Part I: ACTUAL ISSUES IN MODERN PEDAGOGY

DEVELOPMENT OF RESEARCH ABILITIES AND SKILLS OF STUDENTS STUDYING IN EDUCATIONAL INSTITUTIONS OF ACCREDITATION I-II LEVEL

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Abstract: The problems of students' scientific and research activity in medical colleges are described and analyzed in our article. Scientific analysis gives possibility to assert that one of decision ways of set tasks is an implementation of planning in the departmental medical educational institutions I-II levels of accreditation. The authors conducted a study where the results of student's competences and research skills are presented. They demonstrate the overall average opportunities for young people's creativity. Special attention should be paid to the essence and forming stage of students' research abilities and skills. It is proven that attracting students to scientific and research projects contributes upgrading of this sphere with innovative ideas and thoughts that bring scientific education to European standards.

Keywords: scientific and research activity, problems of research activity, projects, research abilities and skills, planning, students of medical colleges

INTRODUCTION

In conditions of swift development of Ukraine and reformations in educational sphere the most actual question is to prepare highly skilled specialists that fit to the European labor standards. Mobile, communicative and competitive specialists are needed nowadays, including specialists in medical sphere.

Leaning the principal items of new legislation Ukraine "On higher education" and Decree of Ministry of Health Care of Ukraine "On approval of the Concept of higher medical education development in Ukraine" No. 522/51 from 12.09.2008, according to strategic tasks of higher education it has been determined bringing students to the applied scientific researches' realization, as well as the active creative activity that requires integration of knowledge in contiguous disciplines. The results of researches that describe the essence of process of forming research abilities and skills are presented in papers of V. Andreev, Yu. Babansky, I. Kataschinska, I. Lerner, V. Mileryan and O. Onishchuk. Specifics of new research paradigm have been analyzed in the scientific papers of Belarusian scientists, such as M. Shegidyin, I. Gubenko, I. Radzyevska and V. Lazorishinets. It should be noted that mentioned researches have reproductive character. Methodical recommendations in order to form research abilities and skills mostly are not adapted to the requirements of different spheres and directions. They are generalized. The spectrum of researches in certain problems doesn't fit to the current situation and doesn't have perspectives for the medical education.

MATERIALS AND METHODS

To point priorities in forming research abilities and skills of students it is the main task of our project research. From the pedagogic point of view, the conceptual essence of "project" is reflected in the specific personality-oriented method; it might be considered as a systemic learning during realization of projects that oriented not to actual knowledge integration, but to their using and getting of new skills through the self-education [1, pp. 16; 23]. Any project has special requisites, i.e. concrete coordination type, term of realization, stages, amount of participants and
profile of dominant activity. It should be noted that an obligatory condition is to raise the problem-searching tasks, oriented to the achievement of the purpose. However in realities it will work concerning the mixed projects more often, as contiguous disciplines is impossible to insulate mostly.

If connection with researches is obvious in the learning process, then it could be determined as a type of systematic cognitive activity, dedicated to study certain problems and to get new knowledge on the basis of the social standardized methods (experiment and supervision) [2, p. 66]. Thus, research activity of students might be considered as a complex of actions with the usage of professional knowledge with the purpose to receipt of new knowledge. Specific abilities (motivated actions directed to the effective and independent implementation of professional tasks with the use of mastered theoretical knowledge and scientific methods) and skills (process of the usage of formed difficult abilities in the wide spectrum of standard and non-standard situations) are result of empiric actions and concrete research.

Development of research abilities and skills is possible only in the process of the active intellectual activity directed to the search of alternative ways to solve problematic situations. Realization of project envisages the same aspects; however, it determines possibilities of practical use with the certain specifics. Having regarded the complication and planning of multi-component system, there is possibility to investigate this process as a complex of certain successive stages and their components (Figure 1).

![Figure 1: Sequence of the stages and their structural components in planning](image)

*Source: created by authors*

The analysis of Figure 1 demonstrates that concrete didactics tasks are solved at the each stage, character of activity is determined and research abilities are formed in skills.

**RESULTS**

According to the main aim of our research we can determine main tasks, i.e.: 1) to develop concept of research abilities and skills rising on the basis of current analysis existing approaches; 2) to hold experiment for determination of level of formed categories; 3) implementation certain strategy; 4) evaluations of results.

Leaning on the understanding of project method's basics and its specifics in the educational process of medical college, it is possible to find practical decision of the problem.

As academic lectures are basic teaching form in each higher educational institution, we can suggest their transforming in off type reading with innovative methods implementation. Such work envisages previous preparation of students, discussion the problem and determination the topic, which is debatable through the learnt theoretical material. Thus, lecturer stops to be transmitter of information and transformer for an interlocutor who aims a dialogue to the decision of priority questions, selection of contradictions and realization of mini-researches.

Considerable efforts in forming of research abilities and skills are needed to organize the independent work. This process is provided by creation of methodical recommendations, educational plans, manuals, demonstrative materials, charts, diagrams, tables and determination of structural components. Thus, students will have the opportunity to learn the necessary
information in details, reduce misunderstandings and deepen knowledge on a concrete topic that causes complication. Scientists put accent to the obligatory practical usage of gained knowledge and skills that allow forming research skills. Therefore it is supposed that presentation and defense of projects will be conducted, mainly on practical or laboratory lessons. One of methodical receptions that allow transforming the conservative over learning of information with a further turning to the active creative process is problem-searching tasks. Essentially, each separate exercise is a clinical standard or off-type situation which decision provides implementation of result planning and makes possible its forecast. The features of Ukrainian medical education allow maximally getting knowledge on real terms. Direct contact with a patient and work with a modern medical and laboratory equipment is demonstration of high quality level projects. The result of such organization the educational process is forming of professionally important research abilities and skills. The complication and multi-component character of offered strategy require clarification of definitions of timely skilled support and correction. Consequently, the system monitoring of results quality on each stage is important. The offered system is given as a scheme (Figure 2).

![Diagram of research abilities and skills formation](source: created by authors)

**Figure 2: Forming procedure of research abilities and skills**

With the aim of previous level determination of formed research abilities and skills it is succeeded to realize the interview, supervision and questioning. The total amount of respondents was 320 persons. Results were: 46,9% (150 students) had a low level of creativity and demonstrated mostly the reproductive type of informational mastering; 16,8% (54 students) participated in school researches and in subject groups, visited additional lessons and worked over projects, thus, they have a middle level of creative abilities; 36,2% (116 students) is characterized by absence of research abilities and creativity (Figure 3).

Final monitoring showed such results: 17,8% (57 students) have a high level of research abilities, they demonstrate active researcher's position having work over the off-type situations decisions; 75% (240 students) have a middle level of research abilities, they find problems and alternative ways of their decision by means of teacher; 7,2% (23 students) have a low level of research abilities, they demonstrate only separate elements of researcher's ability.

Thus, abovementioned results are presented into the diagram where a high level of research abilities is marked in the first group, a middle level of research abilities is marked in the second group, a subzero level of research abilities is marked in the third group and unformed abilities are marked in the fourth group.

**CONCLUSIONS**

Research abilities and skills are formed under condition of creative necessity and thus, they have different aspirations, such as: 1) search for the decision of scientific problems; 2) explanation of concrete scientific facts and phenomena; 3) finding the contradictions and
explanation of their reasons; 4) argumentation or refutation of scientific hypothesis; 5) realization of scientific experiments and pilot projects; 6) interpretation of the obtained data; 7) protection of own scientific points of view and certain positions.

Figure 3: Results of the program implementation for the forming of research abilities and skills

Source: created by authors

REFERENCES