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Developing Critical Thinking in Classroom

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Abstract

In the modern world there are different opinions and ideas, and each individual should be able to choose the best of them to criticize and analyze. This requires critical thinking. As such, its significance in every individual's life is beyond doubt. Critical thinking is so important through its effect on the society that the great educational specialists consider its development as the main purpose of education. In this study, through the use of conceptual analysis research, it is dealt with the analysis of the nature and the scale of critical thinking and its training in classroom. On the whole, it is concluded that it is possible to develop the students' critical thinking skills through encouraging them and providing them with thinking behavioral models. The kind of attempt is worthy in which the individual can think critically to solve the real world's problems. Critical thinking does not develop by itself but should be taught theoretically and practically in educational communities.

Keywords: Thinking**,** Critical Thinking, Classroom, Behavioral Models;

Introduction

Thinking is an inseparable part of man's life. Everybody is familiar with thinking, whether consciously or unconsciously. What, indeed, distinguishes man from other animals is his

thinking ability. What matters is that thinking is a natural process that can be developed and led to critical thinking. In simple words, critical thinking is the ability of analyzing and interpreting information. Critical thinkers raise vital questions to develop them through collecting related information and analyzing them. They use abstract ideas and thoughts, think open-mindedly and communicate effectively by others. Active thinkers suffer from observing the restricted and self-centered world, and reject passive thinkers who are in the bondage of their own restricted thoughts. Passive thinkers answer the questions with just yes or no; they consider their own thoughts as the only

logical source and their own information as the only fact (Scriven & Paul 2004).

According to Hatcher & Spencer (2005), critical thinking is an important and essential skill because it is required for the work environment. It can help individuals with their spiritual questions, evaluating the others, policy making, organizing, and hence avoiding social problems. Therefore, a way should be found to enter into daily life in order publicize its training. Fink (2003) showed that active learning, accompanied by thinking, compared with passive learning, leads to students' better and more learning so that they maintain their learning longer. He also recommends that in choosing learning activities, there are two principle approaches: first, it should take the advantage of combining the three kinds of active learning; that is, information and thoughts, experience, and reflexive conversation; second, whenever possible, direct kinds of learning activities such as performance of valid fixations, direct observation of the event, reflexive thinking, and conversing inside and outside the class, be used. According to Fink's point of view, in reflexive writing, students should answer the following questions: what am I learning? How valuable is what I am learning? How am I learning? What else do I need in the process of my learning?

What has distinguished man from other creatures, and has made man the most gifted one, is his possessing thinking capability and perception of things. All throughout history, man's life has never been without thinking and thought. However, what is important in revealing developing the effective dimensions of thinking is its dynamicism. The man who constantly thinks and uses his mind and releases his mind from being imprisoned in static frameworks and definite principles and connects the affairs in new ways each time confronting them, can offer new ideas. It is here that creativity appears and reveals itself. With respect to the mentioned point, the basis of the present study is the review of definitions, objectives, instruments of thinking and the methods of developing it in classroom.

Critical thinking helps students fill the gap between memorizing or blindly accepting information as facts. It creates a great challenge of analysis and synthesis. Alternative points of view become significant. In critical thinking, through man's encountering with different points of view and responding to alternative opinions, he develops more solid foundations for making personal choices about what to accept and what to reject.

As a matter of fact, critical thinking becomes a means of autonomy, curiosity, and reasonableness. Everybody, in his daily life, encounters with a lot of occasions in which he has to come to a conclusion based on some reasons he has brought together. His task is to decide whether the arguments he has been exposed to are what he wants to make his own or not, whether he accepts them or not. It is critical thinking that is helpful here; the situation is ready for man to start thinking critically. Not only when dealing with ordinary situations and people, but even when dealing with experts, man needs to choose the best and to decide what to do or what to accept or reject. The world has become so complicated that the age is called the age of metanarratives; that is man is exposed to and surrounded by a lot of narratives, every one of which has claims on him. It is critical thinking that will help him. In fact, critical thinking enables man to be

more sensible in his selection of the true narratives exposed by experts.

Critical thinking: definition, objectives, instrument, and its concepts

Since critical thinking is accompanied by complicated mental activities and processes, there is no single definition for it, and it might be said that there are as many definitions as the number of the experts in the field. Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action (Khojasteh & Smith, 2010).

To Meyers (1988), critical thinking means the ability to set generalizations, the ability of creating analytical framework, acceptance of new possibilities, avoidance of prejudgments, and holding judgement (healthy doubt and avoiding hasty judgments). As such, critical thinking helps the individual to concentrate on the related content, to avoid false beliefs and customs, and by using correct information and analyzing and synthesizing them to choose the best options. To King, critical thinking is considered one of life's essential and basic skills, through which the process of improvement of thinking about the nature of things, and creation of the habit of reflection and questioning are created in each aspect of life Arend 2009). On the whole, it can be said that critical thinking is self-leading, self-organizing, self-control and self-corrective (Khojasteh & Smith, 2010).

Critical thinking, under the influence of factors stimulating it, functions in different ways. When stimulated by personal motivations, it often manipulates ideas in the direction of serving the individual or the group, and when worked upon by reason and logic, it issues the most logical order. The quality of critical thinking depends on the individual's depth of knowledge about his subject matter, the raised questions, intellect and the kind of information.

From Paul & Elder's (2007) view, thinking elements are consisted of: the purpose of thinking, questions related to the subject matter, information, analysis and interpretation, concepts, assumptions, results and findings, and viewpoints.

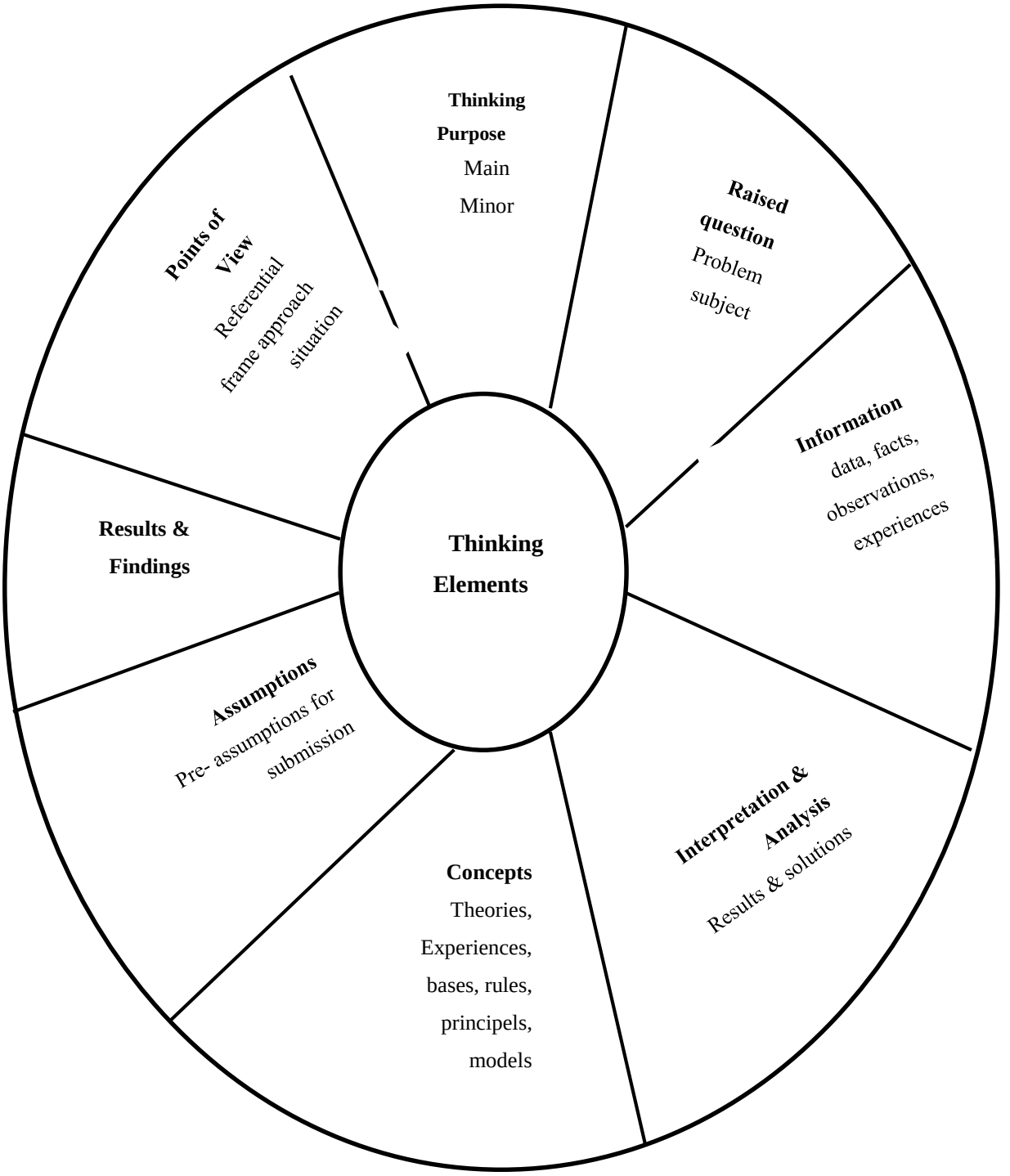

Figure (1) Thinking elements from Paul & Elders view(2007)

Ennis (1987) defines critical thinking as logical thinking, the center of which is decision making and judging on ideas and behaviors. In his opinion, when somebody tries to analyze issues carefully, to seek valid documents, and to reach to valuable conclusion, his thinking is critical.

1. Rearing critical thinking in classroom

When students are accustomed to passive learning who memorize and recite information, it is primarily hard to engage them in learning conditions which critical thinking skills require (Snyder 2008). Instructors should use group controlling techniques to engage students in active learning and creative thinking opportunities (Ladyshewsky 2006).

What is significant is that teachers should not undermine or overestimate students' abilities. Students possess diverse abilities, so they should be taught critical thinking skills in simplified formats in order to let them learn the application of these skills successfully and gain the necessary confidence in their ability to make rational choices about social issues.

On the other hand, critical thinking begins with the desire to improve what an individual thinks. Therefore, students should reveal their desire by asking critical questions in order to understand better. As such, whenever they read something or they listen to somebody, they should prepare themselves for critical thinking by asking some questions. That is why Browne & Keeley (2007) claim that "critical thinking consists of an awareness of a set of interrelated critical questions, plus the ability and willingness to ask and answer them at appropriate times" (p. 3). However, asking is not enough. This asking should lead to providing good reasons for acceptance or rejection of an opinion. This kind of asking results in an argument, and argument is the essence of critical thinking. One becomes a critical thinker if he is interested in arguments and if he succeeds in providing his recipient with good reasons to act in a specific way or believe in something. It is through his asking and trying to find good reasons that man becomes able to draw conclusions about whether the arguments he faces with are valid and justifiable, based on good and solid evidence and sensible assumptions, or whether they are just false logic and persuasive devices.

Facione (2007) recommends that students to be divided into teams consisting of two; a team to be evaluated by problem solving method, and the other team by group controlling. These problem solving techniques lead the students throughout the process of critical thinking, and help learners to cooperate with each other. Insertion of project-based learning activities is among similar methods which students need to use their own knowledge in building their own real world. Also, guiding students and evaluating them two by two are used to prepare students for critical thinking and metacognition skills (Hou, Chang & Sung 2007).

In order to make learning more active, there is a necessity to learn how to enhance general learning experiences through expanding some kinds of experimental learning and thinking opportunities. One highly important base of active learning is deep thoughtful talking. In the process of thinking, the learners should answer the following questions: What am I learning? How valuable is the thing I am learning? How do I learn? What do I need to learn? (Fink, quoted by Duron 2006).

By removing the obstacles that stop students from learning in educational environments, teachers should help them to spend more time on learning accompanied by thinking. Teaching to think is a very significant issue because the students who develop critical thinking skills in themselves and use them are capable of thinking independently. They recognize the restrictions of their own knowledge, and before involving themselves with them, they analyze them. Khojasteh & Smith (2010). have offered three stages for teaching critical thinking in classroom:

Stage 1: discovery of the subject

Before discovering the subject, the teacher should clarify explicitly teaching concepts or basic and important principles. Then along with comprehension, the teacher chooses the materials relevant to concepts with which the students are rather familiar. Students start with these materials and discuss about their own discoveries with the teacher and other students.

Stage 2: creativity and invention

In this stage, the teacher helps his students to use their own interactions with the materials and the questions raised by interactions as a starting point for principles, rules and concepts which conceptualize their primary discoveries.

Stage 3: application

In the final stage, the students apply the ordered concepts and principles with a series of new materials but relevant to their own concepts and principles. The goal of this stage is to strengthen the newly developed thinking skills.

In the last decades important changes have occurred in education, and these changes have been in the direction of active learning. Teachers who have used this method have found out that students learn more; therefore, learning has become more enjoyable, and students have started to think about what they do (Bonwell & Eison 1991).

2. Conclusion

Critical thinking is an attempt for making logical and confident evaluations to see what can be believed logically and what cannot. In critical thinking, scientific and reasonable tools are used because in critical thinking, doubt is privileged and valued to simplicity and stupidity as well as prejudice, logic to faith, science to hypothesis, and intellectuality to emotionalism. Through describing some characteristics of critical thinking, the explanation of its concept becomes easier, too. With respect to the mentioned points and discussed materials, it seems that religions have attributed much importance to thinking as they have asked people think deeply about the events and phenomena in the universe and not to think superficially over the world.

Famous people of history have had concentrated and great thoughts. Mental concentration is the most important item in problem solving. Personal relaxation gives man the chance to arrive at mental concentration as well as psychological peace and security. Concentration of mind is, in fact, directing and fixing mind on a subject or a series of thoughts. Ming concentration is something which is acquired and is enhanced through practice. Imaginative thoughts and ideal thinking makes man ready to take great steps and develop. Releasing thoughts to fly, alongside leading to pleasure and relaxation, sometimes brings to mind new programs and plans which are achievable in smaller scales. Although flying mind flies higher than clouds, man can establish his steps on the

land. As such, it is necessary to realize one's abilities, facilities, resources, and other capabilities, and to use them when he is making decisions.

On the whole, learning environments where students are actively engaged to seek information and to apply their own knowledge, will expand students' critical thinking skills. Like any other skill, critical thinking requires education, practice and patient.

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