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**QR** – Article





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# DEVELOPMENT OF STUDENTS ' MOTIVATION TO STUDY THE COURSE OF INFORMATICS AND INFORMATION TECHNOLOGIES

**Abstract**: In this article we are talking about the problem of developing and increasing motivation to study computer science and other disciplines related to computer technology and new information technologies. The features, functions, and types of motivation, as well as the conditions of its increase.

*Key words*: motivation, computer science, computer engineering, information technology, electronic retrieval systems.

#### Language: English

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### Introduction

## **UDC 37.02**

It has long been no secret that modern life is simply unthinkable without computer technology and new information technologies that are developing more and more rapidly. This, in turn, has a significant impact on the goals, objectives and quality of both school and professional education. The key figure in any education is the personality of a future specialist who possesses a certain set of knowledge, competencies, skills and other professionally significant characteristics. Both students and specialists must constantly improve, acquire new knowledge and skills, and learn to formulate and solve complex problems. The study of computer science and related disciplines is certainly one of the key conditions that contribute to the formation of such professionals, since the rapid development of new information technologies requires specialists to have the highest possible competence in the field of computer science and engineering. This competence includes skills in working with text programs (MS Word, Adobe Reader, DJVU, etc.), spreadsheets (in particular, MS Excel), presentation programs (for example, MS PowerPoint), databases (MS Access), graphic programs (Compass, AutoCAD, CorelDRAW, 3D MAX, etc.), as well as multimedia software (programs for playing audio and video files, photos, etc.).

First of all, this is due to the fact that when studying computer science and related disciplines, there is often no serious attitude to these disciplines. The so-called pragmatic approach is typical [1], when students consider it necessary to acquire only practical skills and skills, mastering only those computer technologies that will be required in the future in their professional activities. The sections of computer science related to information, information systems, classification of concepts and definitions, according to students, are boring and uninteresting.

This raises the question: how can students be motivated to acquire knowledge and skills in computer science and information technology?

First of all, let's turn to the interpretation of the concept of "motivation".

The term "motivation" has two meanings. The first is the designation of a system of factors that determine (determine) behavior (in particular, motives, intentions, needs, goals, and so on). The second is the characteristic of the process that stimulates and supports behavioral activity at a certain level. In psychology, motivation is considered as a set of psychological reasons that explain human behavior, its beginning, direction and activity. In addition, motivation is considered to encourage both yourself



and others to work to achieve personal goals or goals of the group [3]. The following types of motivation are distinguished:

- external motivation (extrinsic) - motivation that is not related to the content of a particular activity, but is caused by circumstances external to the subject;

- intrinsic motivation - motivation, associated not with external circumstances, but by the content of their activities.

In addition, there is motivation based on positive (positive) and negative (negative) incentives, as well as stable (based on the needs of the person and does not require additional reinforcement) and unstable motivation.

The process of forming motivation is also associated with its stimulation, that is, the creation of factors that encourage thought and action.

One of these factors is the competence approach to educational activities: students and students should not acquire separate knowledge and skills from each other, but master them in a complex. The ability to comprehensively apply theoretical knowledge and practical skills in both professional and everyday activities is called competence. In education, competencies are usually divided into General cultural (OC) and professional (PC).

Thus, the study of computer science and technology is one of the key tools for the formation and development of both General cultural and professional competencies of future personnel in this area.

The implementation of the competence approach is inextricably linked with the development and constant improvement of both internal and external motivation to study certain disciplines.

Internal motivation is more natural, so it leads to the most successful results of studying the material. The key importance here is the direct interest of students, their goal is to achieve the best results in the educational and cognitive process. In order to arouse this interest in students, it is necessary to intensify educational and cognitive activities.

In order to activate educational and cognitive activity and stimulate motivation of students in practical classes in computer science and related disciplines, it is necessary to evaluate not knowledge, skills and abilities, but active participation in the educational process - working at the blackboard and at the computer, additions from the spot, performing individual works (tests, coursework). The aim: to involve in the learning process as many students be interested in their content subjects, to show that it is often important that the process of proof: creating a chain of logical statements, rather than performing tasks mechanically [2].

When studying these disciplines, students master software tools, without which future professional activity is simply impossible. And mastering these software tools, in turn, is impossible without the possession of basic skills and techniques for working with computers and new information technologies. This, of course, develops and rapidly increases motivation both to study the theoretical foundations of computer science, and to master practical skills and techniques for working with various software tools. This motivation is called internal, reflecting the need to study these disciplines for future professional activity.

External motivation is determined by circumstances external to the subject. One of these circumstances is the relationship between the teacher and students in the educational process. In situations where the relationship is negative, the level of motivation decreases sharply. With a friendly relationship between the teacher and students, the interest in the subjects studied can significantly increase.

So, motivation is the most important condition for effective training in any discipline and performs the following functions:

1) motivational - motivation encourages the student to carry out educational and cognitive activities to achieve certain goals;

2) developing-if there is a high degree of motivation, the student is actively involved in educational activities; develops intelligence, thinking, necessary skills and abilities;

3) organizational-motivation and discipline are inextricably linked, if there is motivation, the student plans their own activities, expected results, deadlines and stages of work more productively and in an organized manner;

4) orientation-helps the student to understand and navigate the educational material, includes the ability to search for the necessary data, to distinguish the main from the secondary.

In the educational process, the teacher faces a difficult task: to find and apply suitable educational material, it is advisable to use it for teaching computer science to students, since this task is inextricably linked with maintaining a high level of motivation. The following factors must be taken into account for the correct selection of material related to the profile terminology:

- connection of educational material with the future profile activities of students. Students should receive information that is useful for more effective immersion in the field of their future specialty.

- the presence of a surmountable level of complexity in the training material. The material offered by the teacher should contain certain difficulties that the student is able to overcome, since a more detailed study of fairly complex information contributes to the development of the necessary competencies;

- compliance of the material with the level of training of students, their specialization;

- individual approach to teaching students [1].



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The educational activity of students in the study of computer science will be effective only when the basis of the activity will be the need to acquire knowledge and skills in computer science for further study and work [2]. In conditions of a negative attitude to the upcoming classes, it is important to try to eliminate the psychological barrier from the first day, the fear of the complexity of the topics being studied. The teacher should tell the students about the goals and tasks set by the Ministry of education, about the demands of modern society in training literate and intellectually developed specialists [2].

One of the ways to form motivation is to stimulate it, that is, to create factors that give an impetus to thought and action. Methods of stimulating motivation include: competition, cognitive play and educational discussion, encouragement and punishment, problem method, method of specific situations, and so on.

Very important in the study of computer science, as well as any other discipline, is the active educational and cognitive activity of students. To activate this activity, as well as the formation and stimulation of motivation to study a particular discipline (including computer science), such classes as a lecture-presentation; a lecture together; a lecturepress conference; a lecture with pre-planned mistakes that students analyze and correct together with the teacher; encouragement for the ability to ask questions. In the conditions of friendly attitude of the teacher to students, the use of electronic materials and new information technologies in the educational process, conducting classes in the form of dialogue, discussing problematic situations, students are active, confident in their knowledge or not shy to make a mistake, as they are able to detect and correct the error. Therefore, the experiment described above reflects to some extent the level of preparedness of both teachers and students, as well as the psychological climate both in a particular group and in the stream as a whole [2].

From all the above, we can draw the following conclusion: the student's interest in computer science and new information technologies and motivation to study them largely depend on the educational material that the teacher offers during classes, as well as on the method of presenting this material. The process of studying this discipline is quite complex and specific, so the teacher has a serious task-to maintain the interest of students in the studied disciplines, using a variety of methods and techniques for learning to work with various software tools. The quality of the training material is of great importance in this process, because it is included in the content of the training course, is an important support in this process. Correctly and correctly selected educational information and the way it is presented contribute to a greater interest of students in computer technologies, increase motivation both to study this discipline and to the educational process as a whole.

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