1.2 Иностранные языки

CRITICAL THINKING SKILLS AND ANALYTICAL THINKING: COMPARATIVE ANALYSIS

Kostyrava S.S., PhD, associate professor

Vitebsk State Technological University,
Vitebsk, Republic of Belarus

Abstract. *The article highlights the notions of critical thinking skills and analytical thinking in the context of linguistic research exploring the issues of text interpretation. Language not only reflects how a person thinks, but also shapes thinking itself as a chain of stages of the cognitive process.*

Keywords: critical thinking, analytical thinking, comprehension, cognitive theory, awareness, interpretation, judgment.

A number of definitions of critical thinking and analytical thinking notions have been considered. One of the problems with comparing them is that no single definition prevails. The lack of consensus on the definitions among scholars exploring different research areas of interest leads to the necessity to overcome numerous barriers that prevent scientists from forming an established and well-grounded judgement. A closer examination of the existing definitions reveals a large amount of overlap which should be investigated and looked into thoroughly by linguists, philosophers and psychologists, just to name a few. It is generally accepted to define critical thinking as the process of thinking carefully about a subject or idea, without allowing feelings or opinions to affect a thinker.

Analytical thinking involves examining things in detail, in order to discover more about them; it is regarded as the careful, systematic study of something relating to the profound or scientific examination of facts and information. Every time we read or come across something that motivates us or keeps pushing us to understand it, we have to employ a variety of thinking skills. Thinking skills are related to how people process and understand information, and use certain thinking skills depending on what they want to get out of their thoughts. From this point of view, analytical and critical thinking are obviously perceived as two thinking styles. They are relevantly used to achieve the same goals in different ways.

Critical thinking implies evaluating the information that comes to a person and looking for the appropriate approaches to its interpretation(s). We can't but admit the pivotal role of the person's awareness of the main issues the theory of comprehension deals with. Among the most crucial and controversial issues can be mentioned the following ones: what to believe, and whether something seems right or wrong, how to prove or confirm something or to take it for granted.

This style of thinking encourages the thinker use reasoning techniques to come to some conclusion which is relevant to the information derived from the text and could be justified with the solid arguments and objective grounds.

Critical thinking inevitably deals with the additional information which is taken into account by the thinker withing his or her outlook. The outcome is influenced by the thinker's ability or trained skills to explore the elements that may have an impact we can't ignore while perceiving something.

Analytical thinking can be described as a style of thinking that makes it possible for a person to divide some information or a set of overarching data into smaller chunks which can be analyzed one after another. It is based on a step-by-step method to analyze a problem in search of an answer or a solution to the issue under discussion. Essentially, analytical thinking is a cause-and-effect approach to solving a problem.

In the process of any interpretation, we always deal with facts that we strive to understand and explain, for this we reveal their meaning and significance of the symbols, their combinations at different layers of any language. The perception of the information represented in the form of a text involves recreating it in the mind of the recipient as a result of his/her active work, creativity, or rather, co-creation of the author and the recipient.

Critical thinking as well as analytical thinking takes into account psycholinguistic, sociolinguistic and other extra-linguistic data, for the text, while functioning, is complicated by mental, social, paralinguistic and other factors of the linguistic personality of the author and recipient, therefore

the text is not just a linguistic, but also a socio-psychological phenomenon.

Both analytical and critical thinking styles consider facts, but then these facts are used for different purposes. When it comes to analytical thinking, facts are used to build information and support evidence that leads to a logical conclusion. Critical thinking, on the other hand, uses facts to determine a belief, form an opinion, or decide if something makes sense.

The processes of analytical thinking and critical thinking are different. Analytical thinking uses a linear and focused process where one thought follows another in a flow. Critical thinking tends to come in circles and may go around in circles until it a conclusion is drawn.

Any text is inevitably characterized by a plurality of meanings. The text is not a coexistence of meanings, but a transition, an intersection, so it is logical to allow the inevitable dispersion of meaning.

It is possible due to the structure of natural language, that is, their primary code, in which units of higher levels are not derived directly from units of previous levels. So, an important component of a morpheme is a meaning that is not characteristic of phonemes; the meaning of a sentence includes the meaning of the syntactic construction underlying the given sentence. Every new language layer makes the cognitive process more and more complicated.

Obviously, understanding the whole piece of information under discussion is the result of understanding its elements. Of course, it makes sense to analyze words, grammatical forms, syntactic links, etc. As a result, the recipient will have an idea about the lexical and grammatical semantics of the language units in the given text, about the connections between them. But all the units and language phenomena in the text and their understanding influence the final concept and unveil the knowledge based on the parts of the text combination. The meaning of the whole text can be defined and verbalized only after putting forward at least some hypothesis about it as a whole, in order to understand for what content, the form that takes precisely such outlines serves.

The goals of critical thinking and analytical thinking are not the same. Critical thinking strategies are not generally used to find a solution to a complex issue under research or solve a problem. It is generally known that analytical thinking is used for this purpose. However, a person would not use analytical thinking if his or her main goal is to form a belief or to come up with an idea about something. In this case, a person will use critical thinking techniques.

At first glance, it is not difficult to distinguish critical thinking from non-critical thinking. Judging by its definition, it is obviously a process of thinking in which there is necessarily a target component, which includes the following things:

– to analyze what has been perceived;
– to make sure it is true and correct (relevant to the text structure and arrangement);
– to take into account the revealed advantages and disadvantages, at least two-sided nature of any piece of information4
– to unravel the nature of possible errors;
– to rate, evaluate and assess what you have got;
– to detect possible implicit information or intentions;
– finally, to identify or detect everything that can prevent from understanding or can lead to possible misunderstanding.

Undoubtedly, different people have different patterns of thinking. Analytical thinking involves taking the object out of context and focusing on its attributes, while critical thinking requires focusing on the context as a whole. We can say that analytical thinking is mainly aimed at reviewing information. Critical thinking aims at making a general assessment, judgment, or conclusion about information that is possibly free from false assumptions or biases.

Analytical thinking includes:

– facts and evidence;
– information analysis of facts and evidence;
– reasoning which is closely related to logical thinking and requires justifying and exemplifying;
– search for alternatives;
– trend analysis, forecasting, change analysis.

Critical thinking includes:

– careful assessment of information;
– testing for absence of discrepancies and observing the norm and the standards;
– evaluation of the correctness of the claimed item;
– weighing opinions, arguments or decisions;

– reasoning and inference;

– checking whether the arguments really support the conclusions.

Understanding the text, comprehension of its meaning, as we have established, is accompanied by the activity of the reader, including an attempt to explain the incomprehensible. Incomprehensibility can be caused by non-normative formation, which is isolated by the recipient if he has the necessary knowledge of the norm, or it can occur at the normative level of text presentation (provided that the reader is able to recognize "incomprehensibility" at the normative level).

All recipients start a long way of understanding, first of all, with the one given object – the text itself. The text is complex and multi-layered. The task of understanding the text involves extracting the maximum amount of information. The "body" of the text remains unchanged in any approach to its study. The signals objectively present in it, which bring to life such different emotions and associations, establishing some boundaries and restrictions to unlimited interpretations.

Obviously, the linguistic matter of the text contains some linguistic signals that initiate the search for either explicit or implicit information. We can't ignore a single layer of textual information, (re)created in the mind of the recipient on the basis of the author's text and verbalized by him or her, taking into account various kinds of presuppositions.

We consider the final interpretation as the result of text organization, which is a synthesis of linguistic and extralinguistic information, subject to the obligatory reliance on presuppositions, primarily linguistic ones. Taking into account the existence of two basic principles for the arrangement of material in the text (linear and transformational), we have identified the following levels of the information field perception. We consider the phrase as the minimum linear context for searching all possible information, the next levels are the sentence and the discourse.

Subtext search can also be implemented at the level of the whole text or several texts. Any kind of the bias and deviation from the norm or illogicality of any kind in most cases are strong signals that initiate the search for subtext. As a rule, they are perceived and evaluated by the recipient as deliberately chosen by the author, and therefore mandatory for perception.

Although today it is impossible to fully take into account and scientifically rationalize the problems of meaning generation, it can be stated that a certain invariant of explicit and implicit information is set in the text, by which numerous options are directed and limited, which makes them not unlimited. Just as it is impossible to know the laws of its functioning without studying the anatomical structure of the human body, it is impossible to identify the information without a rigorous analysis of the components of the text. It is necessary to analyze multi-level linguistic means, in which special attention is paid to their role in the process of perceiving the meaning of the text. A speaking signal of the presence of any worth unit of information can be a unit of any level, realizing in its environment its "pre-text" or incremental value in the text. We have established that the final conclusion stems from the analysis of functioning and compatibility of different levels of all possible linguistic means available to the recipient within one minimal context.

Thus, as critical thinkers, people decide whether some message seems right or wrong, true or false; evaluate the data and determine how it should be interpreted; then draw conclusions about their perception of the information. In addition, this new information is combined with their worldview to make the most accurate assessment of the issue at hand. Critical thinking, like analytical thinking, uses facts, but takes it one step further. Facts are used to form an opinion or belief. So, we can say that critical thinking is more opinion-based thinking.

CORE COMPETENCES FOR IT SPECIALISTS: PROFICIENCY TERMINOLOGY

Kostyrava S.S., PhD, associate professor, Antonova T.A., student

Vitebsk State Technological University,
Vitebsk, Republic of Belarus

Abstract. *The article deals with proficiency terminology in IT sphere. The core competences for IT specialists are considered in the context of the soft skills listed as a top requirement by employers. The correlation between the notions of competence and proficiency is determined.*