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RESEARCH COMPONENTS IN SCHOOL EDUCATION

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Annotation

This article discusses ideas on improving the content of education based on the experiences of foreign trends in modifying educational forms, as well as enhancing the normative foundations for organizing students' small-scale research activities in the educational process based on innovative approaches. The theoretical analyses conducted, relying on scientific sources, and their methodology are also devoted to instilling research skills in students from school age, helping them understand its essence, and forming specific scientific conceptual characteristics.

Keywords

Forms of education, research skills, pedagogical principles, technologies, methodologies, innovative environment.

Annotatsiya

Ushbu maqolada ta’lim mazmunini xorijiy tendensiyalarning ta’lim shakllari modifikatsiyalariga oid tajribalari asosida takomillashtirish, ta’lim jarayonida o‘quvchilarning kichik tadqiqotchilik faoliyatini innovatsion yondashuvlar asosida tashkil qilishning me’yoriy asoslarini takomillashtirilishi haqida fikrlar bildiriladi. Ilmiy manbaalarga tayangan holda olib borilayotgan nazariy tahlillar va ularning metodologiyasi hamda oquvchilariga maktab yoshidan boshlab tadqiqot ko‘nikmalarini singdirishga va uning mohiyatini anglashga, shuningdek xos ilmiy konseptual xususiyatlarni shakllantirishga bag‘ishlangan.

Kalit so‘zlar

Ta'lim shakllari, tadqiqot ko‘nikmalari, pedagogik qonuniyatlar, texnologiyalar, metodologiyalar, innovatsion muhit.

Аннотация

В данной статье высказываются мнения о совершенствовании содержания образования на основе опыта зарубежных тенденций модификации образовательных форм, совершенствовании нормативной базы организации малой исследовательской деятельности студентов в образовательном процессе на основе инновационных подходов. Оно посвящено теоретическому анализу и его методологии, основанному на научных источниках, и призвано привить учащимся со школьного возраста исследовательские навыки и понять его суть, а также сформировать конкретные научные концептуальные особенности.

Ключевые слова

Образовательные формы, исследовательские навыки, педагогические принципы, технологии, методики, инновационная среда.

INTRODUCTION

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In our country, the content of education is being improved based on the experience of foreign trends in the modification of educational forms, the normative framework for organizing students' small research activities in the educational process based on innovative approaches is being improved. For this, it is necessary for future teachers to come to the stage of general secondary education in a prepared state. In the development of this area, the main goal is to "raise the content of higher education to a qualitatively new level, establish a system for training highly qualified personnel who will make a worthy contribution to the sustainable development of the social sphere and economic sectors, and find their place in the labor market"[1] Priority tasks such as indicate the need to further expand the methodological capabilities of blended learning. This requires the development of a methodological model for preparing students for research activities in blended learning and the improvement of didactic support and pedagogical conditions for its implementation in practice.

LITERATURE ANALYSIS

The explanatory dictionary of S.I. Ozhegov defines the concept of "research" as follows: "Research is usually a process of in-depth study of an issue or phenomenon, its comprehensive consideration, clarification based on a specific goal, and as a result, coming to scientific conclusions. This process is at the heart of scientific study and is one of the characteristics of scientific activity."[2].

The English equivalent of this term is the verb "research". Linguist V.K. Muller, analyzing the semantic structure of this word, divides it into two main parts: "re" - "again, repeatedly", "search" - "to search, examine, experiment". Thus, the concept of "research" actually means a scientific study activity carried out in a deep, repeated and systematic manner within a certain field of knowledge.[3].

Theoretical analyses and its methodology, conducted on the basis of scientific sources, allow us to understand the inner essence of the research topic, identify its inherent scientific conceptual features, as well as previously unexplored problems and current aspects. In particular, A. Derkach puts forward the following idea: "Research in pedagogy is an activity aimed at solving problems arising in the processes of education, training and upbringing using scientific knowledge methods. According to him, scientific research is understood as a theoretically and practically based activity aimed at developing methodological solutions in the organization of the educational process, identifying the principles of teaching subjects and pedagogical laws."

In general, scientific research can be classified and studied based on their various aspects. The following types of research are found in the classifications given in the sources:

fundamental tadqiqot;

- *amaliy* tadqiqot;
- *innovatsion* tadqiqot.

Fundamental research, also known as basic scientific research, is a theoretical or experimentally based scientific activity aimed at a deep understanding of the structure,

1 O'zbekiston Respublikasi Prezidenti 2019 yil 8 oktabrdagi "O'zbekiston Respublikasi oliy ta'lim tizimini 2030-yilgacha rivojlantirish konsepsiyasini tasdiqlash to'g'risda"gi PF-5847-son Farmoni. - URL: https://lex.uz/docs/-4545884.

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functional properties and development mechanisms of man, society and the natural environment. The main goal of this type of research is not to develop direct practical solutions, but to create a basis for the development of science by identifying new, previously unknown scientific knowledge.

Applied research is a research activity aimed at applying new knowledge, solving specific problems and achieving practical goals.

Thus, we can consider research activities as a set of scientific research aimed at searching for and forming new knowledge about the structure, functional mechanisms and development laws of man, society and the natural environment through scientific work, and applying them based on practical needs. Therefore, scientific research activities should include, in addition to fundamental research conducted on the basis of theoretical analysis, applied research that directs existing scientific results to solving real-life problems.

These two types of research - one provides for the expansion of knowledge, and the other for its application in practice. Therefore, the harmony of these directions is important in any excellent scientific activity.

Innovative research - provides a motive, motivation or impetus for conducting research, in which a person's interest and desire to know the new participates; practical research serves to satisfy the need to solve a specific practical problem through the power of incentive (stimulus) and personal initiative.

The following opinion of M.N. Skatkin, based on the goals of science and scientific research, is consistent with our approach to scientific research: “The main task of pedagogical scientific research is to obtain new reliable knowledge about the processes of teaching and upbringing, to reveal their essence (internal structure, activity, development and development), to reveal objective regularities of the connections between pedagogical phenomena”[10].

Zlidneva T.P. distinguished the following components of research activity: informative (obtaining information about existing knowledge, summarizing this knowledge, recording it); analytical-critical (analysis and critical study of existing knowledge, setting (formulating) a research problem based on identifying a partially or completely misunderstood part of the research topic); personal-research (conducting theoretical and experimental research to obtain new knowledge, recording intermediate results of the research) [9]. By research activity of students, we understand their scientific-creative-intellectual activity aimed at applying research methods based on modern knowledge, independently acquiring theoretical and practical knowledge based on experience. This process serves to form the student's skills not only to master concepts within the field of science, but also to apply them in solving practical problems. The main stages of this activity are organized in a consistent manner as follows: first, the object of research and the main problem are determined; then the existing theoretical sources related to the study of this problem are analyzed; an optimal methodology for research is selected and applied in practice; the necessary empirical materials are collected and analyzed in depth. Final At the second stage, general scientific conclusions are drawn based on the information obtained and a personal scientific point of view is formed.

By analyzing the above theoretical and practical information and national and foreign experiences, we have defined a research student as follows: “research student” is a researcher

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who regularly works on himself, knows scientific innovations and effective reforms at the level of professional value, understands the state and society's order to enrich intellectual resources, intensively studies the requirements of the time and innovative approaches, and can analytically apply them in his professional activities.

The scientific observations and analyses conducted show that the ability of specialists who have graduated from higher educational institutions to work in leading organizations in their field is, first of all, inextricably linked to their professional training and level of professional qualifications. Based on this, in our study, the main goal is to identify factors that lead to effective results in the involvement of students in scientific research in the higher education environment. We have set it as .

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By analyzing the above theoretical and practical information and national and foreign experiences, we have defined a research student as follows: “research student” is a researcher who regularly works on himself, knows scientific innovations and effective reforms at the level of professional value, understands the state and society’s order to enrich intellectual resources, intensively studies the requirements of the time and innovative approaches, and can analytically apply them in his professional activities.

The scientific observations and analyses conducted show that the ability of specialists who have graduated from higher educational institutions to work in leading organizations in their field is, first of all, inextricably linked to their professional training and level of professional qualifications. Based on this, in our study, the main goal is to identify factors that lead to effective results in the involvement of students in scientific research in the higher education environment. as.

Theoretical and methodological analyses show that research paths are recommended as the first steps for younger students.

PRACTICAL CONCLUSIONS

The issue of effectively involving students in scientific activities from school age onwards is considered to be an extremely important aspect of today's educational process, the implementation of modern pedagogical technologies and new forms of teaching. In our opinion, research is not only for students and older, but also the formation of students' readiness for research activities is one of the most important research areas in modern education today.

General secondary education, especially specialized schools, is considered a key factor in studying the organizational-pedagogical, psychological-motivational, general-didactic and specific features of student development, and in designing the pedagogical process, focusing on logical thinking through innovative approaches. Such integrative educational stages systematically form the student's capabilities, such as acquiring theoretical knowledge and skills, conducting a comparative-content analysis of the structure of the educational process in accordance with the research principle, and drawing a final conclusion.

Preparing students for research work in the classroom involves the consistent mastery of all its components: motivational, meaningful, active, reflective and re-applying activities.

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These studies are aimed at studying the practical significance of advanced approaches and methods in the pedagogical process, which, in addition to being an important factor in increasing the potential of scientific research, also pave the way for new opportunities and inventions.

Figure 1. Components of research activities

It is necessary to approach the components of research activities taking into account the characteristics of the specialty.

The essence of the research conducted with students, firstly, as an algorithm of the components of research activities, is very important for the effective preparation of the future new generation of personnel, as well as for their effective preparation for scientific research work in the field. The lesson requires intensive integration of modern knowledge into the educational process. Secondly, it also explores new relationships such as the use of modern teaching methods and forms, the use of various information technology tools, problem-based learning and critical, project approaches, the introduction of educational-graphic tasks that enhance academic and social motivation in the system of professional disciplines, the introduction of chronological classification in accordance with pedagogical design. Thirdly, technologies aimed at personalizing the educational process expand the possibilities of developing new modern forms of education.

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