



USE OF INNOVATIVE TECHNOLOGIES IN TEACHING ASTRONOMY TO STUDENTS WITH HEARING IMPAIRMENTS

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KEYWORDS

hearing impaired,
innovative technology,
dactyl language,
tactile-vibrational intuition,
game, method

ABSTRACT

This article is about the effective use of innovative technologies in the teaching of astronomy to students with hearing impairments, taking into account their physical, physiological condition and abilities.

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ИСПОЛЬЗОВАНИЕ ИННОВАЦИОННЫХ ТЕХНОЛОГИЙ В ОБУЧЕНИИ АСТРОНОМИИ ШКОЛЬНИКОВ С НАРУШЕНИЕМ СЛУХА

КЛЮЧЕВЫЕ СЛОВА:

слабослышащие,
инновационные
технологии,
дактильный язык,
тактильно-
вибрационная
интуиция,
игра

АННОТАЦИЯ

В данной статье речь идет об эффективном использовании инновационных технологий в обучении астрономии школьников с нарушением слуха с учетом их физического, физиологического состояния и способностей.

INTRODUCTION.

The use of innovative technologies, improving the quality of education, the development of inclusive education, the special education system plays an important role in the effective organization of the educational process.

In this regard, the Resolution of the President of the Republic of Uzbekistan dated October 13, 2020 PP-4860 "On measures to further improve the system of education of children with special educational needs." The purpose of deaf educators is to educate children with hearing impairments on the basis of DTS, to correct deficiencies, to help them adapt to society.

Organizing the educational process with students with hearing impairments creates some difficulties. This is due to their limited psychological and physiological capabilities. Hearing loss deprives the child of an important source of information and has a negative impact on his mental and spiritual development. There are the following categories of children with hearing impairments:

1. Deaf children - complete hearing loss.
2. Hearing-impaired children - partial hearing loss. Such children, in turn, are divided into groups of congenital and acquired deaf or hard of hearing children.

A healthy child receives most of the information about the environment through the sense of hearing and perception. Deaf children do not have this opportunity, or it is limited. This complicates the learning process. Hearing loss in a child requires increased visual acuity. A child's speech develops through seeing and understanding objects and events. At the same time, the senses of movement, tactile-vibration, smell and taste also play an important role in the formation of knowledge about the environment.

T.V. Romanova's research shows that deaf children also have a unique memory. A hearing-impaired child loses the clarity of an object or event that should be remembered in relation to a healthy peer, the location of individual details in the environment, the perception of size is shallow and difficult to find by comparing familiar objects gives birth.

The child's imagination narrows for a while. In such children, the process of remembering, memorizing and recalling spoken material words, sentences and texts becomes difficult. The word logic is closely related to the speech development of a child with memory impairment. Another characteristic of children with hearing impairment is the slowing down of speech and abstract thinking. All this, in turn, creates the need to organize the educational process for children with hearing impairments in a unique way. It is difficult to form knowledge, skills and abilities in teaching astronomy to students with hearing impairments is a process that requires deep knowledge, creativity and ingenuity from the deaf pedagogue. Hearing loss in children with hearing impairment is a secondary problem that prevents speech formation.

In the explanation of astronomic phenomena, the lack of imagination prevents the perception of processes. For example, sound, noise, friction, natural phenomena, atmospheric pressure, the universe, and other branches of astronomy have difficulty in comprehending knowledge. In the education of students with hearing impairments, it is important to form in them visual, tactile-vibrational and kinesthetic control. Humans receive 30% of information through sight. They perceive information through these senses. it forms perception, through knowledge, practice and outcome, and strengthens it in the mind of the reader

It is very important to organize astronomy lessons on the basis of innovative technologies, because the student perceives each process, size and event only through seeing and feeling. ICT tools, video lessons, visual aids, laboratory equipment, vocabulary will be needed. Vocabulary is low in children with hearing impairments, and dictionaries should be used in each lesson. The gestures of each subject, terms of size, names of physical phenomena, formulas and expressions of a new topic are used. In teaching astronomy to children with hearing impairments, only the preparation of each subject, the use of effective methods will give results. Below we will consider several methods.

"Cluster" method. Using this method, the basic concept of the topic is taught in an integral way to the rest of the parts. With this method, children with hearing impairments are able to understand concepts in a coherent way and bring their ideas into one system. students write, differentiate, and give examples, breaking it down into networks.

In the introductory part of the lesson, the use of the method of "brainstorming" helps to attract students' attention. Students are asked logical questions. Natural phenomena, astronomic processes in life and technology are scientifically substantiated. continuous integration is explained.

The game "Anogram" can be organized with the help of visual aids. At the same time, students are given the task to find a term or size that does not belong to the department.

Physical dictation develops students' ability to read aloud. In addition to the use of interactive methods for students with hearing impairments, it is necessary to create video lessons on each topic. Video lessons will be shown in the description of the new topic of the lesson, in a short time student will learn more. These video lessons are prepared by the deaf educator with the help of gestures and dactyl language depends on.

CONCLUSION.

Children with hearing impairments are not without opportunities. It is possible to effectively organize the educational process, taking into account the individual approach to each student, age, psychological and physiological characteristics. The main purpose of the educational process is to help children with hearing impairments to adapt to society and to form a perfect person.

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