РОЗДІЛ І. ЗАГАЛЬНА ПЕДАГОГІКА ТА ІСТОРІЯ ПЕДАГОГІКИ

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SEARCH-ORIENTED ENVIRONMENT AS THE BASIS FOR THE FORMATION OF RESEARCH COMPETENCE OF STUDENTS

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The article defines and scientifically substantiates the features of constructing a search-oriented environment as a basis for forming the research competence of primary education students. It is established that new challenges of the time and the implementation of the Concept of the New Ukrainian School require a radical change in the priority goals in organizing the educational process in primary school, its competence-based approach, which will contribute to the development of a child's intellect, divergent thinking, problem vision, curiosity, fantasy, and imagination.

It is found that the process of forming the creative personality of a primary education student, who would be both a subject of research activity and its organizer in a modern school, looks quite promising in a corresponding search-oriented educational environment. This environment creates conditions for the development of creative potential, intellectual activity, and the formation and improvement of research skills. A significant potential in solving these tasks lies in the creation and construction of such a search-oriented educational environment, in which interpersonal interaction between teacher and student unfolds based on strategic goals and plans, and lessons are built on research principles, forming in students such important qualities as intellectual activity, research skills, independence of thought, innovative competence, self-criticism, fantasy, and others.

It has been proven that the creation of an innovative educational environment within the New Ukrainian School, which is as close to the realities of life as possible, is the main condition for successfully solving educational tasks through scientific research work. For this process to occur successfully, pedagogical support from the teacher is necessary, which is related to helping students develop research approaches to adequately and most effectively solve tasks and situations. This involves a gradual transition from teacher management to

self-management by the student, their readiness for observation, comparison, analysis, synthesis, classification, application of analogy, generalization, summarizing, establishing cause-and-effect relationships, forecasting, and evaluating results.

ПОШУКОВО ОРІЄНТОВАНЕ СЕРЕДОВИЩЕ ЯК ОСНОВА ФОРМУВАННЯ ДОСЛІДНИЦЬКОЇ КОМПЕТЕНТНОСТІ ЗДОБУВАЧІВ ОСВІТИ

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Ключові слова: *дослідницька діяльність, дослідницька компетентність, пошуково орієнтоване освітнє середовище, здобувачі освіти.*

У статті визначено й науково обґрунтовано особливості побудови пошуково орієнтованого середовища як базису формування дослідницької компетентності здобувачів початкової освіти.

Установлено, що нові виклики часу, реалізація Концепції Нової української школи вимагають кардинальної зміни пріоритетних цілей в організації освітнього процесу в початковій школі, її компетенізації, що сприятимуть розвитку інтелекту дитини, її дивергентного мислення, проблемного бачення, допитливості, фантазії та уяви.

З'ясовано: процес формування творчої особистості здобувача початкової освіти, який був би суб'єктом дослідницької діяльності, так і її організатором у сучасній школі, є досить перспективним у відповідному пошуково орієнтованому освітньому середовищі, що створює умови для розвитку творчого потенціалу, інтелектуальної активності, формування й удосконалення умінь здійснювати дослідження. Значний потенціал у вирішенні означених завдань належить створенню й побудові такого пошуково спрямованого освітнього середовища, у якому розгортатиметься міжособистісна взаємодія вчителя й учня на основі стратегічних цілей і планів, а уроки побудовано на дослідницьких засадах, формуючи в учнів такі важливі якості, як інтелектуальна активність, дослідницькі уміння, незалежність мислення, інноваційна компетентність, самокритичність, фантазія та ін.

Доведено, що створення інноваційного освітнього середовища в умовах Нової української школи, максимально наближеного до реалій дійсності, є основною умовою успішного розв'язання навчальних завдань засобами науково-дослідної роботи. Для того щоб цей процес відбувався успішно, необхідний педагогічний супровід з боку вчителя, пов'язаний із наданням допомоги учням у виробленні науково-дослідницьких підходів до адекватного й найефективнішого вирішення завдань і ситуацій;

поступовий перехід від управління з боку педагога до самоуправління здобувача, його готовність до спостереження, порівняння, аналізу, синтезу, класифікації, застосування аналогії, узагальнення, підведення підсумків, встановлення причинно-наслідкових зв'язків, прогнозування й оцінки результату.

Problem statement. The relevance of the research lies in the fact that modern primary education is oriented towards an activity-based approach to learning and involves a variety of activities for primary school students during lessons, including research activities.

Research activity is a creative process of searching for or constructing something previously unknown to the individual, resulting in the formation of a research stance and research skills. Since the primary task of modern education is to develop a creative and flexible personality, the implementation of research activities in the educational process is a prudent decision. This is explained by the fact that research activities can develop the child's personality not only intellectually but also creatively.

When organizing research activities in primary school, the teacher must adhere to certain requirements and possess fully developed professional pedagogical competence. Compliance with these conditions will have a positive impact on the personality and development of the young student.

Analysis of recent research and publications. Research activity as an educational technology has been studied by scholars such as L. Hammond, A. Hosier, M. Kocagül, L. Bryzhak, S. Budnik, M. Vashulenko, O. Hrynyuk, N. Dyka, D. Kryvoruchko, P. Moroz, T. Tumanyan, A. Oliynyk, N. Chorna, V. Yatsenko, and others. These researchers agree that research activity as an educational technology should be understood as organized student activities that are cognitive and creative in nature and involve solving research tasks and obtaining research results through developed research skills.

The specifics of organizing research activities in the educational process of primary school have been highlighted in the works of pedagogues such as O. Andriushchenko, N. Antonyuk, T. Biloshkura, I. Burch, T. Vodolazka, O. Hnatyuk, V. Holub, Y. Deruha, D. Kenyu, V. Koziy, M. Kuzma-Kachur, N. Lalak, V. Movchan, M. Perk, V. Sopina, A. Fedorenko, and others. These scholars emphasize that the process is variable and dynamic, depending on the age of primary school students and their psychological characteristics.

The impact of research activities on the development of the personality of primary school students has been revealed in the works of researchers and educators such as L. Buryakivska, O. Vashulenko, O. Horetska, N. Hushchina, M. Kiryk, A. Kovalenko, H. Kravchenko, A. Martin, O. Nikitina, T. Ninova, O. Sorochynska, O. Khomenko, V. Sheiko, V. Shpak, O. Yankovych, and others. Researchers are convinced that the implementation of research activities in the educational process of primary school students will contribute to their comprehensive development.

The purpose of the article is to define and scientifically substantiate the features of constructing a search-oriented environment as a basis for forming the research competence of primary education students.

Presentation of the main research material. Activity is a form of human activity aimed at obtaining a specific result, in the form of a material or spiritual object, through interaction with the surrounding world.

We agree with the views of scholars (O. Hrynyuk, P. Moroz) that research indeed provides opportunities for the independent search for specific information based on a given query. We are convinced that the information obtained through research can be better and more productively assimilated by the researcher compared to already provided theoretical information. Thus, research is a cognitive process carried out to obtain new knowledge, scientific or practical achievements. The result of research is a research product that is distinguished by its novelty and uniqueness.

After examining the features of interpreting the terms «activity» and «research» in scientific literature, let us move on to directly defining the essence of the concept of «research activity». We will focus on the existing scientific approaches to characterizing this concept.

It should be noted that the term «research activity» in the scientific domain can be considered in a broad sense and in the context of pedagogical science. Firstly, let us consider the first approach to interpreting this scientific concept.

According to P. Moroz, research activity in a broad sense should be understood as «a special type of intellectual creative activity that results from the functioning of the search activity mechanism and is based on research behavior» [3, p. 12].

L. Bryzhak notes that research activity is «human activity that can be regulated by cognition and personal activity, aimed at satisfying cognitive and intellectual needs, the product of which is new knowledge acquired in accordance with the set goal, objective laws, and existing circumstances that determine the reality in achieving the goal» [1, p. 24].

We agree that research activity should be considered in both broad and narrow senses of its interpretation. We adhere to the opinion that in the educational process, research activity should be viewed in the context of pedagogical science, i.e., in the narrow sense of its understanding.

Considering the examined directions of interpreting the term «research activity» in scientific literature, we conclude that research activity is an individual's activity that involves conducting a specific research project to obtain new information, practical or scientific achievements.

Having defined the essence of the concept of "research activity" in a broad sense, let us move on to examining its characteristics in the context of pedagogical science as an educational technology.

V. Yatsenko points out that the research method of teaching is not an innovation in pedagogical science. The scholar asserts that research activities were previously implemented in the educational process of schoolchildren. The research method (principle) in teaching was characterized as "a method of involving students in independent and direct observations, based on which they establish connections between objects and phenomena of reality, draw conclusions, and understand patterns" [6, p. 63].

N. Chorna claims that the research method of teaching is "the organization of children's search and cognitive activities by setting cognitive and practical tasks by the teacher that require independent creative solutions" [5].

We cannot disagree that research activity in the educational space is characterized by its cognitive and creative nature. It is diverse and allows students to enrich their knowledge and reveal their creative potential.

Thus, based on the analysis of existing approaches to interpreting the term «research activity» in the context of pedagogical science, we can conclude that it should be understood as organized student activities that have a cognitive and creative nature and involve solving research tasks and obtaining research results through developed research skills.

As mentioned above, students need to develop specific research skills to engage in research activities effectively. Let's examine the essence of the term «research skills» in the scientific domain in more detail.

According to M. Vashulenko and S. Dubovyk, research skills are "a set of intellectual and practical actions that ensure an individual's ability to conduct independent observations, generalize, and analyze processes and phenomena of reality; acquire new knowledge and apply it in accordance with the goals of research activities" [2, p. 3].

A. Oliynyk describes research skills as the readiness and ability of students to perform intellectual and practical actions relevant to research activities, using knowledge and life experience with an understanding of the goals, conditions, and means of the activity aimed at studying processes, facts, and phenomena. The scholar identifies the following research skills: identifying problems and asking questions, formulating hypotheses; analyzing, synthesizing, and comparing information; defining concepts; classifying objects; observing and conducting experiments; justifying and supporting opinions; establishing cause-and-effect relationships; drawing conclusions and inferences; collecting and processing information; structuring educational material; presenting and defending ideas [4].

Thus, research skills are the abilities of students to perform intellectual and practical actions that ensure productive research activities, resulting in a specific research outcome (product).

Most authors emphasize the creative and practical nature of research activities as an educational technology. We can conclude that this educational technology is optimal as it meets the requirements of modern education in Ukraine, focusing on an active and creative approach to acquiring knowledge.

So, research activity can be considered in a broad, scientific sense and in the context of pedagogical science as an educational technology. According to the first approach to defining this concept, it is appropriate to understand it as an individual's activity that involves conducting a separate study to obtain new information, practical, or scientific achievements. Research activity as an educational technology, in turn, is an organized activity of students that has a cognitive and creative nature and involves solving a research task and obtaining a research result, thanks to developed research skills.

The research activity of primary school students aims not only to provide them with theoretical knowledge in the process of practical activity but also influences the development of their personality. Let's take a closer look at the impact of research activity on the development of the personality of younger school-age students. The importance of using research activity in the educational process of younger students is due to the fact that it promotes the development of their cognitive activity. The constant use of research activity as an educational technology will allow primary school students to develop a high level of cognitive activity. They will strive to gain new knowledge, particularly in practical activities. In addition, students acquire such personal qualities as initiative, determination, and independence.

In our opinion, these personal qualities are very important for ensuring effective learning activities. A student should be distinguished by their initiative, determination, and independence when solving educational tasks. The implementation of research

activity in the educational process of younger school-age children is an effective means of developing their creative thinking. Children gain the ability to solve situations of incompleteness, independently find answers to specific questions. Moreover, research activity increases their level of independence and responsibility. This type of activity fosters independence and pride in primary school students regarding their own achievements in solving research tasks.

From our perspective, we can add that the formation of these feelings is a factor for developing learning motivation and the motivation for success in primary school students. We also emphasize that modern citizens of Ukraine should distinguish themselves with their creativity in solving life situations.

Research activities positively influence the logical and critical thinking of younger students. Research tasks develop their ability to establish connections between concepts in practical activities with research objects. Children learn to make their own conclusions and defend their opinions and research results. Research activities lead to the active cognitive development of younger school-age children. Under its influence, children's cognitive processes (thinking, memory, attention, imagination, perception, etc.) actively develop. By providing younger students with the opportunity to explore a wide range of subject disciplines that encourage cognitive connections between information and knowledge, students acquire key skills that will be useful in their adult life and further education.

Research promotes the mental development of younger students, as what they see during class motivates them not only to remember the phenomenon but also to explain it. To explain it, students use various mental operations (analysis, generalization, comparison, systematization, etc.). Research activities develop general cognitive skills in younger students, which are necessary for learning at school.

Since the younger school age is a sensitive period for the development of logical thinking, we consider it important to implement various methods and means in the educational process for its development in primary school students, particularly research activities.

Research activities allow children of younger school age to develop specific skills. These include:

1) educational-organizational skills (the child learns to independently organize their learning process, plan the algorithm of their actions; they develop personal qualities necessary for completing the task: independence, determination, responsibility, etc.);

2) search skills (the younger student learns to put forward their ideas, find means of obtaining information, make independent conclusions, etc.);

3) reflection skills (the child gains the ability to analyze received information, express their opinion on its content);

4) communication skills (the younger student learns to listen, receive information, exchange it, control their voice (speak clearly, adjust volume and strength depending on the situation; address their speech correctly (when addressing someone, try to look at them and use the pronouns "you", "yours", rather than "he (she)" and "they"); express their point of view; develop the ability to negotiate, find compromises, etc.);

5) presentation skills (developing the monological coherent speech of the younger student, i.e., the ability to clearly express their thoughts during a presentation, developing the student's artistic abilities);

6) project skills (the child learns to predict and present the final product, the result of their work, find resources to achieve it, and plan their work).

We are convinced that research activity can promote the comprehensive development of primary school students. First, it is important to note the positive impact of this activity on the intellectual development of the child's personality, particularly on the development of their thinking. Research activities actively enhance the analytical abilities of younger students, forming skills in comparing, classifying, and generalizing the information received.

Second, there is a positive trend toward the creative development of primary school students under the influence of research activity as an educational technology. This is explained by the fact that research tasks often have a creative nature, thereby fostering students' imagination, encouraging them to adopt a creative approach to their solutions, and revealing their creative potential.

Research activity positively affects the communicative development of primary school students. They become more sociable, learn to work in groups, and develop their dialogue and monologue skills. Additionally, under the influence of research activity, younger students become more intellectually active (enhancing their memory, attention, and mental operations), enriching their cognitive culture and forming a value-oriented attitude toward the surrounding world.

Engaging children in research activities facilitates interesting and easy assimilation of knowledge about the natural environment, develops initiative, and encourages an active life stance among primary school students. Furthermore, it leads to the active development of memory, imagination, and thinking, as well as the formation of group work skills.

The author's experience in school confirms that the implementation of research activities in the educational process of primary school students within the New Ukrainian School contributes to the develop-

ment of critical and creative thinking; logical thinking operations; memory, particularly in the processes of memorization; communicative skills; coherent dialogue and monologue speech; curiosity; and empathy. In addition, it enables them to express their own opinions, engage in discussions, defend their positions, establish business relationships with teachers and peers, apply collaborative techniques, and present findings from their research.

Conclusions. In summary, we note that the implementation of research activity in the educational process of teaching younger school-age children leads to their comprehensive development. This type of activity positively influences their intellectual development, actively enhancing their cognitive processes (thinking, attention, imagination, memory, perception). It is also important to highlight the positive impact of research tasks on the emotional and volitional sphere of the personality. Under the influence of this activity, students have the opportunity to improve their self-esteem and experience positive emotions from both the process and results of their research.

Younger students develop personal qualities such as initiative, independence, determination, and responsibility. Additionally, research activity fosters cognitive engagement, critical and creative thinking, and creative abilities in primary school students; it effectively influences their communicative and speech development.

The conclusions and prospects for further development lie in identifying the pedagogical conditions for forming research skills in younger students during mathematics lessons through integrated learning approaches.

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