THE STUDY OF COGNITIVE PROCESSES AND INTERCULTURAL COMPETENCE OF STUDENTS

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ABSTRACT

This article presents findings of the study of the field of cognitive spheres of a person. The authors argue that more complex types of intellectual activities of a person, such as critical thinking, cognitive flexibility, and decision-making, are the result of well-formed intercultural competence.

Keywords: Adaptation, critical thinking, cognitive flexibility, intellectual behavior, critical thinking, decision-making, intercultural competence, mental operations, intercultural transformation.

INTRODUCTION, LITERATURE REVIEW AND DISCUSSION

Based on the existing definitions, we know that "critical thinking" is a type of thinking which is the opposite of illogical and irrational thinking. But when it comes to our further understanding of it, we come across such questions as "Can critical thinking be defined as creative thinking? Or are they different notions? Perhaps, one is a part of another?" "How can we correlate critical thinking, inborn intellects, and scholastic abilities?", "Is there a significant importance of critical thinking in the process of focusing on the thing that we know and the content of which we discuss?". It would be logical to form some preliminary ideas about the above-mentioned questions. Is it possible to investigate through psychological research the effectiveness of the acquisition of the material when the test subjects contemplate the given question rather than just read it in detail from the beginning till the end? This kind of research aims to assist in the formation of critical thinking skills and develop this type of thinking in the subject.

Thinking in cognitive content can be reviewed in the following way. In the last years, the theory which emerged from scientific research of subjective thinking and decision-making suggests the thinking of a more integrative and less ambivalent character, than the thinking that is proposed by popular culture. In the process of the analysis of thinking, the experts must carefully approach the suggested simplified methods of understanding human thinking. They must avoid sharp and rigid dichotomies, such as reason and emotions, intuitiveness and consciousness, creativity and criticality, etc.

Human attention derives its share from an unlimited number of cognitive resources. The results of the multiple-choice critical thinking test demonstrate how predictably functions the system described above. The time of cognitive reaction and accuracy diminishes when the subjects do more than one task while doing multiple-choice critical thinking tests. [Barnard et al., 2004]. Many people realize intuitively that reading is more difficult when they are engaged in conversation and as a rule, it is hard to concentrate on one thing when distracting factors are present. This difficulty relates to the fact that distracting factors demand additional resources

when they are given attention. They can even be "switched off" until these processes become cognitively automated [Ashcraft & Radvansky, 2010; Barnard et al., 2004].

Automated cognitive processes are carried out in parallel with other processes, but they don't interfere with them, because automated processes don't require attention resources. Thus, the distracting factors are not a problem if any process is automated. The automatization is at such a level that the more automated the process is, the fewer resources it requires [Ashcraft & Radvansky, 2010].

The automated processes usually take place without conscious participation. Even the evaluation of the happening takes place automatically and unconsciously. [Friedrich, Henik, & Tzelgov, 1991]. Walking, chewing and the analysis of the humor of the sticker on the rear bumper are all automated processes. On the other hand, a child who is learning to walk and chew may stop one of these processes when he reads amusing humor. It is the same case when an adult has to stop chewing or slow down if he concentrates on something more complex.

Besides this, if meta-cognition is a valuable characteristic of the realization of one's cognitive processes, then automatization is valuable and may take place without a conscious action and the contradiction between meta-cognition and automatization seems obvious. Automatization may be unconscious, while metacognition requires conscious action.

The processes of automated thinking undergo preparation, for example, the impact of the previous stimulus on the subsequent [Smith, M. C., Bentin, S., & Spalek, T. M., 2001]. In other words, noticing the "stop" sign unconsciously or consciously may unconsciously or consciously induce a person to say "red" when he is asked to choose a color. The key understanding in automatization and critical thinking is initial awareness since if some thinking is automated and initial, critical thinking may be influenced by factors that are simultaneously irrelevant and unwanted and the subject himself may not realize it. (The realization of it may be included in the category of metacognition). The role of formal logic should be noted here (the notion has been defined earlier), since it uses arbitrary symbols, and avoids many of these initial traps, i.e., abstract algebra will not cause personal feelings with the same probability as algebra with financial reports.

Cognitive development through practice is also important for critical thinking in education. Even extremely complex processes of attention that interfere with each other, including reading and listening to the speech can be automatized through practice [Ashcraft & Radvansky, 2010; Logan & Klapp, 1991]. In other words, practice will result in automatization, and automated processes require fewer resources of attention, thus making them available for other cognitive processes. Critical thinking in education relies on the cognitively supported assertion that cognition can be realizable, but a person may never say or think "I need to train my cognition".

The experts who worked on the concept of this type of thinking reflected on its forms. Creative thinking is only one example of it. There is also purposeful kinetic thinking which instantly coordinates movement and intention as when a football player dribbles the ball during a football game.

Creative and innovative thinking is the kind of thinking that leads to a new understanding of the situation, new approaches, fresh views, and new methods of evaluation and perception of things. Some evident things such as music, poetry, dance, dramatic literature, inventions, and technical innovations can be included in the list of the results of creative thinking. But there

are also less evident examples such as asking questions and expanding the horizon of possible solutions or methods of presenting problems, which challenge the perceptions of seeing the world in a figurative and another light.

We can also include meditative thinking on the list. It is the kind of thinking that will lead to a feeling of tranquility and deep understanding of the event. Instinctive thinking also defines the form of critical thinking. If we observe a manifestation of critical thinking in people, we can discern its various forms. All types of critical thinking that were described above have been characterized by the experts as thinking in popular culture.

Many scientists assume that a crucial role in any difficult situation is how the subject instantly reacts to it. A quick intuitive reaction to the situation is a primary moment in decision–making. But is it like this? Can we call intuitive spontaneous decisions as such? Most of the important decisions which seem to be intuitive are the result of the experience. An individual is absorbed in the surrounding world and his daily life consists of decisions taken constantly. In the process of taking decisions, he can take them reflexively. The individual may worry about his decision and think long about it. Information gathering, consideration of all possible alternatives, the study of potential risks, the formulation of thoughts about a forthcoming action, the rationale behind the choice, and all other processes connected with a decision–making take place depending on the type of thinking. In other words, a person makes a purposeful and reflexive judgment of what he believes in and what he does. Critical thinking is aimed at such thinking.

“Cognitive flexibility is, in the first place, the awareness that in any situation there are available (communicative) options and alternatives through the communicator, secondly, it is the willingness to be flexible and to adapt to the situation, thirdly, it is the self-efficacy in being flexible”. [Martin and Rubin, 1995]. To communicate in different spheres of society, people must be able to think diversely. Besides, Martin and Rubin note that people need “a reason or motive” to consider other alternatives of interaction and adapt their communicative behavior [Martin and Rubin, 1995].

In the given research Pearson correlation test has been conducted to measure the critical thinking, intercultural competence, and cognitive flexibility of 340 students who study at higher educational institutions. The tests measuring critical thinking have been developed by the author and included such types of cognitive operations as induction, deduction, argumentation, and logical conclusions. The test consisted of 19 statements and 58 right and wrong answers. DMIS (developmental model of intercultural sensitivity) method has been used to measure the intercultural competence of the participants. The “Cognitive flexibility” method of Martin and Rubin has also been used in the study. Among 340 participants a correlational connection was confirmed in the following order: intercultural competence and cognitive flexibility indicator was r=0,8, which proves a strong correlation between the subjects; intercultural competence and critical thinking indicator was r=0,68, which is a significant indicator that allows establishing a positive correlative connection that proves the logicality of the initial hypothesis. The correlation between critical thinking and cognitive flexibility is r=0,75.

In the given work studying cognitive peculiarities of students in intercultural background, it has been established that intercultural correlation provides this motivation and is a factor of cognitive flexibility development since cultural and communicative adaptation is often necessary for the situations of mixed culture for a person to function and reach his communicative goals.

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