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Research Article

USE OF ADVANCED TECHNOLOGIES IN TEACHING THE TOPIC OF "ANALYZERS" IN THE FIELD OF HUMAN HEALTH

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ABSTRACT

The article discusses the organization of the educational process based on innovative technologies to achieve learning goals. Advanced technologies of teaching "Analyzers" in the field of human health: The article covers the issues of application of the "case-study" method, the chain of terms, the use of non-standard test items in the educational process.

KEYWORDS

Analyzers, case studies, chain of terms, non-standard testing, advanced technologies, sensor systems.

INTRODUCTION

Reform and improvement of the education system in Uzbekistan is one of the priorities. This, in turn, requires teachers to update the textbooks in the relevant disciplines, taking into account the

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requirements of modern times and the latest achievements of science, the introduction of innovation and educational technologies in the educational process. Therefore, the role and importance of modern teaching methods - interactive methods, innovative technologies in the educational process of educational institutions is incomparable. Knowledge and experience in pedagogical technology and their application in education ensure that students acquire knowledge, skills and competencies. Innovative technologies are the pedagogical process, as well as innovations and changes in the activities of teachers and students, the implementation of which mainly uses interactive methods. In interactive lessons, the teacher's task is to focus students' activities on achieving the lesson goals. Today, the use of advanced educational technologies in the educational process in all areas and directions of education is observed: problem-based learning; technologies that develop critical thinking; developmental learning technologies; modular technologies; collaborative technologies.

THE MAIN FINDINGS AND RESULTS

The use of advanced technologies in the teaching process in secondary schools, such as case studies, clusters, chains of terms, Venn diagrams, graphic organizers, increases the effectiveness of training. A teacher's creativity leads to an increase in students 'interest in science. In particular, in the course of the lesson on Adam and his health, case studies, non-standard tests, demonstrations, grouping to increase the activity of students lead them to move cohesively, fluent speech, the formation of mutual respect.

The teacher assigns the students to read the new lesson independently. Explains the steps of the case-study method to students in two equal groups and provides them with a paper version.

"Case -study" method. "Case-study" - is an English word ("case" - a real situation, event, "study" - to study, analyze) is a method of teaching based on the study, analysis of specific situations. In case-study technology, students are given specific situations in a projected state and solutions are developed. This technology is done in a group setting with students. The implementation of case-study technology involves the following steps and types of activities.

Technology involves the following steps and types of activities.

Case-study implementation stages:

Иш босқичлари	Form and content of activities
Phase 1: Introduction to Case and its information support	• individual audio-visual work; • to get acquainted with the situation; • generalization of information; • information analysis; • identify problems.

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Phase 2: Identify the problem situation and identify the problem assignment	• individual and group work; • identify the topical hierarchy of problems; • identify the main problem situation
Phase 3: Search for a solution to a problem, develop solutions	• individual and group work; develop alternative solutions; • analysis of opportunities and barriers to each solution; selection of alternative solutions
Phase 4: Formulation and substantiation of a problem task solution	• individual and group work; • substantiate the possibility of implementing alternative options in practice; • preparation of creative-project presentation; highlighting the final conclusion and practical aspects of the situation solution

The teacher gives both groups handouts with problems on the vision analyzer.

About the organ of vision

1. CASE STATEMENT.

The red light of the traffic light was on when the driver of the Spark, who was driving in his direction, came to a quarter while driving. The Spark driver stopped immediately, but the Tiko car coming from behind came at high speed and collided with the Spark car.

Case questions.

1. Explain why the driver of the Spark stopped when he saw a red traffic light, but did not see the car "Tiko".
2. What is the role of eye structure in this process?

2. CASE STATEMENT

Why is the "Eye" called the mirror of the soul?[6].

Instructions for students:

1. Understand the essence of case enough.
2. Identify the factors that serve to find a solution to the problem.
3. Sensor Systems Re-read the topic "Analyzers".
4. Identify the factor (or two factors) that are most relevant to the problem among the identified causes.
5. Try to justify the solution based on the reasons.
6. Express your opinion

Case solving process:

1. The audience discusses the essence of the case in small groups by getting acquainted with it.
2. The listener, in collaboration with small group members, identifies the factors that prepare the ground for solving the problem.
3. The most important factors that will allow you to solve the problem are highlighted.

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4. Small group members describe the most important factors based on common opinion.
5. The opinions of the small groups are analyzed and a general conclusion is drawn.

Students will re-read the topic of physiology of sensory systems, i.e analyzers, to understand the nature of the adaptive properties of receptors.

Case solution: (Student options)

1._____

2._____

Teacher's solution.

1. The driver of the Spark car sees the red light at the stoplight because his eyesight is normal. However, the driver of the Tiko car did not see the red light and caused the collision.
2. Sometimes it causes congenital dysfunction of sausage receptors.

Case's scientific statement.

Visual organ dysfunction. The condition of nearsightedness (myopia) is congenital and acquired in life. The condition of farsightedness (hyperopia) is mainly congenital, but can also occur in the elderly due to a decrease in corneal convexity. In some people, the ability to perceive green, red, and other colors is impaired due to a congenital dysfunction of sausage receptors (color blindness). It is more common in men and is inherited.

Case questions:

1. What is visual acuity?
2. What is the significance of the bulge and depression of the eyeball?

Teacher's solution:

1. The eye is the mirror of the heart. For example, anxiety, joy are all reflected in our eyes.

Case Content Analysis.

Work in groups 1 and 2;

Explains hygienic rules. **1- Group**	**Provide physiological justification.** **2- Group**
1. keep books, notebooks, sewing and drawing objects at an average distance of 40 cm from the eye	At close range, the rhinoceros is in a blunt position for a long time, which leads to the development of close vision
2 The light beam should fall on the left side	No shadows will form on the table

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3. sufficient light (100-150 lux)	Insufficient light leads to impaired eye accommodation.
4. reading is not recommended when traveling by bus, tram, subway, train, or other means of transportation	At this time, the book or magazine or newspaper in hand is moving. This causes the shape of the eyeball to change continuously
5. Vitamin-rich foods should be included in the daily diet	Foods rich in vitamin A (liver, butter, carrots, zucchini); because vitamin A deficiency leads to fear of light, and sometimes excessive dryness of the eyes. (xerophthalmia), in low light, visual acuity decreases, can not see well in the evening (shabkor)
6. In manufacturing plants, people strictly follow safety rules.	It is necessary to avoid various emergencies and trauma, which leads to blindness.
7. Watching TV from 2-3 meters away. Do not sit in front of the TV for more than 2-3 hours.	Sight is impaired, sitting too long in front of the TV causes eye strain.
8. The eye should be protected from sunlight, burning flames, dust and similar adverse effects.	This is because the light-sensitive cells in the retina, the peripheral part of the analyzer — the receptors, the optic nerve — can be damaged.

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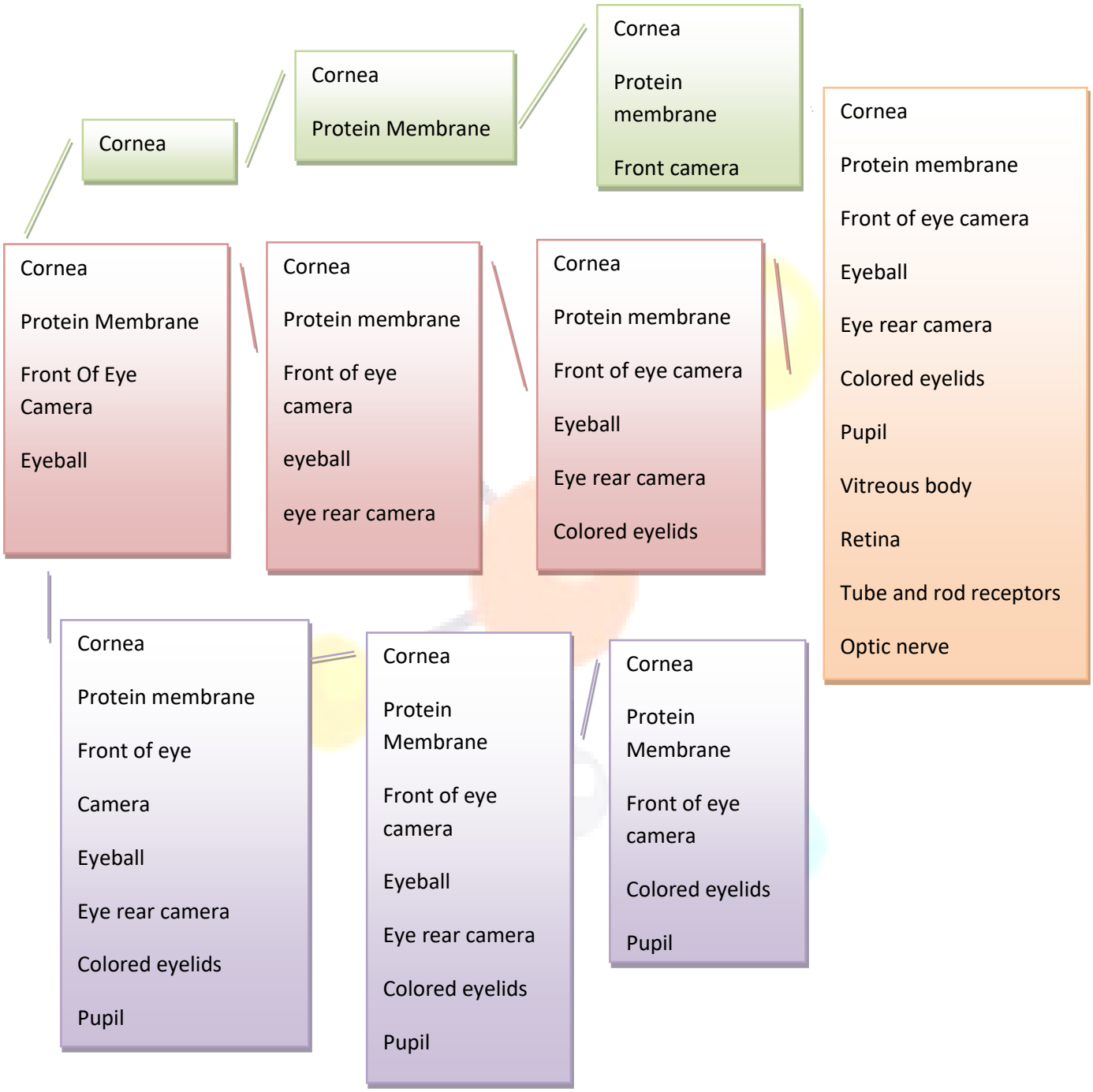
Create a chain of terms according to the structure of the view member



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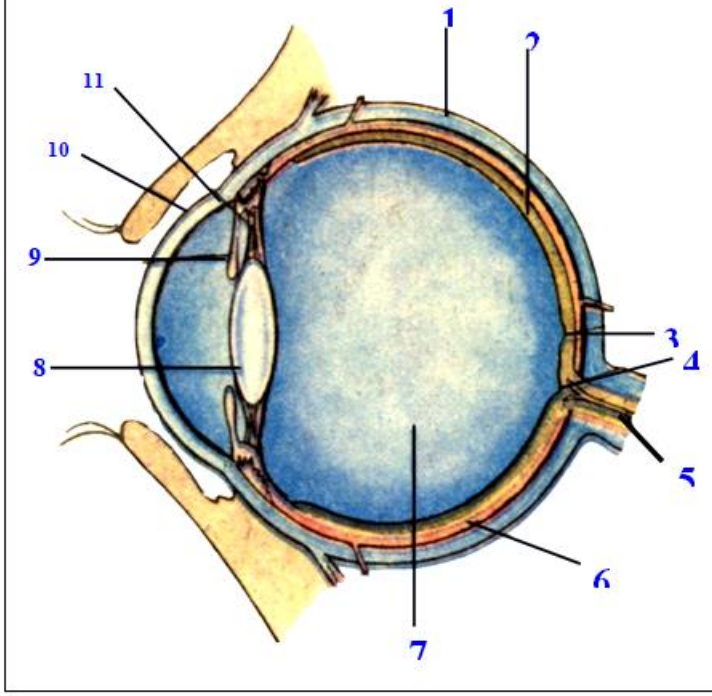
Non-standard test tasks used to monitor and assess students' achievement of learning objectives related to inference. Show the eye parts in pairs.

1	To the optical system of the eye	A	consists of external and internal parts.
2	Accommodation	B	cornea, intraocular fluid, ore, and vitreous body.
3	sausage receptors	C	color recognition
4	Eye contact	D	Variation of the shape of the pearl

answers	1-	2-	3-	4-

Answers	1-B	2-D	3-C	4-A

1. Write the numbers that correspond to the parts of the vision organ given in the picture



Eye parts	Numbers
Vascular shell	
Eyelash muscles	
Gem	
Proteinuria	
Cornea	
Vitreous body	
Retina	
Blind spot	
Yellow spot	
Eyelid	
Optic nerve	

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CONCLUSION

In the creation of educational technologies in the disciplines, it is expedient to be based on diversity, creativity, innovative approaches, taking into account the specifics of each discipline. In this process, it is appropriate to take into account the specifics of the disciplines, forms of training, topics.

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