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METHODOLOGICAL APPROACHES TO THE FORMATION OF READINESS FOR RESEARCH ACTIVITIES OF FUTURE MASTERS

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Annotation

This article analyzes the theoretical and practical aspects of the formation of readiness for research activities of master's students. The components of readiness for research activities are identified and the pedagogical conditions for its development are based. The results of the study showed that a systematic approach is important in the development of research competencies of master's students.

Keywords: master's degree, research activities, readiness, research competencies, professional training, pedagogical model, innovative education.

Introduction

Today, the acceleration of the pace of science, technology and innovative development in the world poses new and complex tasks for the higher education system. The intellectual potential, economic development and competitiveness of modern society largely depend on the effective organization of research activities and the level of training of highly qualified scientific and pedagogical personnel. In this regard, the formation of readiness for research activities of students studying at the master's level is one of the priority tasks of the higher education system.

In the Republic of Uzbekistan, special attention is paid to the modernization of the higher education system, strengthening the integration of science and production, and training qualified specialists for the innovative economy. This requires master's students not only to have deep theoretical knowledge, but also to have the competencies to conduct independent scientific research, identify problems, develop scientifically based solutions, and apply research results in practice. One of the main goals of master's education is to train future scientists, researchers, and scientific and pedagogical personnel for higher education institutions. However, practice shows that some master's students lack sufficient knowledge of research methodology, and the skills of independent analysis of scientific problems, writing scientific articles and dissertations, and summarizing and presenting scientific results are not fully formed. This situation creates the need to improve the mechanisms for forming readiness for scientific research activities.

Also, the widespread introduction of digital technologies, artificial intelligence, large-scale data processing, and modern information and communication tools into scientific activities requires new competencies from researchers. In order for master's students to adapt to these modern conditions and effectively conduct scientific activities, it is important to develop a research culture, critical thinking, an analytical approach, and innovative thinking in them.

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The relevance of this issue is also due to the fact that the readiness of master's students for research activities is one of the important factors determining their future professional success, scientific potential and pedagogical skills. Specialists who are ready for research activities make a worthy contribution to the quality of education and the development of science, promote innovative ideas and ensure the intellectual development of society.

Therefore, the development of theoretical foundations for the formation of master's students' readiness for research activities, the improvement of pedagogical mechanisms and their practical effectiveness are one of the current scientific problems of pedagogical science today.

In the context of the modernization of the higher education system, one of the important tasks is to train highly qualified, independent-thinking and capable specialists in scientific research. The master's degree serves not only to deepen professional knowledge, but also to develop research skills.

The modern labor market and the development of science require masters to have the competencies to identify research problems, develop scientific hypotheses, analyze research results and implement them in practice. Therefore, the formation of master's students' readiness for research activities is an urgent scientific and pedagogical problem.

The purpose of the study is to identify and substantiate effective methods for forming master's students' readiness for research activities.

In the research process, a set of theoretical and empirical research methods was used to comprehensively study the problem of forming master's students' readiness for research activities. The choice of research methods was made based on the content, goals and objectives of the problem under study.

First of all, the method of analyzing scientific and pedagogical, psychological and methodological literature was used. Through this method, the theoretical foundations of the problem of forming the readiness of undergraduates for scientific research activities were studied, the scientific views of domestic and foreign scientists were analyzed, and the conceptual apparatus of the study was clarified.

Using the comparative analysis method, the ideas put forward by different scientific schools, pedagogical approaches, and researchers were compared. As a result, effective methods and pedagogical conditions for forming the readiness of undergraduates for scientific research activities were identified.

The observation method was used to study the participation of master's students in educational and scientific activities, to assess their activity, independence and creative approach in the research process. Observations were conducted during master's classes, scientific seminars, practical processes and activities at scientific conferences.

The questionnaire method was used to determine the attitude of master's students to scientific research activities, their motivation, research competencies and level of preparation for scientific activity. The results of the questionnaire were statistically processed and analyzed in accordance with the research objectives.

The interview method made it possible to study the opinions of master's students and professors on the organization of scientific research activities, to identify existing problems and their solutions. The interviews were conducted individually and in groups.

The pedagogical experimental method was used to test the effectiveness of the model for forming the readiness of undergraduates for research activities. During the experiment, pedagogical influences aimed at developing the research competencies of undergraduates were implemented through specially organized training sessions, scientific seminars, project work and independent research assignments.

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The methodological basis of the study was a systematic, person-oriented and active approach. The systematic approach made it possible to study the readiness of undergraduates for research activities as a holistic system consisting of interrelated components. The person-oriented approach served to take into account the individual capabilities, needs and interests of each undergraduate. The active approach served as the basis for the formation of the necessary knowledge, skills and competencies through the direct involvement of undergraduates in research activities.

The methods of analysis, synthesis, systematization and generalization were used to process and summarize the data obtained. This served to ensure the reliability and scientific validity of the research results.

Methods

The following methods were used in the research process:

• analysis of scientific and pedagogical literature;
• comparative analysis;
• observation;
• questionnaire survey;
• interview;
• generalization of the results of pedagogical experience.

The methodological basis of the study was a systematic, person-oriented and active approach.

Results

The results of the study showed that the readiness of undergraduates for scientific research activities consists of the following components:

1. Motivational-value component - interest in conducting research and professional need.
2. Cognitive component - knowledge of scientific research methodology.
3. Practical component - skills in using research methods.
4. Personal component - independence, responsibility, reflection and creativity.

A model for forming the readiness of undergraduates was also developed. The model consists of motivational-goal, content-technological and result-evaluation blocks, and their interrelationships were determined.

Discussion

The results of the study showed that the formation of undergraduates' readiness for research activities is a complex and multifactorial pedagogical process. This process involves not only teaching undergraduates scientific knowledge, but also developing in them research thinking, independent research skills, creative approach and ability to solve scientific problems.

The analysis showed that the readiness of undergraduates for research activities is largely related to their motivational state. Undergraduates with a high interest in scientific activities are more actively involved in research processes, work independently with scientific sources and strive to acquire new knowledge. Therefore, the widespread use of pedagogical technologies aimed at forming internal motivation in graduate education is of great importance.

The study revealed that scientific seminars, roundtables, scientific conferences, project work and independent research assignments play a special role in developing the readiness of undergraduates for research activities. These types of activities allow undergraduates to integrate theoretical knowledge with practice, develop scientific thinking and form skills in presenting scientific results.

The results of the study also confirmed that the effectiveness of cooperation between the scientific supervisor and the undergraduate directly affects the development of research competencies. Methodological assistance, scientific advice and regular monitoring provided by the scientific

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supervisor are important factors in overcoming difficulties in the research activities of undergraduates and achieving scientific results.

The results obtained are consistent with the scientific views of domestic and foreign scientists. Many researchers emphasize that the readiness of undergraduates for research activities is formed on the basis of the harmonious development of motivational, cognitive, practical and personal components. The results of our study also confirmed these scientific conclusions and showed that each of these components plays an important role in the formation of a graduate student as a researcher.

In addition, it was found that the effective use of modern digital technologies and information and communication tools is one of the important conditions for improving the research activities of master's students. Electronic libraries, scientific databases, bibliographic managers and information systems based on artificial intelligence significantly increase the efficiency of master's students' work with scientific information.

Based on the results of the discussion, it can be noted that in order to form the readiness of master's students for research activities, it is necessary to create special pedagogical conditions in higher educational institutions. These include a research-oriented educational environment, provision of modern information resources, involving master's students in participating in scientific projects and grants, expanding the activities of scientific seminars and conferences, and improving the scientific management system.

Thus, the results of the study showed that the effectiveness of forming the readiness of master's students for research activities is determined by the interaction of pedagogical, psychological and organizational factors. The comprehensive provision of these factors serves to develop the scientific potential of future specialists and increase their professional competence.

The results obtained showed the need to create special pedagogical conditions aimed at developing research competencies in the process of master's education. In particular, independent research work, scientific seminars, conferences and project work serve as an important factor in increasing the scientific potential of master's students.

The results of the study are consistent with the conclusions of other scientific works conducted in the field and serve to improve the quality of master's education.

Conclusion

The results of the study confirmed that the formation of master's students' readiness for research activities is one of the priority tasks of the higher education system. Based on the requirements of modern education and science, it is important to develop research competencies in master's students, form scientific thinking and form skills for independent scientific research.

During the study, it was determined that the readiness of master's students for research activities is formed on the basis of the interrelation of motivational-value, cognitive, practical and personal components. The harmonious development of these components serves to develop the competencies of master's students in identifying scientific problems, planning scientific research, correctly selecting research methods, analyzing results, and drawing scientific conclusions.

The results of the study showed that the use of systematic, person-oriented and active approaches in the formation of master's students' readiness for scientific research activities is effective. The educational process organized on the basis of these approaches allows to increase the scientific activity of master's students, develop their independent work skills and form a research culture.

It was also found that scientific seminars, practical research, project activities, scientific conferences and the process of working on a master's thesis are important tools for developing the scientific potential of master's students. Effective cooperation with the scientific supervisor, the use of

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modern information and communication technologies and the effective use of scientific information resources also have a positive effect on increasing the level of preparation.

As a result of the research, a model for the formation of master's students' readiness for research activities was developed and its components were substantiated. This model, including motivational-targeted, content-technological and result-evaluation components, serves to gradually develop the research competencies of master's students. In conclusion, the formation of master's students' readiness for research activities is an important factor in increasing the professional competence of future scientific and scientific-pedagogical personnel. The results of the research serve as the basis for improving the content of master's education, effectively organizing research activities, and developing scientific and methodological recommendations that serve to train competitive specialists. In the future, it is advisable to expand the scope of experimental work in this area and develop modern criteria for assessing the research competencies of master's students. The formation of master's students' readiness for research activities is one of the important tasks of the higher education system. Through the targeted development of motivational, cognitive, practical and personal components of readiness, it is possible to train highly qualified and competitive specialists. The results of the research can serve as a scientific and methodological basis for improving the process of master's education.

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