

RESEARCH ARTICLE

Methodological Aspects of Developing Critical Thinking in Students Through Semantic Reading

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Abstract

This article examines certain methodological aspects of developing critical thinking through semantic (meaningful) reading within the educational process of higher education institutions. The relevance of this study is determined by the modern principles of educational system development and the social needs of society. Today, training specialists who have well-developed critical thinking, are capable of generating unconventional ideas, possess personal opinions, and can effectively solve professional tasks is a key strategic direction. Freedom of thought allows for the formation of a critical attitude toward the environment and directs an individual toward creative and constructive activity. From this perspective, critical thinking is one of the most important features of independent human thought. Critical thinking is the ability to logically visualize information while considering personal and psychological characteristics, to apply obtained results in both ordinary and novel situations, to ask questions, and to justify opinions and conclusions. The technology of teaching semantic reading is specifically aimed at developing these critical thinking skills.

KEY WORDS

Professional training, critical thinking, methods, thinking activity, competencies, intellectual, self-development, independent reading.

INTRODUCTION

One of the strategic priorities of the modern higher education system is to prepare independent and critically thinking specialists who possess not only deep theoretical knowledge but are also capable of solving professional problems through unconventional approaches. The social needs of society and the demands of the labor market require the development of an individual's ability to logically visualize information, justify conclusions, and apply obtained results in practice. From this perspective, critical thinking is the most important factor in forming freedom of thought and constructive activity in students. Today, within the educational process of higher education institutions, alongside increasing students' linguistic and communicative competence, there is a need to enhance

their culture of working with texts. Semantic (meaningful) reading technology emerges as one of the effective tools for developing critical thinking. However, the issue of selecting appropriate methodological algorithms to form these skills in learners and implementing them into educational stages remains relevant. The purpose of this article is to examine the methodological aspects of developing students' critical thinking through semantic reading strategies in higher education and to analyze authorial methodologies and technologies that serve to optimize this process.

LITERATURE REVIEW

A.A. Leontiev understands semantic reading strategies as

various combinations of methods used by students to perceive textual information in graphic form and process it into personal-meaningful orientations in accordance with communicative-cognitive tasks [Leontiev, 2003: 228]. N.N. Smetannikova defines this issue as follows: "Strategy (in education) is, first and foremost, a systematized plan, a program of actions and operations consciously applied to manage learning in order to improve it; it is a plan and program of actions that helps the reader working with a text to develop reading skills, reflect on the text being read or already read, and includes processes of information analysis and its level of understanding, where the 'reader-text' interaction becomes a reading strategy" [Smetannikova, 2011: 11].

Semantic reading strategies are algorithms of mental actions and operations in working with text. They assist in understanding the text and its characteristics, serve to better and faster assimilate knowledge, develop critical thinking, and foster a culture of reading. In domestic and foreign linguodidactics, a number of strategies for working with various texts are identified, which not only help in a deeper understanding of the presented information but also facilitate the process of working with them [Karpov, 1950: 16-163]. The application of strategies is carried out individually, in groups, and in pairs. This develops linguistic and communicative competence in students.

METHODOLOGY

To develop the critical thinking of learners, teachers are tasked with introducing them to various reading strategies and teaching them to apply these strategies while working on a text and thinking critically. In order to select an appropriate methodology for teaching semantic reading to develop students' critical thinking, we will examine widely used authorial methodologies and technologies for developing semantic reading in learners. Most authorial methodologies are based on semantic reading strategies that ensure understanding during the pre-reading, while-reading, and post-reading stages. Among these are the methodologies of G.G. Granik, E.V. Buneeva and O.V. Chindilova (in co-authorship), and T.I. Fisenko.

DISCUSSION

To develop students' critical thinking, we selected N.N. Smetannikova's methodology of semantic reading. Our choice is based on the widespread prevalence and relevance of this

methodology today, as well as its alignment with the goals and objectives of our research. N. Smetannikova's semantic reading strategies represent a joint action plan for working on a text, providing students with the opportunity to work both independently and under the teacher's guidance. The scholar has developed numerous semantic reading strategies, among which the following can be highlighted:

1. Pre-reading activity strategies.
2. While-reading activity strategies.
3. Post-reading activity strategies.
4. Strategies for working with voluminous texts.
5. Text compression strategies.
6. General educational strategies.
7. Vocabulary development strategies [Smetannikova, 2011: 21].

N. Smetannikova provides a list of strategies for working with various types of texts:

1. Strategies for working with informational texts.
2. Strategies for working with persuasive-argumentative texts.
3. Text frame strategies.
4. "Reading monitoring" strategy [Smetannikova, 2011: 12].

Smetannikova's technology is similar to the ideas of authors of effective reading technologies such as N.N. Svetlovskaya and E.V. Buneeva, as well as the views of G. Granik, S. Bondarenko [Granik, Bondarenko, 1991: 122], and O.V. Chindilova. In our opinion, this technology of acquiring semantic reading skills is effective in developing students' critical thinking through semantic reading. To achieve our goal, we have selected the most effective methods of teaching semantic reading. The choice of methods depends on various factors. "According to the stages of working with text, it is accepted to distinguish the following methods of teaching semantic reading: 1. While-reading stage methods; 2. Pre-reading stage methods; 3. Post-reading stage methods" [Zhupeeva: <https://multiurok.ru>].

There are several stages of working with text: pre-reading, while-reading, and post-reading. Pre-reading strategies are aimed at preparing learners to work with the text. At this

stage, it is necessary to introduce students to the topic, unfamiliar words and phrases, explain their meanings, and discuss the title of the text. Pre-reading strategies in class include setting reading tasks, choosing the type of reading, discussing the epigraph and title, activating the learner's knowledge and experience, motivating them to read, and analyzing the title before starting (answering questions such as: "What do we know about this? Based on prior knowledge, what can be predicted? What conclusions can be drawn from the nature of the title?").

In the "pre-reading" stage, we forecast the future reading and hypothesize the ideological, meaningful, thematic, and emotional direction of the text; relying on the student's experience, we identify potential events and characters based on the title, keywords, and pre-text illustrations; we define the lesson objectives considering the overall readiness of the students. In the pre-reading stage, it is necessary to foresee and prevent language barriers, introduce the topics, socio-cultural concepts, and realities mentioned in the text, and it is crucial to create a comfortable psychological environment to begin working with the text.

Thus, at this stage of working with text, the teacher uses various methodological techniques to involve students in the process and evoke positive motivation. The purpose of pre-reading methods is to define reading tasks by introducing keywords and the communicative tasks of the text, working with questions, and assigning tasks based on the text content.

Methods and techniques of the pre-reading stage of semantic reading include:

1. Organizing work with illustrations and book covers. These help identify the topic, genre, and emotional atmosphere of the text, predict the content, and put forward hypotheses about the plot development, setting, time, and main characters.
2. Working with book or chapter titles. Based on titles, learners can guess what the text is about, express their opinions on the given title, and create associative arrays.
3. "True or False statements" or the "Do you believe..." method. Students are offered several statements about a text they are not yet familiar with and must choose those they believe to be true, subsequently justifying their choices. After familiarizing themselves with the main information, learners return to these statements and evaluate their reliability using information from the text [Rozov, 1971: 58].

4. Brainstorming. The goal is to activate knowledge relevant to the text topic. This method helps define reading goals, focus attention on confirming hypotheses, and search for new information [Kolesnik, 2005].

5. Vocabulary work and identifying keywords to update and repeat vocabulary related to the work's theme. Learners learn to compose their own texts based on keywords. After composing and reading their versions, students' variants are compared with the original. It is also possible to create a specific scheme based on keywords.

6. Working with epigraphs. The epigraph may be by the author or specifically selected by the teacher [Fisenko, 2013: 5].

In the pre-reading stage, students express their initial impressions, make predictions, and share ideas and suggestions. They are not afraid of making mistakes or saying something incorrect. During the subsequent work on the text, students can confirm or refute their hypotheses, learn to build a logical chain from learned material to new information, and utilize accumulated experience. As a result of using various methods in the pre-reading stage, students develop motivation to read and study the proposed text, gaining a certain understanding of the topic and forming hypotheses about the specific content.

Examining the various methods used by teachers in the pre-reading stage, their role in developing students' critical thinking through semantic reading should be particularly emphasized.

RESULTS

The methods and techniques of the pre-reading stage are aimed at defining reading tasks, selecting the appropriate type of reading, activating existing knowledge, experience, concepts, and textual vocabulary, as well as fostering motivation for reading. By utilizing the aforementioned methods, the teacher creates a foundation for forming a positive attitude toward learning and cognitive activity. Furthermore, in the process of engaging with new text and language material, students not only acquire new knowledge and skills but also refine existing ones. Pre-reading methods encourage students to recognize potential difficulties (unfamiliar words, phrases, new linguistic structures) and stimulate the desire for independent discovery (through glossary formation, guiding questions, and making predictions about the upcoming content). In the process of applying

various pre-reading techniques during lessons, students learn goal-setting, forecasting, and planning, which contributes to the development of their critical thinking. At this stage, students develop a future plan for working with the text and generate specific forecasts regarding its subsequent content (brainstorming, guiding questions, breaking down the question). Throughout this stage, students engage in targeted searching, processing, and utilization of information, thereby learning to think critically. Certain pre-reading methods for teaching semantic reading also play a major role in forming communicative skills. This is because these methods help manifest the ability to participate in collective discussions of problems and ensure social competence and consideration of other people's perspectives (brainstorming, "competing with the author").

The next stage of working with text is the direct reading process, which covers the following aspects:

1. Reading the text (individual reading in the classroom, reading aloud, perceiving information after others have read, mixed reading based on the text's characteristics);
2. Re-reading the text (reading carefully by dividing the text into parts);
3. Analyzing and summarizing the read material.

The primary goal of the while-reading (textual) stage is to set specific tasks that determine the main strategy for working on the text based on the reading type, as well as to process information obtained during reading to fulfill previously set tasks. At this stage, teachers use various methods of teaching semantic reading to teach detailed understanding and interpret the content.

While-reading activity strategies include: reading aloud; silent reading with questions; reading with pauses; silent reading with notes; identifying the main ideas of the text, explaining text content; answering questions about the text (identifying semantic connections, explaining facts and events, determining the author's point of view, questions regarding the critical evaluation of facts described in the text), and independently formulating questions about the text.

Post-reading activity strategies include outlining, independently preparing diagrams, drawings, tables, and key charts, retelling, and note-taking (summarizing). All these strategies ensure complete comprehension of the text by mastering acquisition methods before, during, and after

reading.

While-reading stage methods include: semantic mapping, reading with notes, INSERT, KWL (Know-Want to know-Learned), fishbone, zigzag, cinquain, and others. The use of while-reading stage methods serves as a foundation for developing students' critical thinking. By applying various techniques, the teacher assists students in acquiring new knowledge. These methods serve to develop students' ability to evaluate, differentiate, and understand information already mastered versus that which is yet to be learned—namely, critical thinking.

Textual stage methods play an important role in the process of critical understanding of the material being studied. Here, learners learn to independently search for and extract necessary information from the text. Methods of the textual stage are specifically necessary for understanding the content of the text and its linguistic and semantic features. These include:

1. INSERT or reading with notes. Students mark the margins of the text with special symbols for information they already knew, information that contradicts their preconceptions, something interesting or unexpected, and things they want to know in more detail. Marking is carried out using the following symbols: "!" – I knew this; "+" – New to me; "—" – Triggers doubt; "?" – There is a question.

2. Comparison/finding similarities and differences. This may involve facts, characteristics, or artistic techniques concentrated within a single text or across different works.

3. Reading with pauses. Reading is carried out in parts; each part is analyzed, and predictions are made about the subsequent content. A key condition for applying this method is finding the optimal "stop point" when dividing the text into parts. At this point, known information should remain on one side, while completely unknown information that could significantly affect the evaluation of events should remain on the other.

4. Filling the gaps: Students must fill in omitted parts of the text, choosing words that fit the meaning or context. The goal is to activate the learners' attention toward text details.

5. Reading in a circle. There is only one copy of the text in the classroom. Students read the text in turns. The task

of the listeners is to ask the reader questions to check how well they understood the passage they read. If the answer is incorrect or inaccurate, the listeners correct it. Then, the next student reads the following passage.

In planning post-reading stage work, the following methods are recommended:

1. Conversation regarding the text content;
2. Studying the author's life and work;
3. Tasks oriented toward creative thinking;
4. Working with the text title and illustrations.

At this stage, in order to perform a detailed analysis of the text material, its genre, stylistic, and linguistic features are studied, its communicative task, theme, and idea are considered, and a comprehensive description of the text is provided. The post-reading stage is necessary for monitoring the level of comprehension of the text read and the formation of essential reading skills. The main goal of using these stage methods is to apply the studied material in various situations and forms, integrating it into other, broader activities. These methods are related to assimilating, expanding, deepening, and discussing the read material, during which corrections are made to the reader's interpretation.

Among the post-reading stage methods, the following are specifically highlighted:

- Question-answer relationships;
- Post-reading questions;
- Bloom's Taxonomy (Bloom's Flower);
- Matching tasks;
- True, False, Not Given;
- Checklist;
- Cloze text (text with gaps);
- Restoring deformed (scrambled) text;
- Changing the perspective (point of view).

In the post-reading stage, the studied material is reinforced, and its level of assimilation is checked. The methods of this stage are very diverse, including:

1. Cluster – a graphic form of organizing information where main semantic units are identified, and all connections between them are recorded in the form of a diagram. Using

clusters during the understanding stage allows for the systematization of educational material.

2. Types of text retelling.
3. Dividing text into paragraphs.
4. Thin and Thick questions.
5. Creative tasks (crosswords, rebuses, quizzes).
6. Various forms of planning.
7. Venn diagram.
8. Discussion of text materials and post-reading impressions, debate.
9. Tasks based on the text title.
10. Text compression (summarization).
11. Types of text exposition.

These methods and techniques help develop the skills and abilities to understand the purpose of reading and to select key information from texts of various genres. Post-reading stage methods form students' ability to analyze their actions and responses, as well as self-assessment skills. Qualities of critical thinking, such as control and reflection, are formed precisely as a result of the teacher's use of post-reading techniques during the reading process. Teachers have a wide range of semantic reading techniques at their disposal when working on texts that serve to develop students' critical thinking. When choosing a suitable method for developing critical thinking, it is necessary to proceed from the purpose of the lesson, the genre and style of the text chosen for reading, as well as the stage of working with it. These methods serve to better understand the goals of reading and to extract basic information from texts of various genres. Post-reading stage methods develop critical thinking in students through semantic reading, as they form the ability to self-analyze and evaluate. Semantic reading helps to develop logical and abstract thinking, concentration of attention, the ability to answer questions based on the read text and create independent questions, to search for necessary information from the studied text, and to form linguistic intuition (prediction) skills.

Working with text serves to form reading culture and information competence; furthermore, it develops research skills, the ability to generalize information, identify key aspects, and systematize. In developing students' critical

thinking, it is important to delve deep into the essence through careful reading and analysis of texts. As S. Matchonov noted, the types of reading a literary work mean not only reading every word, phrase, and sentence correctly and fluently with recitation but also reading with an understanding of the general spirit of the text [Matchonov, 2020: 8]. Therefore, possessing semantic reading skills helps to develop oral and written speech and to receive an effective education. These abilities of semantic reading assist in mastering the art of analytical, interpretative, and critical reading.

The difference between semantic reading and other types of reading is that in this process, the reader perceives the value-meaning aspects of the text; that is, the process of interpretation takes place. Technologies for developing critical thinking through reading are also among the semantic reading strategies. This technology appeared in the Russian educational system in 1997, and its authors are American scientists – Ch. Temple, K. Meredith, and J. Steele. This technology was developed with the support of the Consortium for Democratic Pedagogy and the International Reading Association. The project proposed by the American scientists was initially titled "Reading and Writing for Critical Thinking" (RWCT). It introduced seminar participants to the methods of the technology in detail and provided general concepts about its theoretical foundations. As a result of the joint efforts of the technology's ideologues and practicing educators, this model was adapted to local pedagogy. The didactic, psychological, and philosophical foundations of the proposed approach were reviewed in detail, the practical part of the project was enriched with new methods, and a model named "Critical Thinking Development Technology" (CTDT) was created in pedagogical literature. This technology involves the development of thinking, comparing information, and forming a personal point of view, all of which are achieved primarily through thoughtful reading. When discussing the technology for developing critical thinking, Q. Yuldashev emphasizes the content of education and the student's freedom of independent thought. According to his views, critical thinking is not merely finding errors, but the ability to draw personal conclusions and justify them through information analysis [Yuldashev, 1996: 42-46].

CTDT (Critical Thinking Development Technology) methods can also be considered effective in enhancing critical thinking through semantic reading. CTDT allows teachers to simplify the process of understanding the text for students and ensure

efficiency in working with it. It is considered important to follow three stages in this technology: evocation (arousing interest), realization (understanding new information), and reflection, as well as adhering to certain conditions, including the activity of process participants and allowing for various "risky" ideas. A lesson, a series of lessons, or a topic can be structured specifically based on this algorithm.

The first stage is evocation. Here, the task is not only to activate the student, interest them, and provide motivation for future work but also to "surface" existing knowledge or create associations regarding the issue being studied. This inherently becomes a serious activating and stimulating factor for subsequent activity.

The second stage is realization (of meaning). At this stage, work is done directly with information, where CTDT methods and techniques serve to maintain the student's activity and make the reading or listening process meaningful.

The third stage is reflection. At this stage, information is analyzed, interpreted, and creatively reworked. This technology is a holistic system that transforms text creation skills. The uniqueness of the technique lies in processing information through reading and writing. The innovative elements of the program are reflected in special methodical tools aimed at creating conditions for the free development of each individual.

Let us list the advantages of the critical thinking technology methodology. Using critical thinking technology in education, firstly, helps everyone reconsider their attitude toward teaching, and secondly, enables the teacher to accept innovations. Consequently, the strategies and techniques of new teaching methods become not only part of pedagogical experience but also an essential tool for performing tasks. Therefore, this methodology responds more effectively to modern educational conditions and the new mindset of today's students than other reviewed methodologies. The superiority of the critical thinking development technology over other pedagogical approaches and technologies aimed at student and teacher development lies in its open nature. In creating it, the authors relied on modern methodical techniques and developments used in other technologies and approaches – discussion and game technologies, reflective writing models, and various methodical techniques that develop students' intellectual and communicative abilities.

This technology helps students master methods of working

with information, thoughtful reading, systematizing material, the art of questioning, posing and solving problems, and reflective writing skills. It also assists in mastering group work methods and the skill of conducting arguments with evidence. The technology integrates known and new methodical techniques into a specific logical system of lesson structure. Simply learning the methods of developing critical thinking through semantic reading may not yield significant results. In our opinion, the most important thing is to use these methods creatively to help students apply this knowledge in specific situations, perform creative tasks, perceive problems, and prepare for future professional activity.

CONCLUSION

Thus, there are various methods and techniques of semantic reading aimed at developing students' critical thinking. While some of these methods are based on the prediction technique, others involve tasks performed directly during the reading process. Semantic reading methods and techniques are focused on understanding the text and creating the reader's interpretation, representing the integration of the reading process with productive communicative skills, namely oral and written speech; this means that students apply the knowledge gained during reading in various speech situations. In these stages, communicative reading skills are developed; therefore, they are considered the most time-consuming and can encompass several tasks. Depending on the goals and the teacher's personal approach, these methods and techniques can be applied at various stages of developing critical thinking through semantic reading. Such methods can be used effectively in individual, pair, or frontal work formats.

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