

## EVALUATION OF APPLICATION OF THE METHOD OF TEACHING STUDENTS OF RESEARCH ACTIVITIES IN HIGHER EDUCATION INSTITUTIONS

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### Abstract

The article substantiates the use of research activities and writing research projects during training. Algorithmic approaches to the organization and content of research activities of students of higher education institutions were modified. Typical modified algorithms are disclosed with a phased explanation of the organization of student research activities.

**Keywords:** Science Preparation, Higher Education Institution Training, Principle of Clarity, Discipline, Pedagogy, Special Disciplines.

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### INTRODUCTION

The global changes taking place today in the information, communication, professional and other areas of modern society require the adjustment of both methodological and technological aspects of education, the revision of value priorities, goals and pedagogical tools used.

Education is the most important and reliable way to get a systematic education. It reflects all the essential properties of the pedagogical process: two-sidedness, focus on the comprehensive development of the individual, the unity of the substantive and procedural aspects, but at the same time has specific qualitative differences. Being a complex and multifaceted process, specially organized to reflect reality in the student's mind, learning is nothing more than a specific cognitive process managed by a teacher [7-12].

It is the teacher's guiding role that provides students with the full assimilation of knowledge, abilities and skills, the development of their mental powers and creative abilities.

Learning always takes place in communication and, as a rule, is based on a verbal-activity approach. The word is both a means of expression and a means of knowing the essence of the phenomenon being studied, as well as an instrument of communication and the organization of practical cognitive activity of students [12-14].

Cognitive activity is a unity of sensory perception, theoretical thinking and practical activity. It is carried out at every step of life, manifests itself in all types of activities and social relationships of students (productive and socially useful work, value-orientational and artistic-aesthetic activities, communication), as well as by performing various practical actions in the educational process (experimenting, constructing, solving research problems). Only in the learning process, cognition takes on a clear design in a special educational activity or teaching inherent only to man.

The curricula and programs of many higher education institutions are focused on the use of research activities in

teaching. Protection of the project is recommended as one of the types of summarizing at the end of the study of a large section of any subject. Thus, the design research activities of students to this day remain relevant in modern pedagogy. And this is no coincidence. Indeed, it is in the process of independent work by students when creating a project that the culture of mental work of students is best formed.

And creating a project is impossible without using

information and communication technology. The use of global network resources by students in the preparation of a research project contributes to the active introduction of modern pedagogical technologies, the development of an integrated approach, productive training in activities, improving the quality of education, and, ultimately, self-organization and self-development.

With full confidence, we can say about the need for further development of this process, which not only significantly increases the motivation for learning, but also develops the ability of students to search the educational Internet, classify information, compare data, that is, in general, helps to increase the information culture, which is a necessary quality of a modern person, instills self-education skills.

The purpose of this article is to evaluate and modify algorithmic approaches to the organization and content of students' research activities.

### MAIN MATERIAL

The organization of research activity can take place both in the classroom and outside the classroom. In modern life, when getting higher education, the organization of research activity comes to the forefront precisely in the classroom, as a rule, in the framework of problem and project approaches to learning.

The most important thing in a project after defining a topic is to develop a hypothesis, pose a problem, plan educational activities, and compare facts. All this phased activity forms the culture of the student's mental work, accustoming them to independently acquire knowledge. It is advisable to teach all this to students not

during the preparation of a specific project, but in advance, during the training of the subject. That is why seminars and conferences are especially relevant today, at which the student can try himself on the part of the researcher and scientist. After all, they not only contribute to the intensification of the educational process, but also form a culture of mental work of students, preparing them for the creation of independent projects [1-10].

The first stage in the formation of a culture of mental work of students during the preparation and presentation of their project is a seminar. The preparation of this type of lesson involves the organization of research activities of students and pedagogical activities of the teacher.

The second stage is a laboratory (computational and graphic) lesson. At this stage, the pedagogical activity of the teacher should be the same as at the seminar.

Thus, conducting these two types of classes, we create a culture of mental work among students, we teach students to research, to self-conscious work on the project.

In general, the technology of organizing educational and research activities of students can be represented as follows. The technology for organizing educational research of students consists of certain elements. Important mechanisms for the development of research activities are: the creation of a creative atmosphere during work, motivation for interest in research, design, creative activities; initiation and comprehensive support of search and research activities; support of research activities; creation of conditions for support, implementation and dissemination of results.

Consider the various algorithms for organizing research activities of students.

**Algorithm 1. "The knowledge of the study."**

Its purpose is not so much the achievement of the result as the development of the research process itself.

Implementation technology: the teacher poses a problem for students, outlines the strategy and tactics for solving it, and the student will have to find the solution. The model is implemented as a form of organization of individual student activities outside school hours. The job is to complete the five main steps.

- Stage 1. Definition of a problem.
- Stage 2. Collection of information.
- Stage 3. Gathering information to prepare for the experiment.
- Stage 4. Justification.
- Stage 5. Research analytics.

**Algorithm 2. "Research".**

Purpose: development of problematic vision, stimulation of search thinking.

Technology: the teacher poses a problem for students, but they are already looking for a method to solve it on their own. It is implemented as a form of organization of group and collective activities of students in the lesson. The work consists of four stages.

- Stage 1. Problem statement, initial data.
- Stage 2. Clarification and processing of the information received for research.
- Stage 3. Identification of problematic reference points.
- Stage 4. The decision in an individual way.

**Algorithm 3. "Systematic".**

The purpose of this model is the synthesis process. Implementation technology: the formulation of the problem, and the search for methods for its research, and the development of solutions are carried out by students independently. The work

consists of six steps.

- Stage 1. Statement of the problem.
- Stage 2. Definition of assumptions.
- Stage 3. Analysis of information sources.
- Step 4. Processing the information received.
- Stage 5. Formulation of the answer to the questions posed, verification of assumptions.
- Stage 6. Interpretation of data in relation to social, economic and political processes [3].

The search for information takes up the largest part of work on any creative or research topic. The success of such research activities directly depends on whether the student is able to search and process the information found. In this regard, the teacher has a very important task to teach them the accelerated search and processing of information.

Today, perhaps, everyone knows that the texts of scientific works can be found not only in a traditional library or bookstore. On the Internet you can find almost any text and download it to your computer, using subsequently for various purposes.

But it's perhaps worth recalling that any search for a specific issue begins, for a specific purpose, i.e. by a pre-compiled logical structure of the research work, or by newly discovered problems. In any case, at the beginning of the work, the teacher, together with the student, develops the structure of future work, identifies problematic issues. If the teacher can offer ready-made literature, fine. But it often happens that a researcher discovers very valuable and useful articles in the process. Collaboration with the teacher will teach the student to process the information found, take only the necessary facts, draw logical conclusions from them or carry out the next search problems.

The next stage of work on the research is the design of the report itself on the research work. Here, the teacher will help the standard requirements for the design of the essay.

The final stage of the research activity is a public report on its work. I think no one will ever be tempted to challenge the idea of the need to accompany this report with a presentation.

Watching a presentation makes it much easier for listeners to perceive information, maintains interest and attention, allows the speaker to focus on the most important points, provide illustrations, necessary quotes or provide examples, etc. The classic look for the content of research work.

**Introduction.** In the introduction, the author substantiates the chosen topic, briefly explains what is his scientific interest, sets the goal of the work. In this chapter, the author reveals the tasks that must be solved in this work, defines the ways of their implementation, gives a characteristic of the subject of study.

**Literature review.** The author gives a brief analysis of the literature read on this topic, describes processes or phenomena that illustrate and directly relate to the experimental part of the work.

**Methods of conducting an experimental or research part of the work.** A detailed description of the technique itself. A list of questions that were used to implement the methods is given, a description of the groups participating in the study is given.

**Analysis of research results.** In this chapter, the author analyzes the data obtained during the experiment.

**Conclusions.** In this chapter, the author draws his own conclusions on the results of the data obtained during the experiment, comparing them with the theoretical material of the third chapter.

**The list of used literature ends. Literary sources can be arranged as follows:**

classic books in the field of knowledge in which the work is written;  
books revealing the theoretical content of the work (author, book title, publisher, city, year of publication, page);  
encyclopedias, thematic dictionaries, reference books;  
literature in a foreign language (author, year of publication, page);  
collections of regulatory documents (if necessary);  
journal articles (article title, journal name, journal number, year of publication, page).

**CONCLUSION**

Interest in research depends largely on how its results are presented. The use of information technology allows you to make this work entertaining. When creating research projects from an object of study, they often turn into a means of acquiring new knowledge by students, and computer science becomes an indispensable assistant.

Information technologies in educational research teach not only to put into practice theoretical knowledge, but also develop skills in working with software, stimulate students to acquire knowledge independently, they develop curiosity, increase interest in studying a subject, and show its need in real life.

The use of modern information technologies in the organization of research activities raises this work to a qualitatively new level, contributes to increased learning motivation, the development of students' creative thinking.

It is safe to say that all modern innovative technologies are focused, first of all, on increasing the activity of students, since the truth, obtained through their own efforts, has great cognitive value.

The research work of the teacher and student is very useful in the formation of the ability to find, analyze, process information and use it for its intended purpose, the ability to establish intersubjective communications, look for general patterns, etc.

Today's students are invited to master such a huge amount of knowledge accumulated over the centuries that we simply do not have to count on absolute success in this, therefore it is much more important to teach them how to work with information. Having mastered this, future specialists in various fields will be able at any time to find and use the necessary information for its intended purpose. As a rule, it is much more useful and interesting to learn how to use encyclopedias when there is a need for them.

**REFERENCES**

- 1 Pantileeva E.S. (2015). Social networks of the Internet as a means of teaching a foreign language, *Modern Pedagogy. No. 10 [Electronic resource]*. - pp. 1.
- 2 Bem N.A. (2010). The use of social networks in teacher education, *Actual problems of computer science and information technology, XIV International Scientific and Practical Conference*, pp. 33-36.
- 3 Sambulyan L.G. Design and research activities of students, [www.sch996.edusite.ru/p42aa1.html](http://www.sch996.edusite.ru/p42aa1.html)
- 4 Sysoev P.V., Pustovalova O.V. (2012). The development of students' speech skills based on the Twitter service. pp. 189.
- 5 I. Smyrnova (2017). System Overview Of The Purpose And Content Of Information Technology Training Of Future Teachers Of Technologies To The Development And Use Of E-Learning Resources. *International Scientific and Practical Conference World science*, 3(5), P. 6-12.

- 6 Kuts, M. O. (2016). Problem technologies in foreign languages teaching of higher technical educational establishments students'. *Cherkasy University Bulletin: Pedagogical Sciences*, 37(370).
- 7 Smoliuk, S. (2018). Features of Formation Developing Educational Environment in the Conditions of Standardization of Primary Education of Ukraine. *Journal of Vasyl Stefanyk Precarpathian National University*, 5(1), 65-72.
- 8 Posyagina, T. A., Bondarev, A. V., & Sapryko, I. A. (2015). Building a System Informative Abilities of Bachelors of Technical College. *Mediterranean Journal of Social Sciences*, 6(5 S4), 446.
- 9 Asanaliev, M. K., Kaidarova, A. D., Iskakova, A. T., Baizakova, E. M., Balabekova, M. Z., Duysenov, D. C., & Baisalbayeva, K. N. (2014). Occupational orientation of students independent work as a factor of students learning efficiency upgrading. *Life Science Journal*, 11(6 SPEC. ISSUE), 414-418.
- 10 Konotop, A. V., Damulin, I. V., & Strutsenko, A. A. Organizational and pedagogical conditions of formation of modern specialist. Example of educational process at medical university.
- 11 Yachina, N. P., Petrova, T. N., Kharitonov, M. G., Nikitin, G. A., & Zhumataeva, E. O. (2016). The method of the content selection for formation of technological culture among students based on ethnological values. *International Electronic Journal of Mathematics Education*, 11(1), 211-219.
- 12 Stukalenko, N. M. (2016). Individual Approach In Teaching Process. *European Journal of Natural History*, (6), 103-107.
- 13 Fayzullina, A. R., & Saglam, F. A. (2015). History and social sciences teacher's professional activity in the context of IT-development of education. *Journal of Sustainable Development*, 8(7), 107.
- 14 Bayanova, A. R., Kuznetsov, V. V., Merculova, L. V., Gorbunova, L. N., Pervozvanskaya, O. A., Shalamova, O. O., & Vorobyova, C. I. (2019). Student Performance Interrelation with Gadget Use at Lessons. *Journal of Environmental Treatment Techniques*, 7(3), 432-437.