

REVIEW

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of Marketing and Logistics

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for **Fu Yanjun** dissertation on the topic «**Management of innovative processes in higher education institutions**»,

applied for the degree of Doctor of Philosophy

from the field of knowledge 07 – Management and administration

in the specialty 073 – Management

1. Relevance of the topic of the dissertation. The modern world is changing and evolving, buzzing with a rich volume of information that has short-lived relevance. In such informational conditions, the contemporary individual must adapt to a corresponding rhythm, quickly process, qualitatively analyze, and critically evaluate the present. The demands of modernity dictate their own rules, filling reality with innovations that provide broad opportunities in utilizing global resources. Life has become partially easier due to innovative possibilities but paradoxically more complex due to constant adaptation to the rapid pace of development. People live in conditions of constant change, and the demands placed on them as individuals acquire new qualities. Innovativeness is an important component of the future society. The quality of education is always a priority for any state. A modern society, which has acquired an informational-digital character, requires competent specialists who easily master information and communication technologies, apply them in their practical activities, are flexible to change and innovation implementation, capable of seeking and creating paths for personal and environmental development, which is filled with constantly increasing volumes of information and updates. The implementation of innovative technologies in the educational environment is one of the main facets of the development of higher education institutions and the acquisition of innovative competence, without which the educational space will not be as highly effective and competitive. The manager of an educational institution and their approaches and management styles play a direct role. Therefore, to ensure quality management of innovative processes, it is important to identify organizational and economic conditions that affect the state of management of innovative processes. The above determined the relevance and practical significance of Fu Yanjun dissertation «Management of innovative processes in higher education institutions».

2. Connection with scientific topics. The dissertation work was carried out in accordance with the research plan of the Department of Finance, Banking and Insurance and Management of Sumy National Agrarian University: «Formation of a

management mechanism for innovative development of a higher education institution» (state registration number 0121U108135), where the author investigated the evaluation system of physical culture and sports management in colleges and universities, as well as within the framework of the topic «Development of management in the conditions of international integration processes» (state registration number 0119U001336), in which the author investigated the main trends and evaluated the foreign experience of managing physical education in colleges and universities.

3. Scientific novelty and theoretical significance of the dissertation. The dissertation contains a number of formulated and substantiated scientific propositions that have theoretical and practical significance. We consider the following to be the most important scientific results:

first obtained:

- an innovative application of marketing theory based on the 4I principle of Internet marketing to the study of the university library knowledge service was proposed by creating a micromedia platform, which aims to provide a basis for the library to develop a marketing plan for the knowledge service and plays an important role in the development and modernization of the librarianship, which, in turn, will contribute to the development and modernization of information services of higher education institutions and, in the final case, will ensure the provision of quality educational services;

improved:

- an artificial intelligence-based innovation management system for higher education institutions by changing the basic theory of artificial intelligence, focusing on the research of theories, methods, tools and systems related to artificial intelligence and focusing on first-class talents and high-level think tanks in key fields innovations of artificial intelligence, strengthening of international academic exchange and cooperation of higher education institutions.

- regulation of the university administration, which must go through two stages: the administrative management of innovative processes entails an increase in administrative efficiency and success. The management of innovation processes focuses on 4 aspects: compliance with rules, specialization, impersonal management and hierarchical control, which ensures the efficiency of the organization of internal administrative processes and is the basis for improving the university administration for the effective management of higher education institutions.

- the credit risk management system of private institutions of higher education by recognizing the targeted nature of the use of credit funds and the quasi-community of educational services aimed at improving the work of private educational institutions and the quality of teaching, consists of five levels:

management environment, risk estimation, management activities, information and communication and internal development and is able to provide an effective mechanism for reducing a high degree of risk, which in the future will contribute to the economic growth of the territories in the future.

further development:

- theoretical principles of creating an effective management system for innovative processes in institutions of higher education, which are based on the main theories of management and provide for their synergistic influence due to considering the size of the educational institution, the distribution of subjects and disciplines, the formation of an organizational system with effective control and coordination at lower levels in order to realize differences between the needs of human capital and the dynamism of the development of economic systems for the development of educational institutions and society as a whole.

- substantiation of approaches to state support for the management of innovative processes in institutions of higher education, which is based on the strategy of creating «world-class» universities in China and, unlike existing approaches, eliminates the imbalance of regional economic development and stimulates the creation of an effective management mechanism for the use of state investment funds based on set of evaluation indices: investment in education, infrastructure investment, scientific research, investment in innovation and additional investment in education for the long-term development of educational institutions and is based on the use of the Tobit regression model.

- methodological approaches to the construction of an effectively functioning system of evaluation of research projects with an innovative focus in higher education institutions based on the use of the Delphi expert evaluation method by selecting 6 indicators of the first level and 20 indicators of the second level, among which the educational technologies occupy the largest share, scientific research achievements are in second place, and educational technologies are in third place.

4. Practical significance of the results of the dissertation.

The scientific significance of the research results lies in the solution of important scientific and applied research on the management of innovation processes in higher education institutions. The practical significance of the results obtained in the work lies in the applied application of the proposed set of methodological principles and applied suggestions in the process of managing innovation processes in higher education institutions.

Proposals regarding the organization of physical education in colleges were reflected in the activities of the Separate Structural Unit «Sumy College of the Sumy National Agrarian University».

5. The main results obtained personally by the author. The dissertation is

a complete scientific work. Her manuscript contains a complete set of structural elements corresponding to the established requirements: abstract, introduction, three sections, conclusions, list of used sources, appendices. The total volume of work is 202 pages. The work contains 36 tables and 10 figures. The list of used literature includes 187 sources. The dissertation is enriched with logical schemes, structured tables, graphic interpretations, which allow to comprehensively perceive the conducted research as a detailed and generalized scientific work.

In the first chapter «*Theoretical and methodological basis management of innovative processes in higher education institutions*» the innovation direction of the university management system under the guidance of the scientific development; the evolution of scientific development concept on the innovative nature of the university management system and modern theories of management of innovative processes in higher education institutions was considered. Four main theories of management were studied. Their advantages and disadvantages are determined, which consider the specifics of the activities of educational institutions in China. Hierarchy theory emphasizes differences in the division of labor at different levels of management of educational institutions. The size of the institution, the distribution of subjects and disciplines, the formation of an organizational system with effective control and coordination at lower levels should be considered when creating an innovative management system.

In the second chapter «*Analysis of the current state of management of innovative processes in a higher educational institution*» the issue of the peculiarities of state financial support for the development and management of innovative activities of educational institutions, modeling of the success of the development of educational institutions, the marketing and promotion of intellectual services based on the micromedia model as a component of innovative processes in higher education institution. The problem of low investment efficiency remains, which to some extent leads to an imbalance in regional economic development; secondly, China's higher education institutions still lack an effective investment management mechanism. Institutions of higher education cannot take full advantage of public investment for their development, which leads to inappropriate use of educational funds and low efficiency of costs and results, which seriously limits the long-term development of colleges and universities. It is noted that from the point of view of analyzing regional differences in the efficiency of allocations for higher education, the government takes as an example the eastern, central and western regions of China. Four hypotheses are proposed. Data analysis is used to measure the performance of public investment in the development of educational institutions, and comprehensive efficiency is divided into scale efficiency and pure technical efficiency.

The third section «*Future trends of innovative processes in a higher educational institution*» considers the issue of the strategy of using artificial intelligence as a basis for introducing innovations in the management and development of a higher educational institution, risk management of credit projects in a higher educational institution, and innovations in the management of human resources of higher educational institutions based on the Delphi method. The aspect of human resource management innovations in higher education institutions is dominated by expert opinion, which is based on an isolated assessment of project content and does not have an effective index system as a reference. Based on a detailed study of scientific works, the principles of evaluating the effectiveness of scientific research projects are proposed, as well as the use of the Delphi method to create performance evaluation systems for teachers in various types of colleges and universities. A team of 32 experts representing HR departments was selected and after three rounds of feedback and modifications, 6 first-level indicators and 20 second-level indicators were selected. Among the indicators, educational technologies occupy the largest share, scientific research achievements are in second place, and educational technologies are in third place.

In terms of content, structure and design, the dissertation fully meets the requirements of the Ministry of Education and Science of Ukraine. The work is written in English, which does not contradict Article 22 of the Law of Ukraine «On Ensuring the Functioning of the Ukrainian Language as a State Language».

An analysis of the plagiarism check report for the presence of textual borrowings (Strike plagiarism program) was carried out. The reviewers concluded that the dissertation work Fu Yanjun on the topic «Management of innovative processes in higher 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. Number of scientific publications. The scientific provisions of the dissertation work were published by the author in 12 scientific works, of which 2 articles were published in a scientific specialist publication included in the Scopus/WoS database, and 2 articles were published in specialized publications of Ukraine. The number of publications is sufficient to present the thesis for defense.

Scientific publications meet the requirements of clauses 8, 9 of the Procedure for awarding the degree of Doctor of Philosophy and canceling the decision of the one-time specialized academic council of a higher education institution, scientific institution on awarding the degree of Doctor of Philosophy (Decree of the Cabinet of Ministers of Ukraine dated January 12, 2022, No. 44). Acquaintance and detailed analysis of the presented scientific works makes it possible to assert that the elements

of scientific novelty, on which the dissertation is positioned, are fully explained in the articles and theses of the reports. The content of the publications, the characteristics of the publications in which they are placed meet the requirements for the publication of the scientific provisions of the dissertation work. Of the scientific works published in co-authorship, only the author's work was used in the dissertation, as indicated in the list of publications. Thus, there are reasons to claim that the dissertation research contains the author's scientific vision regarding the achievement of the set goal and the solution of the specified scientific and applied task.

7. Remarks and wishes regarding the content. In general, while positively assessing the scientific and practical significance of the research, the dissertation has certain shortcomings and debatable points.

1. The author devotes considerable attention to the theoretical foundations of constructing an effective management system for innovative processes in higher education institutions, based on fundamental management theories and envisages their synergistic impact (page 49). It would be pertinent to analyze them from the perspective of international experience and the feasibility of implementation.

2. In section 2.1 of the dissertation, the author examines the peculiarities of state financial support for the development and management of innovation activities in higher education institutions, considering regional specifics. For instance, on page 80, classifications of Chinese provinces according the type of state financial support are provided: ineffective, with average efficiency, and highly effective. Questions arise regarding the criteria for such division. Moreover, the dissertation would benefit significantly if this issue were considered in dynamics from 2012 to 2020.

3. The author's research on the effectiveness of teaching and resource provision of certain disciplines in higher education institutions is interesting. So, on pages 96-101, the disciplines are grouped into 20 categories: G1-G20. However, neither from the text of the dissertation nor in the appendices provided is it clear which disciplines are included in each group. This issue requires detailed discussion.

4. We unquestionably agree with the author's viewpoint regarding the adoption of artificial intelligence as a driver for implementing effective management of innovative processes in higher education institutions (section 3.1.). The necessity to alter the fundamental theory of artificial intelligence is acknowledged, focusing on the exploration of theories, methods, tools, and systems associated with artificial intelligence. However, the concentration of higher education institutions on top-tier talents and high-level analytical centers, as well as the reinforcement of international academic exchange and cooperation, requires further detailed analysis and justification.

5. Section 3.2 of the dissertation is dedicated to the development of the risk management system as a component of credit risk management in higher education institutions, with emphasis placed on private higher education institutions (pages 136-138). It would be worthwhile to explore the possibilities of using elements of the proposed risk management model for state higher educational institutions as well.

However, these remarks only serve to further illustrate the complexity and multi-faceted nature of the problem addressed in the dissertation and do not significantly impact its scientific and practical significance.

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

The dissertation work of Fu Yanjun on the topic «Management of innovative processes in higher 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 the cancellation of the decision of the one-time specialized academic council of a higher education, scientific institution on awarding the degree of Doctor of Philosophy» with changes introduced in accordance with Resolution of the Cabinet of Ministers №341 21.03.2022. The content of the dissertation correspondence to the passport of the specialty.

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