

REVIEW

PhD in Economics, Associate Professor, Associate Professor of the Department of Management named after L.I. Mykhailova

Sumy National Agrarian University

Tetyana Kharchenko

for the dissertation work of a graduate student of the Department of Management named after L.I. Mikhailova Zhao Hejun on the topic «Innovative System for Personnel Management in Chinese Vocational Education Institutions», submitted to obtaining the degree of Doctor of Philosophy in the field of knowledge 07 - Management and administration in specialty 073 - "Management"

1. Relevance of the dissertation topic. In the process of China's economic cooperation with countries around the world and the extensive use of advanced technology and equipment to achieve economic development, vocational education provides an important guarantee of skilled talents for social and economic progress and development. With the further development of the Chinese economy and the continuous improvement of industrial form, China's vocational education has ushered in a new era of rapid development and innovative reform, which also puts forward new requirements for the personnel management ability and level of Chinese vocational education institutions. Through a detailed study of the theories and methodological principles of modern vocational education personnel management, the strategy of constructing an innovative system for personnel management in Chinese vocational education institutions will propose feasible solutions for innovating the personnel management system in Chinese vocational education institutions, thereby enhancing the overall strength and level of Chinese vocational education and better serving the country's economic construction and development, which determines the relevance of this topic.

2. Connection of work with scientific programs, topics, plans. The dissertation was carried out following the directions of research work of the Department of Management of the Sumy National Agrarian University: «Development of management in the context of international integration processes» 2019-2023 (state registration number 0119 U001336), within the PhD student investigated the main trends and evaluated the foreign experience of personnel management of the vocational educational institution.

3. Scientific novelty of the obtained results. The author substantiated the relevance and choice of the research topic at a sufficient scientific level and determined the research goal, tasks, object, and subject. The research methods used in the work are accompanied by proper reasoning. The goal of the dissertation research - the improvement of theoretical and methodological principles and the development of practical recommendations for personnel management of vocational educational institutions - has been fully achieved.

The scientific novelty of this study lies in the following key aspects:

The dissertation aims to establish a structural model for assessing the competencies of managers in vocational education institutions. The primary objective is to facilitate innovative management practices within these institutions. The proposed model comprehensively analyzes 17 different aspects of competency and categorizes them into six distinct dimensions. What sets this model apart from existing ones is its consideration not only of fundamental capabilities but also of exceptional management skills. These higher-level skills are crucial for attaining sustainable development in vocational education, ultimately leading to improved operational quality and institutional growth.

The innovative evaluation method for determining the construction level of teachers in vocational education institutions is based on the hierarchical structure model of the analytic hierarchy process. This method calculates the scientific index weight by analyzing the comparative judgment matrix and conducting consistency tests on the hierarchical sequence.

Among the scientific results of the dissertation, the innovation of the evaluation method for the construction level of the teaching staff in vocational education institutions is very noteworthy. It is more scientific, reasonable, and operable than existing methods. The dissertation designs 15 three-level indicators based on four dimensions: optimization of teacher structure, teacher assessment system, dual teacher model, professional construction and teaching reform.

A systematic analysis was performed to address the limitations of the existing personnel management information system in vocational education institutions in China. This analysis considered feasibility, functionality, and management processes, utilizing JAVAEE technology, Servlet, SSH framework, SQL SERVER database, and development environment. As a result, a novel concept for personnel management in vocational education institutions, leveraging modern information technology, was introduced. This concept serves as a foundation for the development of a more advanced and efficient personnel management system specifically tailored for vocational education.

The management concepts, human resource ratio imbalance, and lack of innovation within vocational education institutions were thoroughly examined and evaluated. With a focus on the future direction of vocational education, recommendations have been put forth to enhance the capabilities and attributes of management personnel at three different levels: national policies, administrative bodies, and personal development. These proposals aim to address the identified issues and improve the overall management efficiency in vocational education.

4. Practical significance of the obtained results of research. The practical significance of the obtained results is beyond doubt. From a scientific and practical perspective, the most important thing is the results of the dissertation work: through a combination of theoretical analysis and empirical investigation, the factors that affect the personnel management of Chinese educational institutions have been identified, and a model of the competency of vocational education institution managers has been formed. We have improved the assessment system for the teaching staff of vocational education institutions based on scientific principles. Innovated the methods and strategies of personnel management in Chinese vocational education. Overall, the

dissertation proposes a set of innovative, scientific and reasonable conclusions to address the scientific issues of personnel management in vocational education institutions, providing new ideas and strategic development suggestions for the administrative management departments and institutional managers of vocational education in improving personnel management work.

5. The main results obtained personally by the author. Zhao Hejun's dissertation consists of an introduction, three sections, conclusions, a list of references, and appendices, which are laid out on 206 pages of the main text, including 15 tables, and 46 figures. The list of used literary sources contains 164 items on 18 pages and 3 appendices.

The *introduction* to the dissertation contains all structural elements, including information on the practical testing of the research results, as well as the personal contribution of the author in scientific works published in co-authorship.

In *the first section* of the dissertation, Zhao Hejun discussed the theory and methodological principles of modern vocational education personnel management through thematic research and theoretical summary, and focused on exploring the systematic methods and innovations of human resource management in vocational education institutions. Author also analyzed the development trend of vocational education institutions under market conditions. By drawing on the experiences of Switzerland, Finland, Germany, France and other countries, China has continuously improved the development environment of vocational education, promoted the cultivation of technical and skilled talents, and achieved new breakthroughs in development. Combining fuzzy mathematics with Analytic Hierarchy Process, based on the principles of fuzzy mathematics, using fuzzy operation rules to quantify fuzzy factors, innovatively using fuzzy mathematics methods for comprehensive evaluation of teacher team construction, and designing relevant indicator systems. Constructing a hierarchical structure model using Analytic Hierarchy Process, exploring the use of reciprocal scaling method to construct a judgment matrix, normalizing the eigenvectors of the matrix to obtain indicator weights, and conducting consistency checks to obtain weight assignments for relevant indicators.

In *the second section* of the dissertation, Zhao Hejun analyzed the current situation of personnel management innovation in China's vocational education, and based on the current situation of China's social and economic development, summarized that China's vocational education should improve the level of collaborative governance among multiple subjects, adhere to government guidance, enhance the effectiveness of industry organization guidance, and further enhance the level and ability of interactive development between China's vocational education and the economy. The author divides the competence of managers in Chinese vocational education institutions into six levels: analytical and inductive ability, decision-making and planning ability, communication and organization ability, leadership and demonstration ability, evaluation and inspiration ability, and core competitive ability. They are respectively classified as basic leadership ability and excellent leadership ability. Based on the results of the questionnaire survey, the current situation of the competency of managers in vocational education institutions in China was analyzed, and the existing problems were pointed out. Based on the

competency model, strategies for improving and enhancing competency were proposed.

In *the third section* of the dissertation, strategies for building an innovative personnel management system in Chinese vocational education institutions were discussed. The author first sorts out and summarizes the innovative experience of personnel management systems in foreign vocational education institutions, analyzes the effective personnel system, relevant experiences and practices of vocational education institutions in countries such as Europe, America, and Japan, and proposes that the construction of personnel management systems in vocational education institutions in China needs to be tailored to local conditions, further improve organizational system construction, smooth talent flow channels, and innovate the training methods for teaching staff. By focusing on innovative incentive methods, we can effectively break through existing management models and achieve new changes, thereby maximizing the value of talents and helping vocational education institutions develop better. According to the characteristics of different regions in China, three different strategies were discussed: innovation in personnel management system based on strategic human resource management, innovation in personnel management system based on improving service level, and innovation in personnel management system based on excellent performance management model. Discussed the logical starting point and main manifestations of the economic effects of vocational education in China. On the basis of analyzing the high degree of homogenization in talent cultivation in vocational education in China, the poor balance of vocational education development, the imperfect cooperation mechanism between schools and enterprises, and the disconnection between talent cultivation and market demand. It is proposed that the interactive development of vocational education and economy in China must adhere to the principle of people-oriented development, the principle of balancing public welfare and economy, the principle of integrating localization and internationalization, the principle of clear rights and responsibilities, and the principle of multiple checks and balances/ Furthermore, innovative guiding principles were proposed to improve the level of collaborative governance among multiple entities, adhere to government guidance on vocational education governance, enhance the effectiveness of industry organization guidance, promote the full play of the role of enterprise entities, and strengthen the independent execution ability of vocational education institutions. Based on the needs of constructing modern information based personnel management model for vocational education institutions, the dissertation analyzes the feasibility, system functions, and management processes to demonstrate the requirements for a modern information based personnel management system for vocational education institutions.

The *conclusions* to the dissertation summaries the main provisions that specify the content of the performed research and the obtained results following the tasks and the general purpose of the study.

The *appendices* contain a questionnaire prepared by the author based on existing relevant research, as well as an outline of interviews with managers and teachers of vocational education institutions.

An analysis of the plagiarism check report for the presence of textual borrowings (Strike plagiarism program) was carried out. The reviewers came to the conclusion that the dissertation work Zhao Hejun on the topic «Innovative System for Personnel Management in Chinese Vocational Education Institutions» is the result of independent research of the recipient and does not contain elements of plagiarism and borrowing in accordance with the resolution of the CMU dated 12.01.2022 No. 44, paragraph 9. Used ideas, results and texts of other authors have a link to the corresponding source.

6. Completeness of presentation of the dissertation material in scientific publications. Scientific provisions, recommendations, conclusions of the dissertation covered by Zhao Hejun in 13 scientific works, namely: 2 articles in a scientific publication, which is included in the international scientometrics database Scopus, 5 articles in scientific professional editions of Ukraine, 1 section collective monograph and 5 works of an approbation nature.

Scientific works reflecting the main scientific results of the dissertation:

1. Stoyanets, N., Zhao, H., & Li, G. (2020). Modernization of vocational education in the context of rural human resources development in China. *Agricultural and Resource Economics: International Scientific E-Journal*, 6(1), 76-90. <https://doi.org/10.51599/are.2020.06.01.06> (Scopus) (the author conducted the conceptualization, data curation, formal analysis, and investigation, designed the methodology, and prepared the original draft).

2. Xia, Y., Qu, D., Stoyanets, N., & Zhao, H. (2022). Policy evolution of personnel management in Chinese educational institutions: A comprehensive policy circle analysis. *Problems and Perspectives in Management*, 20(4), 544-559. [https://doi.org/10.21511/ppm.20\(4\).2022.41](https://doi.org/10.21511/ppm.20(4).2022.41) (Scopus) (author conducted the data collection and collation, designed the methodology, and participated in original draft preparation).

3. Zhao Hejun, Stoyanets N., Li Guohou (2021) Management, modernization and countermeasures of rural vocational and technical education *International scientific journal "Internauka". Series: "Economic Sciences"*. 2021. №2. <https://doi.org/10.25313/2520-2294-2021-2-6936> (the author developed the methodology, conducted the literature collation, and prepared the original draft).

4. Zhao, H., Stoyanets, N., Cui, L., & Li, G. (2022). Strategy of vocational education adapting to social and economic development. *Journal of Innovations and Sustainability*, 6(1), 03. <https://doi.org/10.51599/is.2022.06.01.03> (the author developed the methodology, conducted the literature collation, and prepared the original draft).

5. Zhao Hejun (2022). Study of assessment of the efficiency of quality management in vocational and technical education through industry integration *Науковий вісник Одеського національного економічного університету Збірник наукових праць № 9-10 (298-299), 2022* DOI:10.32680/2409-9260-2022-9-10-298-299-7-13

6. Nataliya Stoyanets; Zhao Hejun (2023). Methodological approaches to the management of vocational and technical education institutions on the background of informatization *Молодий вчений*, 1 (113), 40-44.

<https://doi.org/10.32839/2304-5809/2023-1-113-9> (the author developed the methodology, conducted the literature collation, and prepared the original draft).

7. Zhao Hejun (2023). Implementation of an innovative index system in the management of vocational education institutions in CHINA. *Economy and Society*, 2023. № 51. DOI: 10.32782/2524-0072/2023-51-46

The main terms and results of the dissertation research are disclosed by the author at conferences and seminars, among which the most important are 6th International Scientific Conference on Knowledge based Sustainable Development ERAZ 2020 (May 21, 2020, Belgrade), All-Ukrainian Scientific Conference of Students and Postgraduate Students (Sumy, Ukraine, November 14, 2022), Sustainable Development in Wartime Ukraine and the World: Multidisciplinary Conference for Young Researchers (November 25, 2022, Prague), the VII International Scientific and Practical Conference "Modern Management: Trends, Problems and Development Prospects" (Dnipro, Ukraine, April 14, 2021), the XIX International Scientific and Practical Conference "Problems of Enterprise Management in modern conditions" (Kyiv, Ukraine, April 18-19, 2023).

7. Remarks and wishes for the content. From the text of the dissertation submitted for review, a conclusion can be drawn about the scientific maturity of the applicant: he ability to see current problems in the field and her willingness to solve them at a sufficiently high scientific level. In general, Zhao Hejun's dissertation is an entirely independent study in its content and form. Positively assessing the scientific and practical significance of the dissertation, one should point out several debatable provisions:

- In subsection 1.1, the author draws on the concepts, systems, and innovations of foreign vocational education. Consideration should be given to including analysis and discussion of relevant experiences in Ukrainian vocational education.

- In subsection 1.3, the author discusses the systematic approach and innovation in human resource management in vocational education institutions. The main theoretical basis of human resource management needs to be discussed.

- In subsection 2.3, the author investigates the current situation of the competency of managers in vocational education institutions. The impact of the differences in vision of the three different groups of managers, teachers, and students on the survey results should be considered.

- In subsection 3.1, more empirical evidence should be provided to demonstrate the scientific and accurate path of personnel management reform in Chinese vocational education institutions.

- It is advisable to check for stylistic and grammatical errors throughout the dissertation.

However, the expressed comments and wishes do not reduce the research's overall high quality. The analysis of the dissertation and scientific papers gives reason to conclude that Zhao Hejun dissertation on the topic «Innovative system for personnel management in Chinese vocational education institutions » is a completed, independently performed scientific work that has significant theoretical and applied significance. The dissertation solves a specific scientific task of developing

theoretical provisions and methodological principles and formulating practical model and recommendations to improve the effective personnel management of vocational educational institutions in China.

8. Correspondence of the dissertation to the specialty and profile of the council.

Zhao Hejun's dissertation on the topic «Innovative System for Personnel Management in Chinese Vocational Education Institutions», which was submitted for defense to the specialized academic council for obtaining the degree of Doctor of Philosophy in the field of knowledge - 07 Management and administration, specialty - 073 Management according to its relevance, scientific-theoretical level, main results of justification, main provisions and results published in professional publications, novelty of the production and practical significance, it meets the requirements of the order of the Ministry of Education and Science of Ukraine № 40 from 12.01.2017 «On approval of requirements for the preparation of a dissertation» and Resolution of the Cabinet of Ministers of Ukraine dated from 12.01.2022 № 44 «On approval of the Procedure for awarding the degree of Doctor of Philosophy and cancellation of the decision of the one-time specialized academic council of a higher education institution, scientific institution on awarding the degree of Doctor of Philosophy» with changes introduced in accordance with Resolution of the Cabinet of Ministers № 341 from 21.03. 2022. The content of the dissertation corresponds to the passport of the specialty.

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