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# Psychological And Pedagogical Aspects Of Using Support Technology In Teaching Russian As A Foreign Language

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**Abstract:** The article is devoted to the psychological and pedagogical aspects of using support technology in teaching Russian as a foreign language. In the practice of teaching Russian, support technology occupies a prominent place among other modern educational technologies. The effectiveness of using support technology depends on the bilateral asymmetry of the cerebral hemispheres. In psychological research, the scientifically grounded view of the functional heterogeneity of the left and right hemispheres of the human brain has long been established. The article presents supporting cues accompanied by brief linguistic notes. By the nature of its application, support technology is general-pedagogical and is therefore to a certain extent universal. This is evidenced by the fact that on the basis of this technology numerous specific methods of teaching a wide range of natural and humanities disciplines have been developed and are widely used, both in general secondary schools and in higher education institutions.

**Keywords:** Elements of conscious and unconscious perception of learning material; psychological and pedagogical aspect; problems of optimization and rationalization of the learning process; modern linguodidactic paradigm.

**Introduction:** In the modern educational system, considerable experience has been accumulated in teaching Russian as a non-native and as a foreign language in non-linguistic universities. Courses in Russian within different traditions and programs may have various titles: “Russian Language,” “Practical

Course of the Russian Language,” “Russian as a Foreign Language,” “Remedial Russian Course,” and others. Nevertheless, regardless of the variation in titles, these courses consistently focus on the modern Russian literary language as the highest form of development of the Russian national language. Consequently, they are to some extent correlated with courses in Russian as a native language: in all cases, the instructor aims to instill knowledge of the norms of the literary Russian language.

The literary form of the Russian national language has a key feature that fundamentally distinguishes it from other forms (territorial dialects, jargons, urban colloquial speech, etc.), namely its subordination to norms. All norms of the Russian literary language are codified, i.e., recorded and officially approved in various dictionaries (explanatory, grammatical, orthographic, orthoepic, and others), as well as in academic grammars of the Russian literary language.

It is important to emphasize that textbooks and teaching manuals on the Russian language approved for use in the educational process by authorized state bodies may rightfully be considered among the means of codifying literary language norms. Therefore, great responsibility always lies with the authors and compilers of textbooks and teaching materials. However, the codifying function of educational literature is secondary. Its primary function, as noted above, is to instill linguistic norms in learners, that is, to form their linguistic competence. In other words, educational literature aims to describe language norms in the most accessible and compressed form. In this sense, Russian-language teaching materials for learners of Russian as a non-native and as a foreign language are built on the same principles as those for learners of Russian as a native language. It can be confidently asserted that overall, the tools for describing language norms for linguodidactic purposes are universal in nature [3; p. 98].

In the practice of teaching Russian, support technology occupies a prominent place among other modern educational technologies. A general description of support technology is given in the book by L.T. Akhmedova: “Support technology (the method of large-block presentation of material or support signals) is the use of outlines, illustrative pictures, objects, diagrams, and tables as supports in lessons for explaining and consolidating new material, for systematizing and generalizing knowledge, organizing communication in the target language, increasing learning motivation, and organizing students’ independent work. In other words, support technology represents the organization of theoretical material in the form of a graphic representation that visually

emphasizes the correlation and interdependence of phenomena characterizing a particular linguistic problem (grammatical, orthographic, punctuation, etc.)” [2, p. 168].

The most striking example of such a development in Russian language teaching is the book by Yu.S. Mezhenko “Support Outlines in the Russian Language” [4, p. 48]. Relatively recently, in 2017, a revised and supplemented electronic version of this work was published under a different title: “Support and Scaffolding: An Organizational-Methodological Psychological and Pedagogical System of Intensified Teaching of the Russian Language on the Basis of Support Outlines” [4, p. 79]. The author writes: “The first versions of the support outlines were tied to general Russian language textbooks used by all language teachers in the country. The connection of the support outlines to specific, stable general textbooks somewhat violated such requirements for support outlines as the ‘block’ presentation of the entire topic studied and the anticipatory introduction of new material. With the emergence of variable textbooks and teaching manuals on the Russian language, it became possible to bypass these problems” [4, p. 243].

A support scheme is accompanied by textual material that is memorized by the student in connection with the simultaneous visual perception of the support scheme. Then, when the support scheme is presented again during a subsequent lesson, the student recalls the memorized theoretical text material and can present it in the required sequence, relying on the visual images displayed in the presented support scheme.

The idea of developing support technology (a technology for intensifying instruction based on schematic and symbolic models of educational material) belongs to the outstanding innovative educator V.F. Shatalov [8, p. 97]. The technology proposed by V.F. Shatalov, by its level and nature of application, is general-pedagogical, that is, to a certain extent universal. This is evidenced by the fact that numerous specific methods for teaching a wide range of natural sciences and humanities disciplines have been developed on the basis of this technology and are widely used both in general secondary schools and in higher education institutions.

In terms of managing the learning process, support technology can be adapted for both small-group work and individual instruction. In particular, it is no coincidence that some of its elements are used in the development of instructional materials designed for individual learning—see, for example, [8, p. 107], and others.

In the implementation of support technology, the

informational-perceptual (explanatory-illustrative) method is used predominantly.

According to E.G. Azimov's definition, the informational-perceptual method is "a teaching method that presupposes an explanatory-illustrative way of organizing the joint activity of the teacher and students, in which the teacher provides ready-made information, and the students perceive, comprehend it, and store it in memory. This is one of the most economical ways of transmitting knowledge; it can be used in any type of lesson" [1, p. 90].

Thus noting the effectiveness and efficiency of this method as applied to foreign language teaching, E.G. Azimov also points out its disadvantages: "while contributing to the accumulation of knowledge, skills, and abilities, this teaching method does not ensure the development of students' creative abilities or the possibility of using the acquired knowledge in various situations of speech and work activity" [1, p. 90].

Let us note in passing that within the framework of our study we plan to form not speech, but linguistic competence, and therefore this disadvantage is not critical for us.

According to the description given by G.K. Selevko, support technology, as a variant of V.F. Shatalov's technology of intensifying instruction based on schematic and symbolic models of educational material, in terms of the orientation of pedagogical interaction represents "cooperation with elements of didactocentrism," and its predominant educational means are visual, symbolic, and computer-based.

The concept of "didactocentrism" can hardly be considered a term. It is rather a figurative expression used to describe a situation in which the significance of the lesson as the basic component of the educational process is absolutized: "Didactocentrism is defined as the result of turning the lesson into the central link of the school's teaching and educational process. Indeed, in the mass school, the prevailing form of instruction continues to be the lesson with its traditional obligatory elements: memorization and reproduction of formal knowledge, testing, monitoring, assessment. Such a lesson, with a rigid structure and oriented mainly toward strict implementation of curricula and the formal fulfillment of programs, achieving pre-programmed results in the form of knowledge, skills, and abilities, does not contribute to the effective development of critical thinking, a pluralistic worldview, and the formation of reflective skills in schoolchildren." [5, p. 48].

As we can see, G.K. Selevko imparts a certain pejorative characteristic to the definition of support technology. However, we do not share this opinion.

Indeed, support technology is to a large extent oriented toward the lesson (classroom session) as the most preferable and dominant form of the educational process. It is also beyond doubt that critical thinking, within the framework of support technology, by definition cannot be developed, since memorization is almost always non-critical.

However, in our view, under conditions of limited instructional time and the necessity to master a large volume of linguistic material, the most important factor is the intensification of instruction. According to the requirements of the curriculum, students must memorize in a short period a significant amount of theoretical material on the grammar of the modern Russian literary language. It is precisely in addressing this problem, i.e., in improving linguistic competence in Russian, that the use of support technology appears to be an optimal and adequate measure. In our opinion, to a large extent, the degree of effectiveness of support technology depends on the bilateral asymmetry of the cerebral hemispheres.

In psychological research, a scientifically grounded view of the functional heterogeneity of the left and right hemispheres of the human brain has long been established. At the same time, in works on linguodidactics this issue is practically not taken into account: "Paradoxically, the psychophysiological phenomenon of lateral asymmetry of the cerebral hemispheres has not been taken into consideration either by psychological and pedagogical science or by pedagogical practice. This is explained primarily by the fact that educational programs, textbooks, teaching manuals, methods, and instructional technologies are predominantly, and unconsciously for their authors, oriented toward subjects of the educational process with a dominant left hemisphere, while subjects of the educational process with a dominant right hemisphere, who have a different type of perception, are discriminated against and effectively isolated from the educational process already at the stage of perceiving the learning material."

This view is generally valid; however, over the past two decades one can observe a significant shift in educational paradigms in favor of the development of right-hemispheric thinking. This is due, not least, to the emergence of new concepts of educational literature for institutions at various levels, as well as to the widespread dissemination of information technologies. The canons of the so-called "mass culture," which deliberately instills in its consumers, including students, stable habits of "clip thinking," also contribute to this.

The essence of the latter lies precisely in the dominance of right-hemispheric thinking, which is responsible for

imagery and emotionality. Nevertheless, on the whole, the problem of bilateral asymmetry of the cerebral hemispheres in the development of most authorial methods remains, as a rule, among the unaccounted-for factors. The bilateral asymmetry of the cerebral hemispheres determines the existence of four types of thinking, two of which—left-hemispheric and right-hemispheric—are basic, and the other two—mixed and integrated—are derivative.

Thus, according to A.L. Sirotiyuk, “the dominance of the left hemisphere results in a verbal-logical nature of cognitive processes, a tendency toward abstraction and generalization (left-hemispheric people); the dominance of the right hemisphere results in concrete-imagistic thinking and a developed imagination (right-hemispheric people); the absence of a clearly pronounced dominance of one of the hemispheres (bilateral people)” [6, p. 93].

All of the properties mentioned above are generally innate in people; however, in the course of learning and, more broadly, through regular visual perception of information of a certain type (when reading, watching films, viewing presentations, perceiving and analyzing formulas, diagrams, drawings, etc.), one or another type of thinking may be “imposed” on the individual. This means that the development of a particular type of thinking in learners may ultimately depend on the choice of a given educational technology.

It seems to us that support technology is largely oriented toward the formation of right-hemispheric thinking, since in this case teaching is based primarily on the perception of visual images and schemes. However, one should not forget that a support scheme is, as a rule, accompanied by a text, the perception of which requires the activation of left-hemispheric thinking. Taken together, these facts allow us to assume that the use of support schemes and outlines forms integrated thinking, that is, it requires the synchronous activation of the left and right hemispheres.

In works on linguodidactics, the lateral asymmetry of the cerebral hemispheres is regarded as an important component of an individual’s personality that actively influences the nature of the perception of the taught material and, consequently, the pace of mastering a foreign language. Thus, A.M. Grishechkina’s article expresses the following considerations: “The theory of the asymmetry of our brain is currently becoming increasingly widespread. In this respect, foreign language teaching will significantly facilitate for some learners the acquisition of the language system, the formation of specific skills, and of practically all types

of speech activity, while for others, quite possibly, it will open up previously unprecedented opportunities for the development of their natural abilities. It is precisely this difference in natural potentials that the methodology of the future must take into account, and its assistant will undoubtedly be the theory of brain asymmetry.”

This means that in teaching a foreign language, the need for a differentiated approach to various categories of learners—bearers of different types of thinking (left-hemispheric, right-hemispheric, mixed, and integrated)—is theoretically acknowledged. It is clear that ensuring such a diversity of approaches in practice turns out to be a rather difficult task. For example, there are no generally recognized and universally applicable mechanisms for determining the type of thinking in learners.

It is unclear which of the types of thinking is expedient to develop in light of modern requirements. Finally, most modern teachers have not formed the corresponding psychological competencies to solve these tasks. Be that as it may, diagrams, tables, vocabularies, etc. (the so-called support signals), which are actively used in the creation of support schemes (also called support outlines), are designed for concrete-imagistic thinking and a developed imagination. A support signal is a visual scheme in which the units of information to be assimilated are reflected. The outline is very concise: short key phrases, individual concepts, symbols. The arrangement of the material, arrows, the size and color of the letters—everything is thought out and constitutes a logically coherent algorithm of reasoning.

It follows from this that the support signal has a clearly expressed symbolic nature, and all the regularities and characteristics defined for conventional (artificial) signs in general semiology must be applicable to it. For example, a sign is a two-sided entity that has a plane of expression (the signifier) and a plane of content (the signified).

The connection between the signified and the signifier in an artificial sign is always arbitrary, i.e. conventional in nature. Applied to support signals, this means that their structural components (table cells, diagrams, arrows, conventional abbreviations, color fills, etc.) do not have generally accepted, standard forms and often require explanation, i.e. a legend.

The arbitrariness of the connection between the signifier and the signified is also manifested here in the possibility of constant correction and refinement of support signals as they are used in practice and as their degree of effectiveness is identified. It is no coincidence in this sense that the above-mentioned support outlines



in Russian by Yu.S. Mezhenko have undergone such a significant evolution in the course of their reprints.

In addition, in our view, the aesthetic aspect of support signals is of great importance in their creation. The compiler of a support outline is required to have figurative and spatial thinking, as well as aesthetic taste, i.e., a sense of proportion and harmony of the visual images being represented. Nevertheless, this issue usually remains outside the direct interest of researchers; at least, we have not found works that directly address it.

However, this question, external in relation to linguodidactics, still has enormous practical significance, since contemporary reality is oversaturated with various types of information sources and carriers that distract students from textbooks and teaching aids, especially those intended for independent study. We are referring to the vast number of freely available products of the modern information and entertainment industry (websites, films, computer games, mobile applications, etc.). It is important that most of these artifacts of modern culture turn out to be highly attractive to attention due to their aesthetic qualities. This, in turn, is a consequence of the global shifts taking place in contemporary culture as a whole.

One of these shifts is recognized by specialists as the aestheticization of all aspects of modern human life: "In scholarly research devoted to the analysis and critique of contemporary culture, the term 'total aestheticization' has become widespread as a designation for a particular style of attitude toward reality, in which the quality of the external form becomes the dominant factor of evaluation, surpassing attention to internal content. This mode of perception is characterized as a feature of mass culture and the 'consumer society'."

Naturally, this tendency cannot fail to affect the practice of creating instructional and methodological materials (textbooks, teaching manuals, educational presentations, educational websites, etc.). They must also be sufficiently aesthetic so as not to appear dull and inexpressive against the background of a radically aestheticized surrounding environment.

Not least of all, this also applies to teaching materials developed on the basis of support technology. The point is that the entire psychological and pedagogical mechanism of the impact of support signals is built on establishing associative links between the support signal (visual image) and the theoretical material correlated with it. In turn, the establishment and strengthening of these associative links will be faster and more effective, the brighter and more expressive

the support signal appears.

However, despite this, the aforementioned brightness and expressiveness cannot be without fundamental limitations and must still remain moderate. Therefore, the process of memorizing educational material cannot fully rely on what in psychology is called iconic (instantaneous) memory. To a significant extent, it relies on imaginal memory, associated with the reproduction of relations and connections between certain objects. The establishment of such strong associations requires repeated repetition of the act of perception. These mechanisms were long and thoroughly studied by associative psychology. L.D. Stolyarenko writes about this: "Associative psychology regarded thinking as a peculiar reproductive function of memory."

One of the basic laws of reproductive thinking remained the law of strengthening the force of associations depending on the frequency of their repetition. The assertion by associative psychology of the importance of repetition frequency for the formation and reinforcement of associations became a kind of theoretical justification for the demand advanced by educators at that time to memorize material through multiple, mechanical repetition" [7, p. 2 289]. It was precisely from these principles of associative psychology that the theory and practice of behaviorism later developed.

Let us note that the genetic connection between behaviorism and the technology of intensifying instruction on the basis of schematic and symbolic models of educational material developed by V.F. Shatalov is not pointed out by any researcher. Nevertheless, there is undoubtedly a similarity between support technologies and modern neo-behaviorist methods. However, this similarity is purely external and consists in the fact that the use of support technology is to the same extent oriented toward constructing a "stimulus-response" scheme. The stimulus here is the demonstration to the learner of a support scheme, and the response is the reproduction by the learner of the theoretical material associated in his or her memory with the support scheme. In our view, this similarity is due to the fact that both V.F. Shatalov's technology and neo-behaviorism share the same theoretical basis—associative psychology.

At the same time, there is also a fundamental difference between them, proving the absence of any continuity. Whereas behaviorism rejects the necessity of introspection and is built as the development of skills and abilities that are poorly realized by the learner, support technology most strictly implements the principle of conscious learning and is aimed at instilling theoretical knowledge. It is this circumstance that leads

us to assume its effectiveness in improving linguistic competence in Russian among students of non-linguistic universities in Uzbekistan.

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