

ORGANIZING TRAINING COURSES ON ASTRONOMY TO DEVELOP STUDENTS' COMPETENCE

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Abstract. *The article discusses an opinion on the effective organization and improvement of the process of passing astronomy club classes at pedagogical HEIs.*

Keywords: *astronomy, pedagogy, modern technologies, credit-modular system.*

ОРГАНИЗАЦИЯ УЧЕБНЫХ КУРСОВ ПО АСТРОНОМИИ ДЛЯ РАЗВИТИЯ КОМПЕТЕНЦИЙ СТУДЕНТОВ

Аннотация. *В статье обсуждается мнение об эффективной организации и совершенствовании процесса прохождения занятий астрономическим кружком в педагогических вузах.*

Ключевые слова: *астрономия, педагогика, современные технологии, кредитно-модульная система.*

Determining the priorities of the systematic reform of higher education in the Republic of Uzbekistan, raising the process of training highly qualified personnel with modern knowledge and high moral and ethical qualities to a new level in terms of quality, modernization of higher education, the “Concept of the development of the higher education system until 2030” was approved in order to develop the social sphere and economic sectors based on advanced educational technologies. According to this Concept, the educational process in higher education institutions should be gradually transferred to the credit-module system, based on international experiences, the introduction of advanced standards of higher education, including theoretical knowledge in educational programs. step-by-step transition from education oriented to the formation of practical skills, as well as raising the content of higher education to a new level in terms of quality, making a worthy contribution to the sustainable development of the social sphere and economic sectors It was determined that the establishment of a system of training highly qualified personnel who can find their place in the labor market will be implemented step by step [1].

The work of educating a person is an extremely complex process, and mature people of society have been involved in this activity since ancient times. This situation means that the content of the education of the young generation and its organization is important in determining not only the development of the individual, but also the development of the society. These experiences are of great importance in the creative application of teaching laws and principles used in teaching forms, in the practical implementation of ideas, theories, and laws related to scientific knowledge. Therefore, a person who does not understand the essence of the pedagogical process and does not have deep respect for students will not have an opinion that ensures the effectiveness of education and human development. The process of conducting classes in astronomy should be focused not only on the method of achieving a certain goal, but also on the issue of comprehensive development of the student [2, 3]. Therefore, it is necessary for future teachers to have deep and solid mastery of psychology and information technologies [4,5,6]. A teacher should improve his pedagogic skills and work on himself in order to make the class activities interesting. It is necessary to direct the work of the teacher to increase his

knowledge to the goal of constant creative research. For this, it is necessary for him to always be inclined to manage the process of creative research and systematically design his professional activity. The teacher of astronomy should also pay attention to the circle training in the process of mastering his specialty and teaching it. The circle is one of the main forms of non-auditory work, and among the non-auditory works, the circle is more effective and significant than others due to its long duration and versatility. Students participate in the club voluntarily. In the course of the research, the astronomy circle has the following: solving astronomical problems; learning the principles of telescopes; public events; making educational astronomical exhibitions; if such aspects as organizing didactic games on astronomy, studying the works of astronomers are held, then students will develop basic competencies. The form of work in astronomy circles can be different, but the goal is the same, that is, to deepen the knowledge of students, to develop their interest in science, to teach them to work independently, to apply their theoretical knowledge in practice. is to expand and strengthen the acquired knowledge. Even if models are created in the circles that are already known to the students, this is a practical novelty for the student. During the organization of round-table work, students' theoretical knowledge is deepened, their interest in science is developed, and their creative studies, experience and skills increase, and their knowledge expands and strengthens. It is desirable to organize clubs among parallel course students. Of course, it is pedagogically effective if the group is led by the teacher himself. In this case, if the teacher brings the students of the group he has been training to the circle, the teacher knows the inclination of the student's psyche, his abilities, and it becomes easier for him to work.

Opinions on the problem of opening astronomy circles and organizing its work are presented in many literatures, but it is not explained what topic, how many hours, how it will be conducted, and how it will be effective if this circle is organized. Based on today's requirements, it should be noted that the astronomy circle will be effective if it is held once a week for 80 minutes. Taking into account the observations, it is necessary to indicate the date of the training in advance, and it would be appropriate if the understanding of astronomy climate is given, and the influence of environmental problems on the astronomical observations of the students is also studied [7]. Before starting the work of the circle, the teacher should prepare material for the training, plan it, and develop a program and plan for the organization of the circle. A club started without sufficient preparation may initially have many students, and very few students will remain in the subsequent sessions, because most students come without knowing the goals and objectives of the astronomy club. In order for this not to happen, it is necessary to prepare a lot for starting the circle. Before starting the work of the circle, during several trainings, various tasks are done depending on the topic, such as solving tests. During the lesson, the teacher assigns students to write simple questions on a problematic topic that interests them. By drawing logical conclusions, solving qualitative problems expands students' knowledge of physical concepts, develops problem-solving skills and independent learning activities. It is not appropriate to form a problem-solving circle and limit the studied materials. Depending on the conditions of the higher education institution and the students' preparation, they can study various theoretical and practical materials in the circle. In order to successfully continue the activity of the astronomy club, the role of the group leader and assistant selected in the initial training is great. If the first lesson is very interesting and the teacher ignores the next one, the students will leave such clubs. Therefore, interesting questions should be the same in size in all classes. In the initial training, students should be more involved in working in groups, because

when working with students of different levels of thinking, the lower mastering student will try to compete with the excellent ones. As a result, after 2 or 3 sessions, there will be members of the club who are interested in astronomy and have decided to join the club. Students will be interviewed about their interests, and the plan of the training will be introduced. The contents of the independent lessons are given to the students to prepare at home, and relevant literature is recommended. Biographies of great physicists, various examples and problems can be included in the topics of lectures given by students in the astronomy club. As a result of conducting elementary scientific research work on topics recommended by the club leader and selected by some students, they find instructional methods of making weapons and other creative work topics. they pray. Discussion and question-and-answer sessions can be used to impart new knowledge. Before passing the topic, students are given homework questions for independent study. In order to deepen the knowledge of the members of the circle, the skills of independent work with astronomy textbooks and other additional literature are developed. Visual aids, handouts, and literature related to the topic are usually prepared for each training session.

The technology used in the training is selected, and the main concepts and basic knowledge are isolated in the training. Classes are mainly: organizational part; to acquaint members of the circle with the purpose and progress of the topic of the circle and to organize independent educational activities for their activities in the fulfillment of educational tasks; study the topic, organize groups of members of the circle and assign tasks to the members of each group, achieve high-quality performance of the tasks; organizing a question-and-answer, educational debate among students on a new topic; control and assessment of student knowledge using test tasks; review and analysis of problem solutions; strengthening and completing the concepts learned in the training; it will consist of giving an educational task to be completed independently at home. The topics and observations selected in order to develop students' ability to think and imagine, gradually increasing the level of complexity, developing students' ability to think independently in all aspects, giving them an idea about the celestial sphere, the place of the Solar System in the Galaxy and other astronomical dimensions. Conducting circle work in the organization of education based on a competence approach - expanding students' knowledge of astronomy, developing problem-solving skills and independent educational activities, deepening their theoretical knowledge, developing their interest in science, and their creative studies, experience and their skills, their interest in scientific and research work increases, their knowledge expands and strengthens.

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