher education system over another is explained by its higher level of effectiveness. Since institutional innovations are the decisive force behind the development of higher education, innovation in higher education therefore involves replacing, transforming, and exchanging the existing higher education system with a more effective one.

In 1985, the Central Committee of the Communist Party of China adopted the Regulation on Education System Reform, marking the beginning of higher education reform in China. Since then, the higher vocational education system, as part of the overall higher education system, has continuously improved and developed. The connection between higher vocational education and the market economy is particularly close and rapid, and over more than 20 years, higher vocational education has achieved significant progress in research, but a market-oriented mechanism for independent governance of higher vocational colleges has not been truly established. Meeting the economic development need for highly qualified employees through institutional innovation is a lesson worth learning.

The study of innovation in higher education from the perspective of training highly qualified personnel is a relatively new topic. Although a number of studies on this issue currently exist, as well as numerous indirect findings that can be used as reference materials, these studies are primarily divided into two independent areas (research on innovation in higher education and research on training highly qualified personnel), which precludes a comprehensive and systematic approach to their study.

The development of higher professional education began with studies of the higher education system, and the results of this research were presented in various articles, research papers, scientific papers, and a number of dissertations. The main findings of these studies can be summarized as follows.

1. Research on innovations in the system of higher professional education from the point of view of management. In 2003, Mr. Pan Maoyuan noted that the development of higher vocational education in China was facing a «contradiction between correct strategic decisions and incompatible policies and measures», and that the higher vocational education system needed reform. In 2004, in the preface to the book «Research on the Development of Higher Vocational Educatio», Mr. Pan again emphasized that many problems related to understanding, orientation, technical aspects, and employment in higher vocational education needed to be analyzed, recognized, and resolved at the level of the education system [3]. This points to the direction of research in the field of higher vocational education, and it is necessary to focus the attention of specialists on the higher vocational education system itself.

In the article «Institutional Innovation of Higher Vocational Education in Undergraduate Colleges» (2002), Zhu Yue investigated the institutional innovation of higher vocational education in undergraduate colleges and suggested that higher vocational education in undergraduate colleges should be governed by the public and people. Researcher Huang Weijun and other authors of the work «System Analysis of Higher Vocational Education in China» (2005) analyzed the current situation of higher vocational education in China, noting that systemic inconsistency is the main obstacle to the development of higher vocational education, and the right of independent management of educational institutions is the key factor [4].

In his article «Analysis of Countermeasures to Improve the Governance System of Higher Vocational Education in China» (2006), author Sui Zhicheng noted that the governance system of higher vocational education in China is relatively inflexible compared to the conventional higher education system [4]. Among the numerous problems, he believed it was necessary to study various forms of school governance, implement autonomy of school governance, comprehensive monitoring, and establish a quality assessment system for higher vocational education.

Researcher Mr. Yang Jintu in his article «Education in China Lagging Behind in Its Endeavors» (2005) noted that, compared with the reform of the economic system in China, Chinese education is clearly lagging behind. This lag is mainly due to the country's major policies, the ideas expressed in the leaders' speeches and relevant documents, as well as the education system and educational policy [5]. The lagging system and policy in resource allocation leads to a lack of public welfare in the education sector, which hinders the diversification of educational types, while vocational education is fur-

ther neglected in the unbalanced system and political environment of resource allocation. The backward system and policy in student admission have damaged some types of education and some educational institutions, so vocational education is the first to bear the brunt of the negative impact.

2. Research from the political text point of view. In his work «Review and Reflections on the Reform and Development of Higher Vocational Education in China» (2005), Chen Yaling examined and assessed the content, achievements, and losses of four stages of higher vocational education development in China from the perspective of political text analysis [6]. It is noted that the policy of higher vocational education should be innovative, and higher vocational education should be more closely integrated with the market and the front line of production, construction, management, and service in terms of the management system, operation mechanism, teaching mode, teaching content, and curriculum system.

3. Research of systemic innovations from the perspective of professional education. In his article «Innovation in the Vocational Education System from the Parallel Vision of Education» (2003), Zhang Shezi considered innovation in the vocational education system from the perspective of educational equality and noted that, based on the general needs of individual and social development, vocational education should occupy an equal position with general education in terms of concept and conditions [7]. Based on the search for equivalence between vocational and general education and striving to solve practical problems, he proposed the basic concept of innovation in the vocational education system in the parallel vision of education. In his article «Solving Institutional Obstacles to Vocational Education Requires Systemic Innovation» (2005), Xing Hui fundamentally eliminated the institutional obstacles that have arisen in the development of vocational education and pointed out the need for a breakthrough in systemic innovation. Systemic innovation should conform to the principle of «overall government planning, departmental cooperation, market relations, resource integration, and cooperation between educational institutions and enterprises» to achieve systemic and mechanism innovation.

In his 2006 article «Some Policy Suggestions for Improving China's Vocational Education System», Wu Fusheng put forward a series of policy proposals for improving China's vocational education system, including strengthening the link between vocational education and general education, accelerating the reform of the personnel provision system, and strengthening cooperation between schools and enterprises. In his 2007 article «Construction of a Modern Vocational Education System», Zhuang Xizhen divided the evolution of China's vocational education system into three stages. In the first stage (from the mid-19th century to the 1940s), the vocational education system of Europe and America was mainly transposed. In the second stage (1949–1980), the vocational education system of the former Soviet Union was transposed. Since the 1980s, the vocational education system in Europe and America (including Germany, Australia, and other countries) has been transplanted [7]. The development of the vocational education system in China has a pronounced state character.

In his monograph «On the Development of Higher Vocational Education» (2004), Wang Minglun focused on the higher vocational education system and suggested that systemic innovation is the goal of higher vocational education development, state-owned and private enterprises are the chosen direction for higher vocational education development, sustainable development is the eternal theme of higher vocational education development, and the combination of industry, universities, and science is the only path to higher vocational education development.

4. Dissertations devoted to innovations in the system of higher professional education. Liu Jing's dissertation «A Study of China's Higher Vocational Education System» did not examine the problems of China's higher vocational education system in depth, and the analysis was somewhat one-sided. Wu Siwen's research paper «Economic Analysis of the Higher Vocational Education System», analyzes the higher vocational education system from the perspective of institutional economics, taking four perspectives: property rights theory, transaction cost theory, agency theory, and institutional change theory. However, this analysis is insufficiently relevant to China's national context.

There are doctoral dissertations on innovation in the educational system, such as «Generation and Transformation of Educational System – An Outline of New Institutional Pedagogy» (2001) by Dr. Kang Yongjiu, which studies the educational system using the method of new institutional economics. Some doctoral dissertations study institutional innovation in higher education from the perspective of educational economics, such as «Economic Analysis of Innovation in Higher Education

System» by Dr. Cui Yuping (2001) and «Economic Analysis of the Functioning of Higher Education System» by Dr. Wu Wenjun (2006). There are also doctoral dissertations that study institutional change from a cultural perspective, such as «Institutional Change in Chinese Higher Education and Cultural Perspectives» by Dr. Lei Xiaoyun (2006). There are doctoral dissertations devoted to the study of vocational education system, such as «Vocational Education System from the Perspective of the Great Vocational Education» by Dr. Dong Renzhong (2008) and «Analysis of Vocational Education System» by Dr. Sun Meilu (2008).

Our analysis revealed a current dearth of research (especially monographs) devoted to the development of highly qualified personnel in China. To date, only two monographs have been published on the subject. One, «Training Highly Qualified Personnel» (2001), edited by Li Zongyao et al., presents the first comprehensive study of highly qualified personnel and notes that the methods and mechanisms for developing highly qualified personnel within the higher vocational education system are insufficient to enable enterprises to play a role in their training. The other, «Developing Highly Qualified Personnel: Research and Practice» (2005), edited by Bi Jieli, examines the issue from the perspective of developing highly qualified personnel within enterprises.

The analysis of government legislation revealed the Action Plan for the Revival of Education for 2003–2007, developed by the Ministry of Education, which provides for the «active development of vocational education and the training of a large number of highly qualified personnel» [8]. Analyzing this document, one can conclude that higher professional education is designed to develop highly qualified personnel.

Thus, the existing research literature on the topic of our study can be roughly divided into three categories: studies devoted to the development of highly qualified personnel in higher vocational educational institutions; studies devoted to the development of high-tech personnel in enterprises; and studies devoted to the development of highly qualified personnel in technical schools, colleges, and other educational institutions. The results of scientific research are most often published as articles, and there is not a single scientific study focused on the specifics of preparing vocational school students for innovative activity.

References

1. Wang, Q. Paths of professional and innovative integration in the field of vocational education in China / Q. Wang // Pedagogy and education. – 2025. – № 1. – P. 12–16.

2. Liu, S. Comparison and integration: innovative approaches to reforming education in universities / S. Liu, I. Man // Pedagogical science. – 2024. – № 6. – P. 38.

3. Sun, L. Construction of a deep integration model of «double innovation» of education and vocational education in the new era / L. Sun, N. Wang, Sh. Wang // Journal of Anhui Agricultural Sciences. – 2024. – № 52. – P. 24.

4. Wang, J. Construction and reflection of the modernization of higher education in China / J. Wang. – Beijing : Intellectual Property Publishing House, 2017. – 88 p.

5. Yin, Da. Modernization of higher education : Basic connotation, time characteristics, and implementation paths / D. Yin, F. Xu // Shandong Higher Education. – 2015. – № 11. – P. 19–23.

6. Mao, R. Foundations of the modernization of higher education in China / R. Mao. – Kunming : Yunnan Educational Publishing House, 2015. – 126 p.

7. Sui, Y. Rational thinking on the modernization of higher education / Y. Sui // Chinese Higher Education. – 2014. – № 10. – P. 1–10.

8. Yang, T. Research on the modernization of the higher education management system within the framework of synergy theory / T. Yang // Shandong education. – 2021. – № 13. – P. 3.

Гомельский государственный
университет имени Франциска Скорины

Поступила в редакцию 04.11.2025