

Methodology for the Formation of Research Competencies in Junior Students of a Pedagogical University

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Abstract – The article deals with the formation of research competence of junior students and the development of a system of continuous innovative training of a future specialist in the framework of research activities.

Keywords – Competence, Research Competence, Innovative Training, Specialist, Scientific Problem.

Global trends in education, expressed in the integration of national education systems, in the preparation of bachelors, suggest changes in the approaches to teaching and revising the forms of organization of educational, research activities of students, in particular bachelors. The introduction of a new paradigm in education contributes to the displacement of traditional cognitive orientations of education. Also, the introduction of a competency-based approach involves the introduction of a new educational content, its methods and technologies. The organization and formulation of research among students is reflected in the works of Yu.N. Kulyutkina, B.F. Sorokina. In his work, Yu.N. pays special attention Kulyutkin [1] on the motivation of prestige, he believes that in this case the student receives satisfaction, standing out from among the people around him who do not participate in such a teaching. The purpose

of the study, according to V. Zhuravskaya [2], not only the end result (knowledge), but also the process itself, during which the students' research abilities are developed through the acquisition of new knowledge, skills, training already developed, broadening their horizons, changing their motivation and position in the youth community. Despite numerous studies in this area, the possibilities of different approaches have still not been fully explored, allowing teachers to manage the research activities of junior students.

The purpose of the study is the formation of the research competence of junior students.

The main idea of the study is to engage younger students in research activities and to develop a system of continuous innovative training for a future specialist in the framework of research activities that can see, formulate and solve actual

scientific problems of professional activity, find fundamentally new creative solutions and implement them in practical activities.

Based on the requirements of our time, we can conclude that the student research is one of the main components in the formation of research competence.

Under the research activities of junior students (NIRS) we understand the totality of activities aimed at mastering the methods and techniques of research work. In our opinion, research activity is a means of forming students' research competence [3].

By indicators of the formation of research competence, we propose to identify seven basic elements, expressed in the following abilities:

- ✓ Allocation of the purpose of the activity;
- ✓ Determination of the subject, means of activity, implementation of the intended actions;
- ✓ Reflection, analysis of performance (correlation of achieved results with the goal);
- ✓ Ability to independently master new knowledge;
- ✓ Ability to transfer acquired knowledge to new conditions;
- ✓ The ability to plan their actions using the knowledge gained, the ability to develop, implement a subject or interdisciplinary training project;
- ✓ Knowledge of information and communication technologies (ICT), search, building information, the ability to safely use ICT tools and the Internet.

In our understanding, NIRS among younger students has a transformative character of research competence, and the most important result of research activity is the ability to correlate acquired knowledge in subject areas with a future profession and to acquire research work skills. Based on this, a system of work on the formation of research competencies among junior students was built.

Let us dwell on some examples of involving junior students in research.

At the first stage of work (this is the month of September), we identify the inclinations of students who did what kind of research work at school and whether there is motivation for learning. We introduce students to the point-

rating system for assessing student performance, where such types as:

- Preparation of a research project;
- Participation in a conference at the university;
- Participation in other conferences;
- Preparation of articles in foreign magazines;
- Participation in student competitions and grants.

Work begins on involving students in project activities, the teacher voices topics of possible research. At the initial stage, they are a review of the literature on a selected topic. After choosing topics and individual work of the student with the teacher, there is a public defense of research topics on the stream, where students present the goals and objectives of their future design work and articulate their work plan .. We associate the topic of design work with their future profession, which helps determine the place of the discipline being studied that contributes to motivation in the study of discipline.

Based on the results of the selected topics, an individual plan is compiled for each student, which provides assistance to the student in the selection of literature, analysis, the ability to highlight the main thoughts. Next comes the work of teaching article writing, research. Weekly meetings are held with each student according to his individual plan. The organization of research is carried out at the expense of hours of the CDS. In our experience, we can conclude that participation in various competitions promotes motivation for educational activity, is a leading factor in mastering modern methods of searching, processing and using information, mastering the method of scientific research, defending and defending your opinion.

In our opinion, this is a new form of obtaining knowledge, the basis of which is an independent search for information, its analysis, interpretation in order to obtain new knowledge - this is the beginning of research activity that creates certain competencies.

The result of the research work is a student conference, which takes place in a festive atmosphere, with the participation of teachers, heads of departments, vice-rectors for academic work and science.

An important point in the organization of research work with students is the preparation of research papers for participation in national competitions, it is important to teach the student to present their research correctly, and be able to engage in dialogue with opponents. Students learn

the ability to present their work in specially organized classes on the ability to ask questions and answer questions. Experience shows that it is difficult for students to enter into a dialogue with professors and teachers to uphold their point of view, therefore a lot of classes are devoted to this important skill:

- ✓ At the first stage, the student must thoroughly analyze his work together with the leading teacher;
- ✓ The next stage is a dialogue with fellow students, which takes place in the form of pre-defense of their work;
- ✓ Further undergraduates present their presentation.

A separate stage of work is teaching academic writing, first of all - the art of writing a scientific article on your research work, this training is carried out in tandem with a foreign language teacher.

This technique of working with junior students allows you to acquire research skills, teach the ability to present your work and prepare for more serious research work in senior courses.

Research results and discussion. The results of the study can be the basis for the formation of research competencies of students of technical universities, based on the creation and implementation of a system of training students in the framework of research work. The research work of junior students has a continuation, as their involvement in research, also the research results become part of the graduation project.

Conclusions : Thus, the widespread use of project methods in the educational process, as well as the involvement of students in research activities, is a factor in the formation of the research competence of junior students, prepares them for research work in senior courses and is the main factor in the formation of the research competence of a university graduate.

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