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THE USE OF MODULAR LEARNING TECHNOLOGY IN TEACHING PRIMARY SCHOOL STUDENTS TO THINK INDEPENDENTLY

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ABSTRACT

In fact, modern pedagogical technologies increase the productivity of the educational process, shape the independent thinking process of students, increase the enthusiasm and interest in knowledge in students, and strengthen the acquisition of knowledge, the formation of skills and skills of free use of them in practice. Teaching students to think independently is a process that is not carried out in one day or one hour of classes, but is carried out gradually over the years under the influence of various factors. This article discusses the use of modular learning technology in teaching primary school students to think independently.

KEYWORDS: *Modular Learning Technology, Independent Thinking, Teaching, Primary School Students, Formation Of Skills.*

INTRODUCTION

The use of modular educational technology in teaching primary school students to think independently, preparing them for the implementation of modern pedagogical technologies is one of the important requirements of today's primary education. Modern pedagogical technologies, firstly, allow students to learn knowledge, skills and abilities easily and with interest, and secondly, help the teacher to grow both professionally and spiritually. When does a student begin to think independently? The question naturally arises. First, it is necessary to know the stages of formation of the human thought process. The process of human thinking is formed in the process of observing life, people, relationships between them, nature through the senses. From the moment a child is born, he begins to see, observe and absorb life, adult activities, events and phenomena in nature, and as a result, he develops imagination and speech. At the same time, the child acquires a lot of imagination based on the information collected through the senses, and tries to understand it. So they have a lot of questions. For example, *what is in the*

sky? Why is a day and a night? Why do birds fly? Why am I small? Why are the colors different? Why is it raining and snowing? What about clouds? and so on.

A mother told of her three-and-a-half-year-old son: “One day my son asked me this question:

- Mother, why are our noses different? Mine is flat, yours is upright, my sister’s is different? Not knowing what to say,

"That's the way it is, son," I said.

"Who made it, the doctors?" Do they cut and paste?

"No, boy, God made it."

"How does God do it?"

So my son beat me in question and answer. I didn’t know what to explain. I tried to distract my child. My son kept asking questions.

Indeed, children constantly ask their parents questions in their preschool years. Answering the child's questions patiently helps him/her to think, to understand events, and to develop his/her speech. In preparation for school, a child's speech is formed at the level of reading and understanding people's interactions with adults. He can understand what he has heard and seen. He can express information in a certain order, use mental operations appropriately. (Compares, clarifies, groups them, tries to draw valid conclusions).

The level of thinking of a preschool child improves in the educational process at school. The role of the teacher in the development of students' thinking is invaluable. The teacher needs to make students active participants in the learning process. It is especially important to teach students to think about what they are learning and to express themselves freely. The use of pedagogical technologies in the educational process is very effective. The student actively participates in the lesson, which is based on pedagogical technologies, and interacts freely with the teacher and peers. In particular, person-centered technology makes students the subject of the learning process and allows students to think freely about the material. The role of modular learning technology in this area is invaluable. The use of didactic games in the educational process is also very effective. Didactic games help children develop reading skills. There can be no real mental development without games. The game sparks students' interest and curiosity. Students facilitate the acquisition of knowledge, learn to interact with a variety of subjects, and develop a culture of communication through games. It is important that in the process of didactic games the child develops self-confidence, learns to move freely, to express themselves freely, to express independent thoughts. For example, in the game "Find the mistake in the picture" the child observes the picture independently. If a picture of a winter landscape shows a tree in bloom, the child will find it independently. The games such as “can't be”, “find the error in the text” games, rebuses, and puzzles stimulate students' thinking and teach them to think independently. Exercises to work on the picture in the textbook also teach students to think independently. The child expresses his / her attitude to the picture, actively participates in questions and answers, and when given a task to write a story based on a picture, he / she writes a story based on his / her imagination. There are many opportunities to teach a child to think independently in elementary school, and it makes good use of it wisely. Guiding students to work on a text is one of the most effective ways to teach them to think independently.

Textbooks for primary school should also encourage students to think independently through exercises, questions, and assignments at the end of the text. For example, "Who is reciting the poem?", "How can you add to the poem?", "Do you want to be friends with the protagonist of the story (or fairy tale)?", "What advice would you give to the protagonist of the story?" , "Do you want to be in a fairy tale?", "Who do you want to be in it?". Questions such as "Divide the text into parts and put a title to each part", "Make a text plan with the help of the teacher", "Re-narrate the text according to the plan", "Re-narrate by changing the characters in the text" and so on assignments serve to develop students 'thinking and independent thinking.

MATERIALS AND METHODS

Current status of the use of modular learning technologies in primary education

To increase the activity of teachers in the use of modular learning technology and, conversely, to identify the reasons that hinder it, to look for more effective ways to work on the basis of the use of modular learning technology. The information gathered on these issues will help the school teacher to enrich the pedagogical activity with elements of the use of modular educational technology and to identify a number of measures that will help it to be effective. An in-depth study of the specifics, differences in structure, and character traits of experienced teachers based on the use of modular learning technology. When evaluating the performance of teachers with the skills to use modular learning technologies, a positive description will undoubtedly prevail. Young teachers consider the specific features of the use of modular educational technology in the methodological support of pedagogical activity, the correct application of psychological and pedagogical knowledge. Experienced teachers emphasize the importance of using modular teaching technology in their work, which can be understood through in-depth analysis of the pedagogical situation, along with methodological support.

Working on the use of modular learning technology, methodological support is paramount, and the importance of knowing, explaining, communicating, and engaging students in modular learning technology is highly valued. Skilled teachers have a slightly different situation. They consider the reasons for success to be: the ability to use modular learning technology, regular self-study, problem-solving based on modular learning technology, and research on professional development. They prioritize the use of modular learning technology, which is one of the foundations of pedagogical skills and need to work on themselves on a regular basis.

The study of the peculiarities of the organization of pedagogical activity of skilled teachers on the basis of the use of modular educational technology has yielded the following results:

a) compare the methodological skills of experienced teachers;

b) be able to intelligently analyze the pedagogical situation;

c) specificity in the use of modular technology.

In this context, we have identified differences in understanding the nature of the use of modular learning technology, its sources of development, its causes, and the factors that contribute to or hinder the use of modular learning technology. In order to make the comparison more effective, we had to conduct an initial selection in a group of experienced teachers. For comparison, we selected only those that were rated "based on the use of modular learning technology" and "generally based on the use of modular learning technology."

Comparing teachers who have a lot of experience with experienced teachers and who have achieved high results in this area, by identifying the differences between them, which of them has the highest pedagogical skills, the work of educators who have earned the title of a skilled teacher an in-depth analysis of its specific features was made possible. In addition, the specificity of the scope of attitudes of skilled teachers stems from a clear perception (lat. perception) of their inner state of mind and actions, a clear knowledge of their own personality and the personality of the student. The results show that the teacher's organization of the educational process on the basis of the use of modular learning technology depends in many respects on his self-reliance, knowledge, good knowledge of pedagogical features and the teacher's modular learning technology.

The essence and description of the concept of modular training.

The term "modular teaching" is related to the international concept - module ("module", from the Latin word "modulus" - means a norm, a measure.) The module divides the subject studied in the educational process into specific parts and creates a clear system of its study. A single meaning of a module is a node consisting of closely related elements that can function. In this sense, it is understood as the main tool of modular learning, as a complete block of information.

A module is a fundamental concept of a science: a specific process or law, a section, a specific major topic, a group of interrelated concepts.

A module is a logically complete learning material based on developed principles that are designed to help students master one or more concepts.

A module is a purposeful functional network that combines learning content and learning technology in a highly integrated system [Kaldibekova, 2006].

A module is a logically complete piece of learning material that compulsorily monitors students' knowledge and skills [Stolerenko, 2003].

A module is a logically defined piece of learning information that has some kind of logical integrity and completeness, synchronized with knowledge control.

By module we mean a didactic unit of learning material that logically completes and perfectly illustrates important aspects of the objects, with a clear goal in mind for a particular subject [Nuriddinov, 2002].

Modular learning is a logically defined part of educational information that has some kind of logical integrity and completeness, coordinated with knowledge control[Stolerenko, 2003].

An educational module is a meaningful part of a course of study, along with relevant teaching materials.

Curriculum module - instructions for studying the timing of each assignment, methods of control and accounting, study of teaching materials (paragraph, topic, section, subject, integrated course). In a more simple and unique way, the training module reflects the topics (sections) of the usual curriculum, along with more reasonable forms and methods of learning it [Podlasiy, 2002]. Modular learning is one of the most promising systems of learning because it is best adapted to the assimilation system of the human brain. The modular system of education was first officially discussed in 1972 at the UNESCO World Conference in Tokyo. Modular learning

technology is based on the general theory of functional systems, neurophysiology of thinking, pedagogy and psychology.

Modular teaching provides a comprehensive solution to the following modern problems of pedagogical education:

• module - optimization and systematization of activity-based learning content to ensure the flexibility and flexibility of programs;

• individualization of teaching;

• Monitoring the effectiveness of training at the level of practical training and assessment of observable actions.

There are two approaches to modern theory and practice of modular teaching: the science approach and the system approach.

The effectiveness of teaching is enhanced when the module program is provided to the student as a textbook for independent reading for continuous use during the reading of the block of learning material included in the curriculum.

The structure of the module manual reflects the following design requirements and rules:

- An integrated goal included in the quality classifications (personal and cognitive) as a result of modular reading.

- Clarification of the purpose in the "learning elements" of the subject given in the educational standard.

- study of the module, programs and recommendations on technological methods.

- Clarification of goals in the final control tasks on the standards and criteria of mastery levels.

- Standards for the organization of self-control and mutual control.

Features of the implementation and design of modular technology in the classroom.

RESULTS AND DISCUSSIONS

The organization of educational activities on the basis of separate modules in the educational process creates great opportunities for the student to acquire independent, planned knowledge and self-development as a subject of educational activities. Applying modular technology to practice requires the teacher to be familiar with the principles of modular learning:

Principles of modular education

Modular learning technology is developed and implemented in accordance with the accepted principles of teaching. The following principles form the basis of modular learning technology:

1. Principle of activity: This principle means that the modules are formed in accordance with the content of the activity of the specialist.

According to this principle, modules can be based on a science-based approach or a systematic approach. Modular learning technology requires a science-based approach to building modules

as a result of curriculum and program analysis. In the systemic activity approach, a block of modules is formed based on the analysis of the professional activity of the specialist.

2. Equality, the principle of equality. This principle determines the nature of the subject-subject relationship between teacher and student.

This suggests that modular learning technology belongs to the category of person-centered technologies. The modular learning technology is adapted to the individual psychological characteristics of the individual.

3. The principle of system quantization. This principle is based on the requirements of the theory of information compression, the concept of pedagogical knowledge, theories of enlargement of didactic units. In addition, this principle requires consideration of the following psychological and pedagogical laws:

- A large amount of learning material is remembered with difficulty and reluctance;
- Abbreviated learning material in a particular system is easier to master;
- Highlighting key elements in the learning material has a positive effect on memory.
- The basis of the teaching material should be scientific and fundamental.
- The principle of system quantization is achieved by building the appropriate structure of educational information in a module.
- The module can generally consist of the following elements:
- historical - is a brief description of the history of the problem, theorem, problem, concept;
- problematic - the formation of this problem;
- systematic - this is a systematic representation of the content of the module;
- Activation is the identification of key phrases and actions needed to master a new learning material;
- Theoretical - this is the main educational material, which - didactic goals, problem statement, hypothesis (hypothesis), ways to solve the problem;
- experimental - is the description of experimental material (learning experience, work, etc.);
- Generalization - is the generalization of the image and module content of the problem solution;
- Application - the development of new methods of action and a system of issues for the practical application of the studied material;
- Errors - to identify, identify the causes of mistakes of the student in the study of the content of the module, and to show ways to correct them;

• Connection - to show that the passed module is connected with other modules, including related disciplines;

• Deepening - providing highly complex learning materials for gifted students;

• Testing - monitoring and evaluation of students' mastery of the content of the module by means of tests.

It is important to understand the practical significance of the module during the lessons, the relevance of the content of the module to other modules, the analysis of the same mistakes of students in the study of this module.

4. **The principle of motivation.** The essence of this principle is to stimulate the learning process of the student. This is the basic rule.

The tasks of the historical and problematic elements of the module are to arouse interest in the learning material of the module, to stimulate learning, to encourage active creative thinking during the lessons.

5. **The principle of modularity.** This principle is the basis for the individualization of teaching.

First, the dynamic structure of the module allows the content of science to be presented in three ways:

- full;

• abbreviated;

• Deepened.

The choice of this or that type of teaching is left to the student.

Second, modularity is reflected in the mastery of the content of the module, as well as in the variety of methods and forms. These can be active forms and methods of teaching (dialogue, independent reading, reading and simulation games, etc.), as well as problem-based lectures, seminars, consultations.

Third, modularity is provided in the step-by-step acquisition of new material, meaning that teaching in each subject and in each module is oriented from simple to complex.

Fourth, due to the flexibility of the learning elements included in the module, it is possible to regularly update the learning material.

6**. The problem principle.** This principle allows you to increase the effectiveness of the learning material, as it focuses on problem situations and practice. During the lesson, a hypothesis is made, its validity is demonstrated, and the problem is solved. First of all, this is what interests the reader, it stimulates creative thinking and activity.

7**. The principle of cognitive visualization.** This principle stems from the psychological and pedagogical laws, according to which educational exhibitions increase the productivity of learning only if they perform the function of painting, as well as cognitive function.

That is why cognitive graphics is a new problem area in the theory of artificial intelligence, where complex objects are represented in the form of computer images. The structure of the module consists of colorful, cognitive-graphic learning elements (picture block). Images are therefore a key element of the module. This is:

First, it develops the student's ability to see and think in space, which means that the learning process is enriched by the rich possibilities of the brain's right hemisphere.

Second, a picture that clearly illustrates the content of the learning material helps the student to form systematic knowledge.

Thirdly, color pictures increase the effectiveness of the reception and recall of educational information material, as well as serve as a means of aesthetic education of students.

Learning is like using two mechanisms of thinking: one is symbolic and the other is geometric (algebraic).Visual information is more important and effective than verbal information. The ability of the visual cortex to receive information is much higher than that of the auditory cortex. This, in turn, allows the visual system to transmit about 90 percent of the information a person receives. In addition, visual information is provided at the same time. Therefore, it takes less time to receive and remember information than verbal information. When visual information is used, the formation of imagination is on average 5-6 times faster than verbal. Human exposure to visual information is much higher than to verbal information. In most cases, he misses the last one. Repetition of visual information is easier and more accurate. People have more confidence in visual information than in verbal information. That is why it is said, "It is better to see once than to hear a hundred times."

CONCLUSION

We conclude that the following results can be achieved when using modular learning technology to teach elementary students to think independently:

1. The possibility of modular learning - "dosing" of the material, combining it with the individual characteristics and abilities of students, special selection of material, the combination of information-cognitive and educational tasks, the principle of compulsory assessment, a great contribution to it The provision of flexibility, flexibility, diversity allows for a high level of organization of professional practice and the approximate introduction of bachelor students to the cultural and socio-pedagogical reality.

2. Modular teaching provides an opportunity to comprehensively address the following modern issues of pedagogical education:

• module - optimization and systematization of activity-based learning content to ensure the flexibility and flexibility of programs;

• individualization of teaching.

REFERENCES:

1. Kaldibekova A.S. Modular learning technology and its features. // Collection of scientific-methodical 24 chapters. CH.6. - p. 45.

2. Stolerenko L. D. Pedagogy. - Rostov-on-Don: Phoenix, 2003. - p. 274.

3. Nuriddinov B.S. The use of active teaching methods in professional development teachers of vocational education: candidate of pedagogical sciences. ... diss. Abstract of thesis. - T., 2002. - p.13.

4. Stolerenko L. D. Pedagogy. - Rostov-on-Don: Phoenix, 2003 .-- p. 58.

5. Selevko G.K. Pedagogical technologies based on didactic and methodological improvement. - M .: Research Institute of School Technologies, 2005. -p. 58.

6. Podlasiy I.P. Pedagogy. - M .: Higher education, 2006 .-- p. 379.

8. Avliyakulov N.X., Musayeva N.N. Modular technologies for teaching professional subjects in vocational colleges. Study guide. - T .: Yangi asr avlodi, - 2003. – p.88

9. Azizxodjayeva N.N. Pedagogicheskiye teknologii i pedagogicheskoye masterstvo. - Tashkent: Finance, 2002.

10. Belouxin D.A. The basis of personality-oriented pedagogy. -M .: Voronezh, 1997. – p.92

11. Bespalko V.P. Slagayemiye pedagogicheskoy teknologii. - M: Nauka, 1989. – p.192

12. Bondarevskaya,Ye.V. Gumanitarnaya paradigma lichnostno-oriyentirovannogo obrazovaniya // Pedagogika. - 1997. - №4. - p.11-14.

13. Borodina N.V., Samoylova Ye.S. Modular technology in professional education: Texbook. - Yekaterinburg .: UGPPU, 1998. –p.27

14. Davletshin, M.G. Module technology training. - T: TGPU, 2000.

15. Nishonaliyev,U.N. Modulniye pedagogicheskiye teknologii.- Professionalnoye obrazovaniye. M: 2002. - № 14. - p. 10-12.