



THE USE OF INTERNET TECHNOLOGIES IN THE DEVELOPMENT OF STUDENTS' RESEARCH ACTIVITIES

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ABSTRACT

The article describes the features of using Internet technologies in the development of students' research activities in biological education. The essence of modern approaches to the development of research competencies of students and information about the structure of research activities of students is given.

KEY WORDS: *research, research, research activity, student, biology, biological education, approaches.*

INTRODUCTION

The country is taking active measures to increase the scientific potential of the pedagogical communities by reforming the education system, raising the level of training of scientific personnel to modern standards, attracting creative and talented young people to research activities. The government of Uzbekistan has made education a priority at all stages of reform. The essence of education is science and its continuous development. Therefore, the main component of the National Education model is the training and use of highly qualified science specialists, a manufacturer of advanced pedagogical and information technologies.

Therefore, the intensification of work to direct young people to research activities in modern higher educational institutions, the training of highly qualified personnel in the field of education, in particular, their independent scientific and creative approach to each work, the ability to apply innovations Development of competencies, integration of science, education and production are required.

In the new millennium, mankind has entered the information era of its development, which puts the following in front of school education the problem is to prepare students for life in a rapidly changing information society At present, "computer literacy" is extremely important, and research skills are important components of it. Formation efficiency research skills of students in biology

lessons is not high, the data we obtained during the ascertaining experiment showed that teachers and students consider it possible and expedient to use multimedia and Internet technologies to increase the effectiveness of the development of research skills of schoolchildren in the study.

The relevance of the topic of our dissertation research is due to the need to ensure the quality of biological education based on the use of computer technologies in the context of reducing the number of hours in the program devoted to studying the section "Animals" To solve the problem of the development of research skills of students in the section "Animals", the teacher can be helped by modern computer technologies. This requires the development of a scientifically grounded methodology for using multimedia and Internet technologies.

We considered it expedient to implement the systematic approach through the development and practical application of the methodology as a system consisting of interconnected elements and having a strictly defined structured

Within the framework of a systematic approach, we created a model of the methodology, described the connections between the elements that make up it / This gave us the opportunity to organize an effective process for the formation and development of students' skills and achieve the goals and objectives.

A personality-oriented approach is aimed at taking into account the individual capabilities and



needs of each student when organizing the educational process and preserving identity

personality, taking into account its characteristics. The implementation of this approach is due to the capabilities of multimedia in the presentation of information. Multimedia uses various channels of perception of information from the student and enable students with a predominance of one of the channels to effectively assimilate the proposed educational material.) at an individual pace. In addition, the teacher has the opportunity to increase the interest of students in the study of biology due to the high interest of schoolchildren in the use of computer technology in educational activities.

The implementation of the activity approach requires the organization of an active independent cognitive activity of students. All skills and abilities are formed only in practical activities. Multimedia technologies due to their possibilities of presenting information, allowing to combine text, sound, video, graphic images and animation in a computer system, allow organizing practical activities of students in the "Animals" section, aimed at the study of living organisms. Within the framework of our methodology, the implementation of the activity approach went through the strengthening of the role of independent work of students in the classroom, in extracurricular and extracurricular work.

RESULT AND DISCUSSION

The main findings of the study are as follows:

1. On the basis of theoretical analysis, the process and content of research activities of university students as a type of educational activities, the content of which is focused on the development of personal intellectual qualities, creative self-development in the process of solving problem situations, educational and creative research tasks. The structure of students' research activities is represented by a set of interrelated components — cognitive, axiological, creative, organizational-activity, reflexive-evaluative, which are manifested at a limited, acceptable, optimal level.

2. The necessary and sufficient organizational and pedagogical conditions, contributing to the effective development of research activities of university students: concentration in time, the gradually increasing complexity of problematization of the content, reflexive co-management. The concept of concentrated education is supplemented by the idea of problematization of content in the development of research activities of university students, which made it possible to clarify the content of the concept of "problem-focused learning".

3. Developed and theoretically substantiated: a structural-functional model of the development of research activities of university students in the process of problem-focused learning, revealing development as the assistance of a teacher and students in mastering the problematic content of education; a program that made it possible to ensure the effective development of research activities of university students through modules of interrelated, complementary disciplines, practices and research seminars (methodological, search and design, search and research) in the logic of scenarios of local, modular and system changes, allowing to implement multivariance and nonlinearity ways of development.

4. Criteria and indicators of the effectiveness of the development of research activities of university students in the context of problem-focused learning have been determined: the criterion of effectiveness is the presence of necessary and sufficient organizational and pedagogical conditions: concentration in time, the gradually increasing problematization of the content of training, reflexive co-management); the criterion of effectiveness is the dynamics of creative self-development, manifested at a limited, permissible, optimal level, expressed through indicators of the development of students' research activities: to solve complex problem problems; set goals, highlight the most significant of them; overcome stereotypes, original solution to problem situations, educational and creative tasks; self-organization, self-government; to carry out reflection.

5. A diagnostic toolkit has been formed to determine the level of development of the components of research activities of students, and experimentally confirmed the effectiveness of its development in conditions of problem-focused learning.

The results of the study mainly confirm the validity of the hypothesis put forward and the provisions put forward for defense. The implementation of the conditions of problem-focused education ensures the effectiveness of the development of research activities of university students, which is reflected in the dynamics of their creative self-development.

This study does not claim to be an exhaustive solution methodological, theoretical and practical aspects of the development of research activities of university students.

CONCLUSION

Further research prospects can be determined by the following areas: in-depth development of the issue of the formation of value-semantic orientations of students towards creative self-development in the process of research activities; development of the technology of creative self-



development of university students in the learning process biological; deepening the understanding of the development of research activities of students in the context of training in line with the continuity from the bachelor's level to the level of graduate school.

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