

THE IMPACT OF VISUALIZATION TECHNIQUES ON LANGUAGE LEARNING

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В статье рассматривается визуализация как средство развития познавательных процессов учащихся, повышения уровня осмысленности в овладении ими учебным языковым материалом. Раскрыты преимущества использования визуальных опор в процессе обучения языкам. Обоснована значимость визуализации учебной информации для развития интеллектуальной сферы учащихся. Приведены основные методические приемы визуализации, активизирующие познавательную и речемыслительную деятельность учащихся.

Ключевые слова: изучение языка, прием визуализации, развитие мышления, познавательная активность, интеллектуальная сфера.

The article examines visualization as a tool for developing students' cognitive activity, and increasing the level of comprehension in the process of language acquisition. The advantages of using visual aids in the process of language teaching are revealed. The importance of educational information visualization techniques for the development of students' intellectual sphere has been substantiated. The main methodological techniques, facilitating students' cognitive and speech and thinking activity, are given.

Keywords: language learning, visualization technique, development of thinking, cognitive activity, intellectual sphere.

It's common knowledge that today our visual channel of information perception is subjected to a rapid "attack". The Internet, television, printed media, advertising and trade companies bombard people with bright and catchy images, relying on reaching their minds through eyes. Undoubtedly, modern educational environment is also "forced" to proclaim the special importance of educational material visualization, despite the fact that the didactic principle of visibility became an integral part of the learning process long ago.

Visualization is used mainly for more understandable presentation of educational information through various techniques and forms. Considering the fact that cognition is carried out through verbal and non-verbal forms of information representation, the process of teaching language as a cognitive phenomenon should be based on both forms. The combination of figurative presentation and verbal description is an effective way to increase understanding of linguistic the-

ory [2]. The intensive introduction of visualization into the process of language learning and teaching contributes to the accumulation of a wide range of positive changes: from strengthening the attention of students and their motivation in language mastering to enhancing the reliability of acquisition of necessary information and its long-term retention in memory.

Visual aids perform various **functions** in relation to educational information, including: *representative* (to present the object under study in a visual form); *mnemonic* (to provide support for efficient retrieval of information from memory); *organizational* (to establish logical relationships between the linguistic concepts and phenomena under study); *decorative* (to make information catchy, bright and memorable); *transformational* (to show the changes occurring with the studied object); *interpretive* (to illustrate theoretical statements, principles, causal relations, etc.).

Along with the well-known graphic visual aids (tables, diagrams, maps, charts, graphs, etc.), innovative techniques of educational information visualization are widely introduced into the practice of modern school. Such techniques, aimed at the enhancement of students' speech and thinking activity include: fishbone, mind maps, cinquain, concept maps, infographics, Venn diagrams, timeline, etc. Let's consider some of them in details.

Fishbone (Ishikawa diagram) is a visualization technique aimed at developing the ability to establish causal relationships between the object under study and the factors influencing it. Graphically the diagram is presented in the form of a fish skeleton, where a topic, a problem or a question for analysis are located in the head; the upper branches ("bones") represent the key concepts of the topic, the reasons causing the problem; and the lower branches reveal the essence of key concepts or facts supporting the reasons; the tail covers conclusions, generalizations, an answers to the question posed. Working with this visual aid develops students' critical thinking, forms their ability to subject the posed questions to a comprehensive check: evaluate them clearly, see strengths and weaknesses, identify valuable and inaccurate judgments, etc.

Venn diagram is aimed at identifying similar and different features of the linguistic phenomena. Each group of concepts is represented by a circle. The space at the intersection of the circles is filled with information and properties common to all the phenomena under consideration. Tasks using this technique contribute to the development of abstract thinking with an emphasis on mental operations of comparison and classification.

The graphic organizer *Argumentation Scales* is used to represent arguments that confirm and refute statements, located on the opposite scale pans. While "weighing up" the statements learners take into account not only the number of arguments from one side or the other, but also their ponderability, significance, irrefutability, etc. While working with this visualization technique, students actively

use language tools that help to formulate their assumptions, evidential judgments, counterarguments correctly. (E.g. *To my mind, ...; It can be confirmed by the fact that ...; But on the other hand, ..., etc.*). Collaborative educational activity contributes to the development of students' ability to listen and accept everyone's opinion, to support ideas with arguments, to find clarifying information on the topic [3].

Another well-known technique for visualizing information is a *mind map*. Its construction is based on the theory of radiant (associative) thinking. The information on the map is presented in the form of a central concept surrounded by tens, hundreds, and even thousands of associations. Such non-linear mapping of a set of concepts and relationships between them is natural for the human brain and develops its limitless possibilities, contributing to the improvement of abstract linguistic theory understanding.

The stated above and many more additional methods of educational material visualization have a number of advantages that allow them to be actively used for optimizing the process of language teaching and learning. They:

- make linguistic information more concentrated, compact, coherent, comprehensible, and suitable for coding, folding or unfolding [1];
- facilitate the perception and understanding of educational information by decoding it from an internal form to an external one;
- contribute to the comprehension of abstract linguistic theory through its logical structuring, thus developing students' analytical and synthetic skills;
- draw and keep students' attention on the key elements of educational material;
- update knowledge, promote its transfer to new conditions of cognitive activity;
- help students create new images in long-term memory, which contribute to deep understanding and improved memorization of educational material;
- provide support for a consistent, logical expression of thoughts and the construction of learners' own statements;
- develop creativity, divergence (versatility), productivity and originality of thinking, stimulating the search for innovative solutions to educational problems;
- increase the awareness and rationality of using mental operations in the process of solving educational linguistic problems;
- develop the flexibility of thinking, manifested in the ability to approach the studied linguistic phenomenon from different sides, to switch from one aspect of language to another.

Graphic visualization techniques are diverse and multifaceted: they are used at various stages of language learning (introduction of linguistic material, consolidation, repetition, systematization, control, etc.) in group, paired, and joint forms of interaction.

Summarizing our teaching experience, it should be stated that visualization of linguistic information supports not only effective formation and development of students' linguistic and communicative skills, but also displays great potential in improving their cognitive processes. Thus, the incorporation of graphic visualization tools into learning facilitates students' systematic meaningful actions with linguistic material (consideration, characterization, comparison, classification of linguistic phenomena and concepts), draws their attention to the topic being studied, increases motivation and cognitive initiative.

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