

**AUTHOR'S INTERACTIVE TEACHING METHOD:
"GAME LOGICAL ASSOCIATIONS"**

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ABSTRACT

The problem of lecture classes for students of higher educational institutions is considered, using modern educational technologies. It is shown that the interactive method of conducting lecture classes developed by the authors - "game logical associations" is a new pedagogical technology of teaching, which improves the process of cognitive activity, ensures an effective process of assimilation of knowledge by students.

Relevance. In the educational process, the one-way form of transfer of information by the teacher and its subsequent reproduction by students is the main method of conducting training, which especially often occurs in lectures. Based on the results of Edgar Dale's study to identify the most effective methods of teaching, it is shown that a classic lecture (i.e. a teacher's monologue, not without technical training tools) ensures that listeners absorb only 5% of the information presented, while other methods: reading - 10%, audio visualization - 20%, demonstration - 30%, group discussion - 50%, practice of specific work - 75%, teaching others/immediate use - 90% ensure assimilation, respectively (5% - lecture, 10% - reading, 20% - audio visualization, 30% - demonstration, 50% - discussion group, 75% - practice by doing, 90% - teach others/immediate use) [Thalheimer, Will].

In this regard, the development of new pedagogical technologies in the educational process using interactive methods is undoubtedly relevant.

Target: Development of an interactive method "Game logical associations" for a lecture for students on the topic "Principles of intensive care for children in a life-threatening condition".

Tasks:

1. Conduct an analysis of interactive teaching methods in the educational process.
2. Develop and evaluate the effectiveness of the author's method of interactive lecture classes "Game logical associations" in students.

Object of study. Students and teachers of the Samarkand Medical University

Research results.

One of the requirements of educational processes is the widespread introduction of interactive forms of conducting classes into the educational process.



Interactive teaching methods are based on close interaction between students, in joint activities through dialogue, polylogue, and are most consistent with the personality-oriented approach, in which the teacher is often only the organizer of the educational process, creating certain conditions for students, the implementation of which is the most important direction in the modern educational process.

The interactive form of lectures ensures high motivation of students; consolidation of theoretical knowledge in practice; ability to make collective decisions and social integration; acquisition of skills for solving problems that arise [Bazilevich S.V., Brylova T.B., Glukhikh V.R., Levkin G.G.; Vendina A.A., Kirichek K.A., Maliataki V.V.].

To Interactive methods of teaching lecture classes currently include: problem lecture - a lecture based on the logic of sequentially modeled problem situations by posing problem questions or presenting problem tasks. correct assessment and resolution; visualization lecture which implements the didactic principle of accessibility: the ability to integrate visual and verbal perception of information; lecture for two in which educational material of problematic content is given to students in live dialogic communication between two teachers; lecture with pre-planned errors allowing to develop in students the skills of promptly analyzing professional situations, acting as experts, opponents, reviewers, isolating incorrect or inaccurate information; lecture - press conference consisting in activating the work of students in the lesson due to addressed information to each student personally; lecture-conversation, or dialogue with the audience is the most common and relatively simple form of active involvement of students in the educational process. It involves direct contact between the teacher and the audience; lecture-discussion in which the teacher uses students' answers to questions posed to him, organizes a free exchange of opinions on sections of the material presented; lecture with analysis of specific situations; lecture using feedback techniques in the form of audience reaction to the words and actions of the teacher; lecture-consultation when the topic is of a purely practical nature; programmed group lecture-consultation classes in which are more effective if students ask a large number of questions; video lectures the advantage of this method is the ability to listen to the lecture at any convenient time, re-visiting the most difficult places; multimedia lectures in which theoretical material is presented thanks to the use of multimedia tools; lecture-press conference; lecture-provocation is conducted with pre-planned errors. develops in listeners the ability to quickly analyze professional situations, act as experts, opponents, reviewers [Antyukhov A.V., Nikolaeva].

Thus, the considered forms of lecture classes allow to a significant extent to activate the educational and cognitive activity of students. It is important to remember that the choice and application of one or another form of lecture depends on many factors: the objectives of the class, the preparedness of the audience, the availability of time, the technical equipment of the educational process, etc.

Found messages about 12 original pedagogical technologies dedicated to the educational process in secondary school [[https:// www.ru.wikipedia.org/wiki /Pedagogical technologies](https://www.ru.wikipedia.org/wiki/Pedagogical_technologies)], as well as the author's technology of intellectual education by Frolov A. A. [Frolov A. A.] and the author's pedagogical technology of management using the foresight method "Time Swing" in which S. V. Tetersky offers an innovative technology for modeling the future in the present,



allowing one to understand the meaning of one's life here and now, to develop recommendations for goal achievement, planning, programming, design, and management based on a comparison of data from the future and standards [Tetersky S.V.].

The existing innovative methods of interactive technologies for conducting lectures do not sufficiently involve both the teacher and the student in the learning process, especially in terms of independent participation and decision-making on assigned tasks.

The Samarkand Medical Institute is holding a lecture on the topic: "Principles of intensive care for children in a life-threatening condition." There are 14 principles of emergency care for children in emergency conditions (Veltischev Yu.E., Intensive care in pediatrics):

1. Syndromicity.
2. Priority.
3. From simple to complex.
4. Stage-by-stage.
5. Feedback
6. Preventiveness.
7. Protection of the internal environment.
8. Adequate control.
9. Taking into account the child's age and the presence of borderline conditions.
10. Accounting of hereditary, ante- and intranatal data.
11. Optimal organization of the environment.
12. Neurological focus.
13. Prevention of hospital infection
14. Staff skills.

The methodology of the lecture conducted on the interactive teaching method called by the authors "Game Logical Associations" is as follows:

- I. At the beginning of the lesson, the lecturer announces the topic: "Principles of intensive care for children in a threatened condition."
- II. Then a slide is shown (Figure 1) and the question is asked, who is this?



Figure 1. Who is this?

- One of the answers is a person who does not know what to do? What medical care? In what order? should be provided to a child in an emergency condition. The "provocation" method is used, the purpose of which is to develop motivation in students before the lecture - we are not that person, we are much better, we know what to do,
- III. Then, slides are shown one after another, depicting various objects, drawings, pictures, etc., which have practically nothing to do with medicine, but at the same time have an association or a meaningful logical connection between the drawing and one of the principles of intensive care.
 - IV. After each slide, students are asked questions: What could this reflect? What does this mean? What is this principle of intensive care?
 - V. The teacher, analyzing the answers in the form of a dialogue with the students, if necessary, directs the course of their thoughts and fantasies (any answer is allowed) in the right direction.
 - VI. After discussing the answer to each slide, the teacher, together with the students, selects the most correct solution (possibly more than one) needed in a given situation, answer.
 - VII. The next slide demonstrates the correct thematic answer-standard (in the form of text, table, diagram, etc.), which was compiled by the lecturer based on reliable literary sources of information.
 - VIII. A comparison and analysis of the correspondence between the students' previously adopted solution on the slide-drawing and the standard answer given on the answer slide is carried out.
 - IX. After discussing the students' answers and the standard, the next slide question is shown, etc.
 - X. All lesson material is presented in the order described above.

- XI. After demonstrating all the slides, the teacher asks the students for their opinion on the adequacy of the question slides, and for the next presentation any slide can be replaced by another, including one suggested by the students.
- XII. Then an express control of knowledge acquisition is carried out.
- XIII. At the end of the lesson, the most active students are thanked.

Example. A slide is shown (Figure 2) and the lecturer asks students to name what is shown in Figure 2, the answer is obvious - it is an arithmetic abacus and a calculator, then the question follows - which of the principles of intensive care, according to the association of the pictures: an arithmetic abacus and a calculator does it mean.



Figure 2. What is the principle of intensive care?

The most diverse answers from students are possible, from “calculating the dosage of medications,” “cost of treatment,” “methods of calculating numbers,” etc., each of which is discussed: what association exists with the possible principle of intensive care, why yes or no, and ultimately the correct answer is chosen, from “simple” - because it is easy to do arithmetic abacus, in particular, the student will be able to do it himself, to “complex” - the student will not be able to make a calculator - a complex mechanism. Then a slide is shown (Figure 3), in which Figure 3. The principle from simple to complex

from simple to complex

This principle is indicated - “from simple to complex”.

Then the next slide is shown (Figure 4), where the principle is deciphered – “from simple to complex: intensive care should always begin with a simple method, and if it is ineffective, move on to a more complex method.

Intensive care should always begin with a simple method, and if it is ineffective, gradually move on to a more complex method

Figure 4. Explanation of the principle - from simple to complex.

Then the lecturer gives several clinical situations. For example: in case of convulsive syndrome, the following methods (activities) are used to provide emergency care to a sick child:

First, you need to carry out step 1 - clearing the airways - this is a very simple method;

if the convulsions are not relieved, carry out measure 2 - intramuscular administration of diazepam - this is a simple method;

if the convulsions continue, carry out step 3 - administer sodium oxybutyrate intravenously - this is a rather complicated method;

if the convulsions are not relieved, perform procedure 4 - perform a lumbar puncture - this is a more complex method;

If the convulsions continue, carry out measure 5 - artificial ventilation of the lungs using muscle relaxants - this is a very complex method.

The above-mentioned treatment measures are carried out in accordance with generally accepted standards of diagnosis and treatment of children with convulsive syndrome.

It takes from 2 to 10 minutes to analyze this principle, depending on the complexity of the question, the activity of the students, etc.

Example 2. The lecturer asks students to name what is shown in Figure 5, the answer is obvious - these are nesting dolls, then the question follows - which of the principles of intensive care is this, according to the association of Figure 5.



Figure 5. What is the principle of intensive care?



The students' answers are very diverse, from "relatives", "souvenirs", "can be put together into one nesting doll", etc., each of which is discussed: what association exists with the possible principle of intensive care, why yes or no, and ultimately the correct answer is chosen: "Considering the child's age and the presence of borderline conditions", since the nesting dolls differ significantly in size, which means their age difference. Then a slide is shown (Figure 6).

Taking into account the child's age and the presence of borderline conditions

Figure 6. Taking into account the child's age and the presence of borderline conditions

Then the lecturer gives several clinical situations and examples: when providing intensive care, it is always necessary to take into account the child's age, since antibiotics cannot be prescribed to a newborn child Chloramphenicol, since the drug is very toxic and is prohibited for use in young children, and it is prescribed to a 15-year-old child; take into account the presence of borderline conditions, so yellowish skin coloration in a 6-day-old child may be a manifestation of the norm (physiological jaundice) and you only need to observe him, and in a 5-year-old child, this symptom almost always means a disease and requires urgent examination.

There are numerous clinical situations that can be cited.

Example 4. The lecturer asks students to name what is shown in Figure 7, the answer is obvious - it is a coronavirus and a road sign - "stop", then the question follows - which of the principles of intensive care is this, according to the association of this drawing. It should be noted that previously in place of the drawing with the coronavirus there was a drawing with a cockroach and it was replaced due to the current relevance of the COVID-19 pandemic, which indicates the possibility of changing the drawings to a more illustrative one and the flexibility of the interactive teaching method we offer

The students may give a wide variety of answers, but ultimately the correct answer is "Prevention of hospital infection". The lecturer then discusses with the students what this principle means and how to implement it. The lecturer emphasizes to the students that "protection" from infection is not only for the patient, but is equally important for the medical staff themselves (washing hands, wearing medical masks, respirators, gloves, protective medical uniforms, etc.).

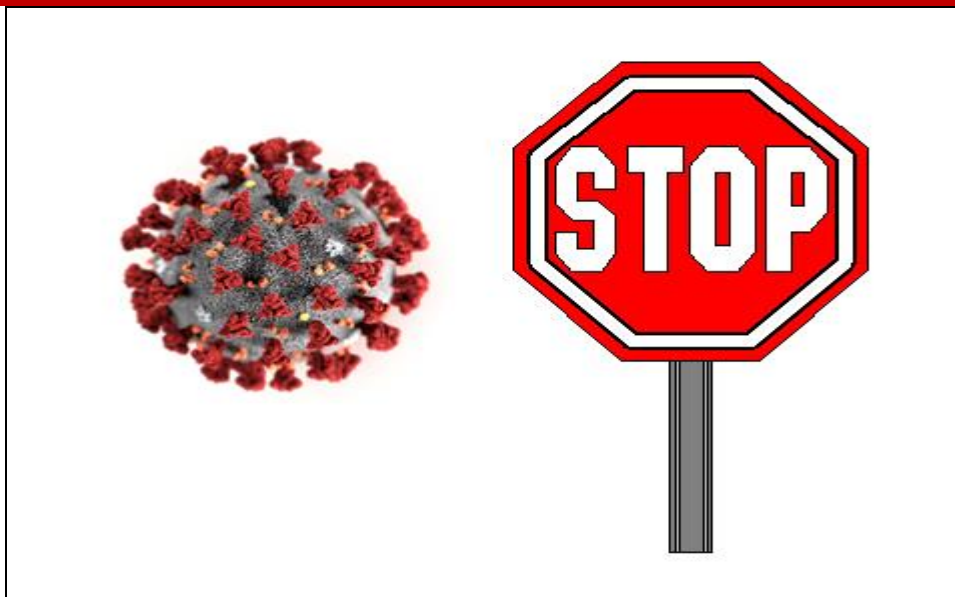
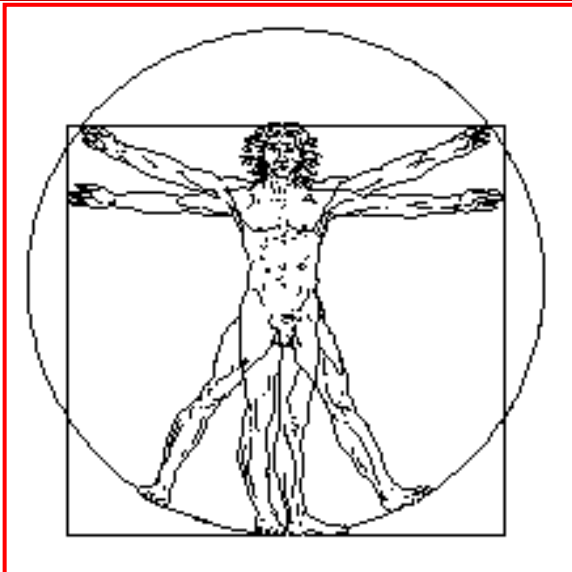
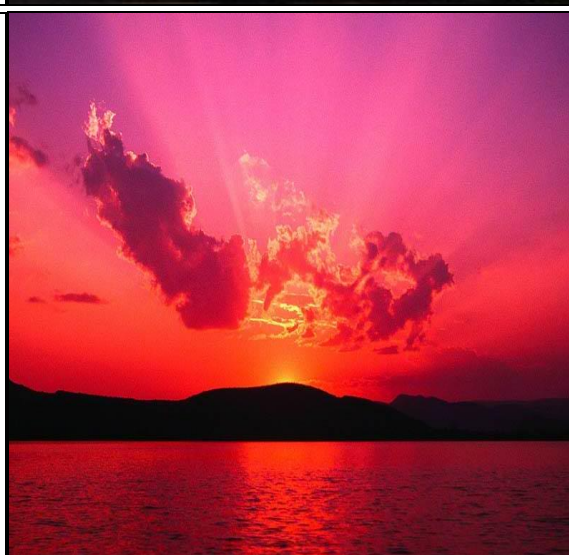
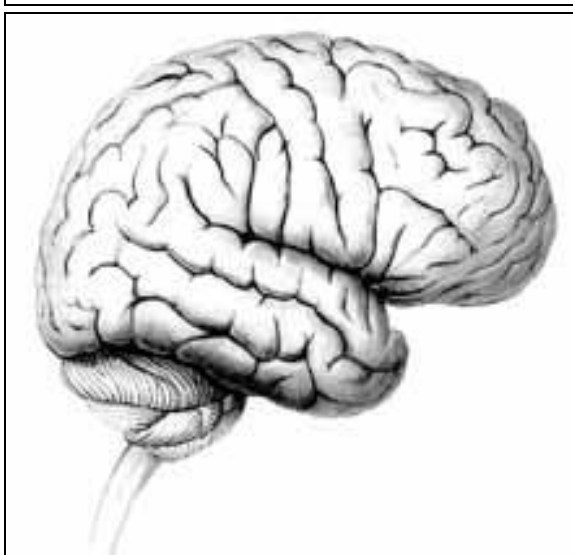
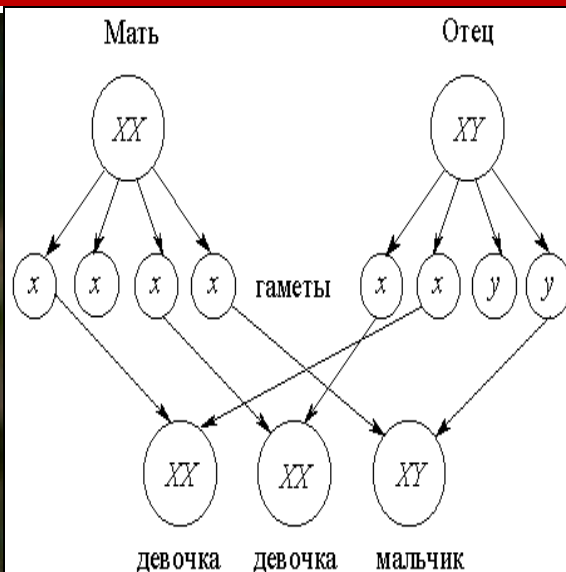


Figure 7. What is the principle of intensive care?

Similarly, by means of questioning, explanation and interpretation with the obligatory participation of students, a step-by-step analysis of all slides is carried out (Figures 8, which corresponds to the principle of syndromicity, 9 - priority, 10 - stage-by-stage, 11 - from simple to complex, 12 - feedback, 13 - adequate control, 14 - protection of the internal environment, 15 - taking into account hereditary, ante- and intranatal data, 16 - taking into account the child's age and the presence of borderline conditions, 17 - preventiveness, 18 - neurological focus, 19 - optimal organization of the environment, 20 - prevention of hospital infection, 21 - staff skills), to determine the remaining principles of intensive care for children, the sequence of demonstration of slides must be strictly observed





After the main part of the lecture is completed, to assess the assimilation of knowledge obtained in the lecture, the lecturer distributes an assessment sheet to the students (table 1),



then sequentially shows drawings No. 8-21 on slides and asks the students to fill in the drawing number in the second column themselves, corresponding to the number of the principle of intensive therapy that he mastered in the lecture.

Table 1
PRINCIPLES OF INTENSIVE CARE

| Name of the principle | No. |
|---|-----|
| Neurological focus. | |
| Preventiveness | |
| Optimal organization of the environment. | |
| Prevention of hospital infection | |
| Syndromicity | |
| Feedback | |
| Protection of the internal environment | |
| Stages | |
| From simple to complex | |
| Priority | |
| Accounting of hereditary, ante- and intranatal data | |
| Taking into account the child's age and the presence of borderline conditions. | |
| Adequate control | |
| Staff skills. | |
| TOTAL (number of matches) | |

The lecturer dictates the verification of the correctness of the answers, using the standard (table 2) for convenience, and the students themselves evaluate the assimilation of knowledge by the correctness of the coincidence of the numbers of the drawing and the name of the principle - the text part. The lecturer, having collected the assessment sheets, can conduct a statistical analysis of the assimilation of knowledge, both after the end of the lecture and at any other time, the date of the end of the subject cycle is convenient.

Table 2
PRINCIPLES OF INTENSIVE CARE (standard answers)

| Name of the principle | No. |
|--|-----|
| Neurological focus. | 18 |
| Preventiveness | 17 |
| Optimal organization of the environment: | 19 |
| Prevention of hospital infection | 20 |
| Syndromicity | 8 |
| Feedback | 12 |
| Protection of the internal environment | 14 |
| Stages | 10 |
| From simple to complex | 11 |
| Priority | 9 |



| | |
|---|----|
| Accounting of hereditary, ante- and intranatal data | 16 |
| Taking into account the child's age and the presence of borderline conditions. | 15 |
| Adequate control | 13 |
| Staff skills. | 21 |
| TOTAL (number of matches) | |

The lecture "Principles of intensive care for children in emergency situations" developed by us using this method has been conducted in lecture classes with students for 3 years.

The analysis of the assimilation of knowledge from lectures conducted using this method (current, midterm, final control) among students in the period 2018-2020 revealed an average of 80 to 85% of correct answers on the day of the lecture and 50 to 55% 10-15 days after it, which indicates the undoubted effectiveness of in-depth study of this topic, compared to traditional teaching methods.

The interactive method "Game Logical Associations" that we offer includes some elements of interactive methods such as "lecture provocation", "lecture-visualization", "lecture-conversation", "lecture-discussion", "lecture-debate", "brainstorming", to what extent is it similar to the television program "WHAT-WHERE-WHEN" when, when asking a question on the "black box", the players (participants in the program) are shown an object and asked a question - what does this mean and yet the main difference of the method that we offer is the creative work and participation of students in studying the lecture material and the fact that the students themselves participated and created "Principles of Intensive Care for Children" - the principle "the best pants are those that we made ourselves."

Conclusions: 1. The interactive method of conducting lectures developed by us - "game logical associations" is a new original teaching method, which allows students to participate in the disclosure of the topic and the solution of the questions posed, improves the process of cognitive activity, which is the key to improving long-term memory.

The efficiency of knowledge acquisition by students during the lecture "Principles of intensive care for children in emergency situations" using the "game logical associations" method is on average, from 80 to 85% on the day of the lecture and 50 to 55% 10-15 days after it.

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