

The Significance of Critical Thinking Ability in terms of Education

Murat KARAKOÇ

Istanbul Aydın University
Institute of Social Sciences
Turkey

Abstract

This study explained critical thinking ability in terms of education processes and the importance of thinking critically for a student who attends any education programme. Developing the ability to think critically is an important element for modern education approaches and models. This study intends to give a framework on the concept of thinking critically while teaching or learning. This study is limited to the literary description of critical thinking subject. The world is getting both more technical and more complex day by day, that's why the necessity for education increases for each growing generation. The skill of thinking critically is generally accepted as a very vital stage in every field of learning, particularly in the last decades. As a result this study draws a general suggestion on the significance critical thinking ability.

Key Words: Critical Thinking, Thinking, Education.

1. Introduction

Thinking critically will boost creativity and enhance the way you use and manage your time (Hader, 2005) and critical thinking not only describes the ability to think in accordance with the rules of logic and probability, but also the ability to apply these skills to real-life problems, which are not content-independent. . Critical thinking can provide you with a more insightful understanding of yourself. It will offer you an opportunity to be objective, less emotional, and more open-minded as you appreciate others' views and opinions. By thinking ahead, you will gain the confidence to present fresh perspectives and new insights into burdensome concerns.

2. Thinking

The history of researches on thinking depends upon the time that human beings recognized that they think. Thinking is one of the features that distinguish humans from other living beings. Thinking is the manipulation or transformation of some internal representation (Halpern. 2003, p.84). She says that when we start thinking, we use our knowledge to achieve some objective. In this sense thinking ability is the basic case of our life because all of us need to achieve an objective; on the other hand humans have relations in society and whereas nobody is alone. Descartes argued that thinking is reasoning, and that reason is a chain of simple ideas linked by applying strict rules of logic (McGregor, 2007). His findings regarding neurological transmissions between receptors and effectors in various vertebrates led him to declare 'cogito ergo sum', which translated means 'I think therefore I am' (Gaukroger, 2003). Both learning and thinking are the concepts which support and complete one another. When considered from this point of view, whereas learning style and critical thinking concepts have different qualifications, it can be stated that they can be used jointly. Likewise, when literature is examined, it is seen that there are researches handling learning styles and critical thinking concepts jointly (Güven & Kürüm, 2004).

2.1 Creative thinking

Creativity is known as a skill which can be seen in every human and in every period of human life. But the continuousness, improvement, grade and appearing of creativity may change human to human. Creativity has various features: flexibility, multiple thinking, sensitivity to environment and humans, to be awake and interested in new situations, rationalism, thinking and treating easily and quickly, originality, reaching to different results. Critical thinking is sometimes referred to as 'critic-creative thinking. Thinking critically and thinking creatively can be seen as the same but undoubtedly there are basic differences between two thinking styles. *Creativity* masters a process of making or producing, *criticality* a process of assessing or judging.

The very definition of the word “creative” implies a critical component. When we understand critical and creative thought truly and deeply, we recognize them as inseparable, integrated, and unitary (Paul & Elder, 2008).

3. Thinking in Education

Education, perhaps the most basic need for people, is the process that provides the development of human. According to Meyer (1976) the aim of education is to nurture the individual, to help, to realize the full potential that already exists inside him or her. There has always been a strand of educational thought that held that the strengthening of the child’s thinking should be the chief business of the schools and not just an incidental outcome – if it happened at all (Lipman, 2003). Qualified education should show the way to students about what and how to learn. While students evaluate what they learned and their learning methods, they manifest their critical thinking abilities (Emir, 2009). As Cotton indicates (1991):

“If students are to function successfully in a highly technical society, then they must be equipped with lifelong learning and thinking skills necessary to acquire and process information in an ever changing world”.

One of the aims of education should be developing students’ thinking skills as well as motor skills, which is basic goal of contemporary approaches in education. According to Elder & Paul (2008) students are not passive but active while they are realizing critical thinking.

4. Critical Thinking

When the term of ‘Critical Thinking’ is searched, it is understood that there are meanings of it which are suggested in the frame of philosophy and psychology sciences but in general sense this term has not got a definite meaning. ‘Critical’, derived from the Greek word *kritikos* meaning to judge, arose out of the way analysis and Socratic argument comprised thinking at that time. (McGregor, 2007) and then the word *kritikos* passed to Latin as ‘*Criticus*’ that is the type of spreading to world languages from it (Hançerlioğlu, 1996). According to Critical Thinking Cooperation (2006) critical thinking is an ability which is beyond memorization. When students think critically, they are encouraged to think for themselves, to question hypotheses, to analyze and synthesize the events, to go one step further by developing new hypotheses and test them against the facts. Questioning is the cornerstone of critical thinking which in turn is the source of knowledge formation and as such should be taught as a framework for all learning. Students are frequently conditioned in their approach to learning by experiences in teacher-centered, textbook-driven classrooms (Sharma & Elbow 2000). This situation is a disturbing case for contemporary educators, and for this reason they would rather choose the latest models and methods which are more effective in directing students to thinking.

4.1 Characteristics of a Critical Thinker

When we take a look to the definitions about critical thinking, approximately we can infer a general idea about the features of the individual who thinks critically. Critical thinking individuals are people who research, question, refuse the information’s as it is, active, think analytically and synthesis, evaluate the information and explain with true basis, treat open-minded and aware of thinking processes. . If you develop the ability to analyse people’s attempts to persuade so that you can accurately interpret what they are saying or writing and evaluate whether or not they are giving a good argument then you can begin to liberate yourself from accepting what others try to persuade you off without knowing whether you actually have a good reason to be persuaded (Bowell & Kemp, 2002). Anyway this part is a very explanatory and descriptive one in emphasizing both the importance of critical thinking and characteristics of critical learners. Paul and Elder (2008) revealed a list about the characteristics of critical thinkers. . They list the characteristics of critical thinkers as:

Raises vital questions and problems, formulating them clearly and precisely; Gathers and assesses relevant information, using abstract ideas to interpret it effectively; Comes to well-reasoned conclusions and solutions, testing them against relevant criteria and standards; Thinks open-mindedly within alternative systems of thought, recognizing and assessing as need be, their assumptions, implications, and practical consequences; Communicates effectively with others in figuring out solutions to complex problems. (Paul & Elder, 2008, p. xxiii)

4.2 Teaching Critical Thinking

Every pupil should have an effective skill of critical thinking, and they must not accept anything for granted but how can you teach thinking critically to students?

There are several ways of organizing for instruction in critical thinking: We can teach a separate course or unit, we can infuse critical thinking into all that we teach, or we can use a mixed approach. The first approach of a separate course or unit requires materials that teach specifically for critical thinking dispositions, skills, and knowledge. The downside is that there may be little transfer from what the program or materials teach to the rest of the curriculum. Infusion, the second possible approach, requires that critical thinking be taught as an integral part of all subject areas (Wright, 2002). According to Hirose (1992) employers complain about employees' lack of reasoning and critical thinking abilities. Those abilities are essential because compared with the jobs in the past the modern work environment requires more thinking and problem solving abilities. This situation can be adapted to education, too. Teachers had better be equipped with high critical thinking skills. Critical thinking is not equal with intelligence and shouldn't be misunderstood with it. Critical thinking is skill which can be developed (Walsh and Paul, 1988). As well as critical thinking can be developed, it can be searched and analyzed with its different dimensions, so this shows that many scientists or experts hypothesize about critical thinking, because the vitality of critical thinking has been realized by many people recently. Educators are aware of the fact that critical thinking can be thought.

4.3 Studies Conducted on 'Critical Thinking'

Initial studies conducted on critical thinking began in the years of 1960s. Researchers have intended to explain critical thinking with two main disciplines thorough these studies. Philosophical approach has dwelled on norms of good thinking, the concept and motive of human thought and cognitive skills necessary for an objective world view; while psychological approach have dwelled on thinking and experimental studies thinking, individual differences in learning thinking and the concept of problem solving which is a piece of critical thinking. Now I will give a few examples on the studies of critical thinking. Kürüm (2002) put forward a study at Anadolu University Education Faculty. The goal of Kürüm's study was to identify critical thinking abilities and the levels of thinking abilities that constitute this ability and the factors which influenced critical thinking of teacher trainees studying at Anadolu University Education Faculty. The results of the study showed that teacher trainees' critical thinking abilities and all levels of thinking abilities were at mid- level and that these abilities were affected by different factors such as age, high school types graduated, score type and level in university entrance exam, program being studied, education and income level of the family, and activities held for developing themselves.

Paul (1989) conducted a study touching upon the adaptation of critical thinking dispositions in learning environment. In this study Paul suggests dispositions to be disciplined and self-directed thinking could be taught. He maintained that critical thinking was constructed from skills, such as spotting conclusions, examining premises, forming conclusions and diagnosing fallacies. Thus he proposed that critical thinking be constructed as 'disciplined, self-directed thinking which exemplifies perfection of thinking appropriate to a particular mode or domain of thinking. Critical thinking conceptualised in this way must be taught with a focus on developing fair-minded, critical thinkers, who were willing to take into account the interests of diverse persons or groups regardless of self-interest. Paul called it the dialogical or dialectical thinking model. Giancarlo, Blohm, and Urdan (2004) were interested in the measurement of critical thinking disposition in adolescents as illustrated with four successive studies. The results of their studies provide support for the California Measure of Mental Motivation (abbreviated as CM3). This study was based on the assumption that critical thinking is a disposition and provided not only evidence that critical thinking disposition exists in adolescents but also a valuable tool for assessing this construct. The authors concluded that "CM3 assess the extent to which individuals perceive themselves as willing and inclined to approach challenging problems in a systematic, innovative, open-minded, and inquisitive way."

5. Conclusion

Critical thinking is no doubt necessary in every field of life, but especially for professions that occupy with people. Finkelman (2001) took the attention and emphasized the importance that the people who work in the field of human health, especially the people who directly intervene to the person's life like psychologists, counsellors and educationalists have to be critical thinkers in both practice and management. In order for teachers and counsellors to be able to implement critical thinking into their classrooms they must first be committed to critical thinking and its philosophy.

References

- American Philosophical Association (1990). Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction. "The Delphi Report 'Committee on pre-college philosophy. (ERIC Doc. No. ED 315 423).
- Bowell, T. & Kemp, K. (2002). *Critical Thinking: A Concise Guide*. Rutledge Press.
- Emir, S. (2009). Education Faculty Students' Critical Thinking Disposition According to Academic Achievement. *World Conference Education Science*, 1.
- Finkelman, R.B. Skinner, H.C.W. Plumlee, G.S. & Bunnell, J.E, 2001. *Medical Geology*. *Geotimes*, 20- 23.
- Gaukroger, S. (2003). Descartes, René in L. Nadel (ed.) *The Encyclopedia of Cognitive Science*, Vol 1. London: Macmillan.
- Giancarlo, C. A., Blohm, S. W., & Urdan, T. (2004). Assessing secondary students' disposition toward critical thinking: Development of the California measure of mental motivation. *Educational and Psychological Measurement*.
- Güven, M. ,& Kürüm, D. (2004). The relationship between teacher candidates' Learning Styles and Critical Thinking Dispositions. An investigation on the Students in Faculty of Education in Anadolu University, 1.
- Hader, R. (2005). Carve out time to think - yes think. *Nursing Management*, 36(4), Retrieved April 5, 2011, from: EBSCO Host database.
- Halpern, D.F. (1996). *Thought and Knowledge: An introduction to Critical Thinking*. New Jersey: Lawrence Erlbaum.
- Haçerlioğlu, O. (1996). *Felsefe Sözlüğü*. İstanbul: Remzi Kitabevi:31.
- Hirose, S. (1992). Critical thinking in Community Collages. ERIC Digest Retrieved August, 30, 2006 from <http://www.ericdigest.org/19922/critical.htm>
- Kürüm, D. (2002). Öğretmen Adaylarının Eleştirel Düşünme Gücü. *Yüksek Lisans Tezi*.
- Lipman, M. (2003). *Thinking in Education*. Cambridge University Press, 1.
- McGregor Debra (2007). *Developing Thinking, Developing Learning*. Open University Press, 9
- Meyer, John R. (1976). *Reflections on Values Education*. Wilfrid Laurier University Press, 114.
- Paul, R. (1989). Regarding a definition of critical thinking. Paper presented at the International Conference on Critical Thinking and Educational Reform's 25th conference, Robert Park, CA, United States of America
- Paul, R. & Elder, L. (2008) *Critical thinking: tools for taking charge of your learning and your life*. Pearson/Prentice Hall.
- Sharma, M. & Elbow, Gary S. (2000). *Using Internet Primary Sources to Teach Critical Thinking Skills in Geography*. Greenwood Publishing Group, Incorporated.
- Wright, I. (2002). *Is That Right? Critical Thinking and the Social World of the Young Learner*. Pippin Publishing Corporation, 112