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**SCIENTIFICALLY-APPLIED APPROACH TO THE  
LINGUOCULTUROLOGICAL STUDY OF "THE NATURE"  
TEXTBOOK**

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***Abstract***

The authors describe the research endeavor that is the multidisciplinary project, based on the postulates of the pedagogical semiology, which is under development at the Institute for Strategy of Education Development of the Russian Academy of Education. The research has a linguoculturological nature and is focused on the study of the world view embedded in textbooks. The key attention of the research is given to the subject line of the surrounding world "Elementary School of the 21st century. The Nature" (author: N.F. Vinogradova), created within the framework of the scientific school of N.F. Vinogradova "Elementary School of the 21st century". The scientific school of N.F. Vinogradova arose in the early 1990s and was engaged in the development of the scientific and methodical support of the process of education of the primary school students on the basis of the developmental education principles. The paper considers major activity areas of the scientific school, presents the requirements to educational tools (in the first instance, to the textbooks) as set out in the Concept of the primary education, that demonstrates the close relationship between the main provisions of the scientific school and the vision of what should be the textbook for the elementary school.

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**Keywords:** Pedagogical semiology, interdisciplinary, linguoculturological, world view, textbook.



## **1. Introduction**

The article is devoted to the description of the project - the interdisciplinary research conducted in line with the pedagogical semiology at the Institute for Strategy of Education Development of RAE.

The pedagogical semiology, being the pedagogical research area founded and lead by Lukatsky (2015), is focused on the study of the process of the transfer of cultural values, expressed as signs or symbols, to students, and on the impact of this process on the development by them (students) of their language consciousness, which in turn determines the way they cognize the world and interact with other people (Kurovskaya, 2017). The research within the pedagogical semiology is focused on the mechanisms of the pedagogical language creation, as well as on peculiarities of the language of interaction between a teacher and a student, that represents the unity of the ordinary language and the language used in the study of an academic subject.

One of the areas of the pedagogical semiology is oriented to the study of the process of designing the student's world view. This should emphasize the fact that the student's world view is consonant with the world view reflected in the textbook, the contents of which the student comprehends in the course of education. This world view, the one which is reflected in educational materials and educational illustrations (which are, in substance, educational texts that contain the instructive sense), eventually is a subject of this interdisciplinary research.

## **2. Problem Statement**

The study of the texts of the textbook and a description of the world view embodied therein is dramatically important for the national education. A textbook it is not only the main tool of a didactic purpose, it also contains perceptions of the norms and values of the language community, that become a part of the language consciousness of a recipient in the course of the study of the training material, and thus, is forming the basis of his mentality/world view. In our project the textbook is understood as the source of that content, which is a building material that forms the student's world view (regarding the world view, see: Kurovskaya, 2017; Anderson, 2014; Hiebert, 2008; Naugle, 2002; Sire, 2015; Wilkens & Sanford, 2009).

The textbook is a conductor, a medium for senses important for the culture, transmitted to a child in the course of training. The look at the world, the understanding of the world emerging from learning in the context of education are caused by the textbook structure of the world view, as well as by the extent to which it is meaningfully and compositionally balanced, nominatively saturated, and culturally aligned.

## **3. Research Questions**

The focus is on revealing the contents of the textbooks on the surrounding world, created within the framework of the scientific school of N.F. Vinogradova "Elementary School of the 21st century"

#### **4. Purpose of the Study**

The purpose is to demonstrate how one can study the content of the textbook "The World" in the linguoculturological context.

#### **5. Research Methods**

The work progress has taken into account the research reflecting the main trends and strategically important ways of the development of the modern pedagogical science both in Russia and abroad (see: (Bebenina, 2018; Vinogradova, Romanova, Rydze, Kochurova, & Kuznetsova, 2011; Ivanova & Serikov, 2017; Fath, 2010; Hernández-Castillo & Pujol-Valls, 2019; Ivanov & Ivanova, 2017, Leibrandt, 2019; Pache, 2012; Pinker, 2014; Thomas, DeScioli, & Pinker, 2018; Vladu, 2007; etc.).

For the analysis of educational materials and the identification of embedded concepts as fragments of the language vision of the world, we rely on a complex of methods, including the methods of the pedagogical semiology (see, for example: Kurovskaya, 2017; Lukatsky, 2015), and of the semiology and discourse analysis (see, for example: Karasik, 2016; Stepanov, 2013).

#### **6. Findings**

One of the priority focus areas and the most important role of the Russian Academy of Education and, in particular, of the Institute for Strategy of Education Development of RAE, is the development of textbooks for the domestic general education.

In our endeavor we applied to textbooks for the elementary school and set the goal to examine how these textbooks are arranged, filled in, and what world view they contain. Primary school textbooks are created at the Institute for Strategy of Education Development of RAE by the team of authors working under the guidance of N.F. Vinogradova, the founder of one of the country's leading scientific schools in the area of the primary education. This is the scientific school "Elementary School of the 21st century", which was established in the early 1990s with a view to developing "scientific and methodological support of the process of education of junior school children, taking into account the requirements of the state and the society, on the basis of the developmental education concept" (Ivanova, 2017, p.22).

The main vectors of activities of the scientific school of N.F. Vinogradova are as follows.

The first focus area relates to the justification of the "theoretical grounds for the modernization of the content of the primary education". Within its framework, the theoretical basis of "building an educational and methodical kit (a system of educational tools) "Primary school of the 21st century" was developed (Ivanova, 2017).

The second focus area is retrospective in nature and deals with the study of the development of "primary education in Russia in the 20th century" within the historical and pedagogical aspect (Ivanova, 2017).

The third focus area is concentrated on the development of scientific and methodical support of the "educational process in the modern primary school", which had necessitated the creation of the "educational and methodical kit "Primary school of the 21st century" (Ivanova, 2017).

In the framework of the fourth focus area the problem of the continuity of different levels of education is considered: "the preschool and primary education, the primary and basic school" associated with the creation of the "continuity concept of the preschool and primary level of the education" (Ivanova, 2017).

The focus of the fifth area is on FSES (Federal State Education Standards) as an indicator and the main guideline for the "quality of general education" (Ivanova, 2017).

Let us turn to the textbooks system under the name "Elementary School of the 21st century" developed by the team of authors under the guidance of N.F. Vinogradova. This system, which has been published by the Publishing Center "Ventana-Graf" and has received a serious recognition at the state level, includes lines of primary school textbooks on various subjects (see details on the official website: (The primary school of the 21st century, 2019).

The Concept of the primary education (Vinogradova, 2017) clearly defines the requirements to the modern means of education. There are five requirements, and they say that learning tools, firstly, should take into account the main objectives and contents of the planned subject and metasubject learning outcomes, provide information for the perception and the reproduction, for its use for intellectual activities (analysis, classification, compilation, comparison, etc.); as well as for the independent work on its application in practice (Vinogradova, 2017). Secondly, educational tools should include educational texts of different types (informative, instructive, referential, involving) (Vinogradova, 2017). Thirdly, the educational tools should create conditions necessary for the organization of various activities, which, in particular, is enabled by the system of special headings-tips for the scholar (Vinogradova, 2017). Fourthly, "the textbook should acquaint students with the various methods of voice and language, mathematics, science, social and other education, to disclose the leading methods of the cognition of each educational area". The textbook should contribute to the development of "universal skills to observe the linguistic, literary, natural, mathematical, social and other objects, compare them, conduct grouping and classify, put in place plans of elementary tests and experiments, record and analyze their results" (Vinogradova, 2017, p.64). Fifthly, educational tools should take into account the peculiarities of "the perception by the junior student of a text, illustrations, their appropriate combination on the book page." First and foremost, all educational materials should serve for the didactic function, and then to the graphic one (this requirement applies not only to the texts, but also to the educational illustrations) (Vinogradova, 2017).

Thus, a serious demand is placed on the textbook for the primary school, that is directly linked to the quality of education, the educational achievements of a student and his self-improvement ability. And moreover, the textbook predetermines the development pathway of the junior student personality and has a profound effect on his understanding of the surrounding phenomena and developments.

In our research endeavor, we focus at one of the courses of the system "Primary School of the 21st century" - the course of "The Nature" (by N.F. Vinogradova).

Let us look at the structural and semantic picture of the course (Vinogradova, 2018) and illustrate how the above requirements are met.

From the point of view of the objective and the content of results, planned as a result of the education, one can note their harmonious combination in the textbook due to thoroughly thought

informational and educational component, which proposes not only the perception, understanding and reproduction of the read/heard content, but also enables the student to draw conclusions as a result of mental operations, to develop his position and apply in practice in the real world surrounding the child.

With regard to the ergonomics of the content of the textbook, the system of special headings-tips for students is ramified and "colorful", easy to remember and includes training markers (involving rather than forcing) and direction signs for the cognition of the world. These include, for example, such markers as "storytellers", which indicate creative tasks to figure out/imagine a story and share it with friends (for example, in the study of domestic animals a child is given a task to tell about his pets: (Vinogradova, 2018), while studying animals a child has to imagine the end of the proposed story-fairy tale (Vinogradova, 2018), while learning the topic on the native land the scholar receives the task to tell about the place where he lives (Vinogradova, 2018); "gigglers", offering funny educational texts and materials that enable the child to better understand/remember/learn a topic via a positive emotional background (for example, when studying the section about the school life, the child is given a motivating poetry of V.Berestov, that reveals the advantages of reading skills, which is then followed by tasks (Vinogradova, 2018); while learning the topic of the place of living, the scholar is provided with a comic thematic poem followed by relevant questions (Vinogradova, 2018). These poetic texts are also marked with a symbol of "For those who read well" (Vinogradova, 2018).

There is a marker "thinkers", assuming the tasks for the ingenuity, the guesswork, for example, the task to interpret the meaning of proverbs about the family and its values for a human being (Vinogradova, 2018), the task to compare images of animals and their characteristics (Vinogradova, 2018), the task on the definition of the group of birds (Vinogradova, 2018), the riddle of the bird (Vinogradova, 2018), the question on the comparison of trees and their leaves (Vinogradova, 2018), which may be accompanied by a marker "tip" to guide the child's reasoning when considering an issue (for example, in the description of the tree leaves the marker places emphasis on their shape (Vinogradova, 2018).

There is a marker "Let's highlight the key point", which reveals the essence of the phenomenon discussed in the section (for example, from the very first lines of the textbook the notion of the surrounding world is introduced (Vinogradova, 2018). The marker "Observe, experiment" introduces the child into the world areas which should be studied and described. For example, using this marker, the author of the textbook shows already familiar, real world, which is revealed by the visual demonstration and is cognized in the course of the pictorial tour in the school (Vinogradova, 2018) or during walking tours in the park (Vinogradova, 2018). This marker indicates tasks on the discovery and the description of stylistic means characterising, for example, natural phenomena (Vinogradova, 2018). The marker also points out at the necessity to experiment while learning the world, for example, in the section on health (Vinogradova, 2018).

On the cognitive way the child faces also markers related to the execution of a tasks, as well as questions of all types, for example, the need to perform a separation of proposed illustrations into two groups, with an explanation of the logic of thinking and of the decision taken on its basis (Vinogradova, 2018). This marker is accompanied by other index (the marker "hint") depicting conditional symbols for each group (Vinogradova, 2018). This marker can also be used to label questions on not only the

comparison, but also on the association (Vinogradova, 2018), to draw parallels with the real world of the child (Vinogradova, 2018), etc.

Thus, by putting in place the identification marks that indicate the correct road on the map of the surrounding world, the author of the textbook manages to provide the scholar, travelling around the world, with the necessary equipment, and thereby to make the scholar's journey while studying/learning/cognizing the world fascinating, full of informative adventures and the life's discoveries.

It should be noted that the markers of materials and tasks correlate with the typology of texts (and this is also a requirement to the textbook). The acquaintance with the world that surrounds the scholar occurs using texts of very different nature, from reference books and explaining rules to poetry and creative tasks.

From the position of ways and means of cognizing the world through the aggregate of the individual educational areas, to which the author relates the areas of language and literature, mathematics, natural science, social science, etc., here we see the entire palette of the world colors. The younger student reveals the world of family, school, work with their canons and rules of communication and behavior. A student becomes closer to the world of the big and small motherland, skillfully presented on the pages of the book. The child gets acquainted with the natural space, which includes all the many- and the diversity of flora and fauna, the phenomena of nature and natural events. Thus, the child is getting involved to the surrounding world, analyses what he saw/read/heard, compares elements of the world; seeks and finds the place in the world, becomes a part of this world and acquires his identity.

Regarding the compatibility of a linguistic sign (a text) and a symbol (a training view), one should note the wealth of the illustrative material which performs the didactic function and becomes the full-fledged educational text. The illustration in this textbook is not only and not so much a visual support to the written text, it is itself a text offering the comprehensive information on the fragment of the students' world, demonstrating a phenomenon of the world with different facets (often we see entire series, sequentially or simultaneously reflecting the essence of the subject, rather than isolated illustrations).

## **7. Conclusion**

So, we considered the coordinated system of the world elements, skillfully depicted in the textbook. Our further research interest relates to the structural and semantic arrangement of the world view, that is latently presented in the textbook closely associated with the world around the student.

The issue of what is the world view depicted in the textbook "The Nature" and proposed to the student as the excerpt of the surrounding world, will be covered in the further work on this topic.

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