Reasons for non-critical thinking: The multilevel model approach

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Abstract

In current literature, one is offered a number of ways of discussing critical thinking, and furthermore, authors follow different tracks grounded in a variety of disciplines (philosophical, psychological and educational) to approach the concept. The only consensus within this topic seems to be the claim that there is no consensus concerning the definition and the construct of critical thinking. I propose that the critical thinking is a complex concept, which simultaneously involves components at three levels, at the level of the culture, the individual and the language. I call the resulting framework a multilevel model (MLM) of the critical thinking concept. The paper argues that the study of critical thinking and non-critical thinking instances within the framework of the MLM allows us a better understanding of the phenomena internationally, and in addition, that no one level can be singled out as the only appropriate level of analysis of critical thinking instances.

Keywords: Critical thinking, language, emotion, context, social environment, culture.

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1. Introduction

The multilevel model (MLM) of critical thinking (Fabian, 2017) was formulated with the intention to refine the current framework of understanding critical thinking in education, and is based on the following interpretation of the concept (Fabian, 2014)*. Critical thinking in education is a way of learning. It is activated by one's internal initiative to develop one's understanding of reality through revealing further objective information, with the aim to construct new and solid knowledge for oneself*.[a]

Through the application of the MLM professionals will become capable of providing a valid interpretation of the students' critical thinking processes, or of the lack of that. Having a clearer understanding of the internal and external factors involved in the critical thinking instance of the individual will allow an expert to develop methods for improving students' capacities in this area.

In what follows, I will first present a brief overview of the current approaches to the critical thinking concept to move on to provide some evidence of further influencing factors to exist. These factors might provide good reasons for the individual to avoid thinking critically, however, are currently rather underestimated. We will learn what these factors are, and the reason why they deserve a place in the extended concept of critical thinking, which we will name MLM of the concept.

2. A brief overview of critical thinking concept

The discipline of philosophy has developed a coherent and sound framework of critical thinking by emphasising the perfection of thought, and by focusing on the qualities of the ideal thinker. The earlier interpretation of critical thinking as *reflective and reasonable thinking* (Ennis, 1985, p. 45) has been completed with the criteria of the thought being goal-directed and purposive (Ennis, 1985; Facione, 1990) and furthermore, with the standards quality thought is required to meet (Bailin, Case, Coombs & Daniels, 1999; Lipman, 1988; Paul & Elder, 2008). A widely held view of the philosophical school suggests that critical thinking maintains the fundamental intellectual standards of the good thought, which are clarity, accuracy, precision, relevance, depth, breadth, logic and significance (Paul & Elder, 2008).

The psychological school of thought, however, intends to move away from this ideal, and focuses on how people actually apply critical thinking. *We understand critical thinking to be purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based* (Facione, 1990, p. 2).

Further debate over the concept has been nurtured by an array of conceptual differences. To illustrate what we mean, let us observe the feature of permanence as an example. Figure 1 shows how permanence in individual critical thinking is handled in the various theories of critical thinking.

The most traditional approach to critical thinking intends to maintain the quality of the product of thinking. It investigates the thought, its internal cohesion, the relationship between the thought and reality, and the relationship between the thought and the language expressing the thought according to universal intellectual standards. The main aim of the approach is to identify flaws of thinking or expression, and to introduce corrections to develop the thought and thought utterances or language, for perfection. At the same time, the psychological approach intends to identify a set of skills and abilities required to complete the process of critical thinking. A set of skills or abilities will enable the individual to proceed, however, might not be demonstrated in the process under observation, which may be the reason why recommendations to efficient procedures and methods have also been developed for thinkers to follow. Still, others argue that instead of a single way to think critically, there is a variety of tools one can choose from when completing the thinking process, which implies that a variety routes are available in successful critical thinking, too.

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[a] Translation completed from the Hungarian text by the author.

PERMANENT   DIVERSE

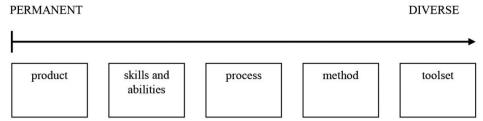| product | skills and abilities | process | method | toolset |

Figure 1. The current concept of critical thinking according to permanence

Despite the differences between the approaches to critical thinking, it is clear that there are a number of areas of agreement between the philosophical and the psychological schools of thought, which paved the way for the Delphi Report document (Facione, 1990), which shares a common understanding of critical thinking across disciplines.

Most importantly, it provides a comprehensive description of six essential skills applied in critical thinking:

1. Interpretation: the ability to understand information.
2. Analysis: the ability to identify the main arguments.
3. Evaluation: the ability to judge whether this argument is credible and valid based on the logic and evidence given.
4. Inference: the ability to decide what to believe based on solid logic, and to understand the consequences of this decision.
5. Explanation: the ability to communicate the process of reasoning to others.
6. Self-regulation: the ability to monitor one's own thinking and correct flaws in logic.

Furthermore, it states that The ideal critical thinker is habitually inquisitive, well-informed, trustful of reason, open-minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgments, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in the selection of criteria, focused in inquiry, and persistent in seeking results which are as precise as the subject and the circumstances of inquiry permit. (Facione, 1990, p. 2)

The document also identifies seven dispositional elements or habits of mind of the critical thinker, which are the following: inquisitiveness, truth-seeking, critical thinking self-confidence, open-mindedness, systematicity and analyticity cognitive maturity.

Thus, it seems that the philosophical and psychological schools have been highly successful in drawing a thorough picture of the domains within which the individual cases of critical thinking can be analysed either for research or for developmental purposes. We have a clear understanding of the quality of the critical thought on the one hand, and the quality of the critical thinker in terms of the dispositions, skills and abilities critical thinking requires on the other hand.

The individual factor

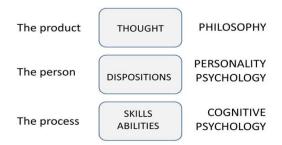| The product | THOUGHT | PHILOSOPHY |
| The person | DISPOSITIONS | PERSONALITY PSYCHOLOGY |
| The process | SKILLS ABILITIES | COGNITIVE PSYCHOLOGY |

Figure 2. The current conceptual framework of critical thinking in philosophy and psychology

The two schools provide us with three interconnected components within the individual domain of critical thinking. The investigation of the three components of: 1) the product (the good thought) best developed by philosophy; 2) the person (the dispositions of the ideal thinker) best developed by personal psychology and 3) the process (the skills and abilities of the thinker) best developed by cognitive psychology will help us better understand the critical thinking concept at the level of the individual. Since the three domains describe individual performance, that is the individual demonstrating certain dispositions and applying particular skills and abilities during the process of thinking, we will integrate them in what we call the individual factor (Figure 2) of the MLM of critical thinking.

However, some research suggests that the individual component of critical thinking concept shown in Figure 2 is incomplete. Some covert non-cognitive factors may also have great impact on the individual's decisions concerning their thinking strategy choices (Fabian, 2015). Personal and emotional, or 'affective', reasons can even create barriers (Cottrell, 2005). Since feelings or emotions, have a place in critical thinking, just as logic does, the awareness of the enhancing, the hindering effects of emotions and the metacognitive understanding of one's own emotions might play an important role in the critical thinking process. This implies that the individual component of the critical thinking concept of current literature (Figure 2) requires an extension with a further component of non-cognitive individual factors. This will allow the study of and will account for the operation of critical thinking, and furthermore, may offer strategies for individuals on how to overcome affective factors in critical and non-critical thinking instances.

3. The extension of the critical thinking concept

In contrast to the lingering ambiguity as far as the definition of the concept is concerned, the general interest in the education scene has stimulated the rise of a new aspect of critical thinking theory among philosophers and psychologists and education specialists. Some contextual features of the educational situations have emerged as crucial factors in influencing the individual's critical thinking processes. Among these aspects, the role of background knowledge has raised a special interest. Most researchers of critical thinking agree on the important role of background knowledge (McPeck, 1990; Willingham, 2007) meaning that the student needs something to think about. Some go even further (Bailin, 2002; Bailin et al., 1999; Facione, 1990; Paul, 1992) claiming that the critical thinking is domain-specific. Willingham (2007) argues that critical thinking is fundamentally intertwined with domain knowledge, and as such, is subject-specific.

I support the idea that critical thinking application instances might be overshadowed or even dominated by other effects outside the scope of the individual in at least three ways as follows: 1) Some other features of the context, and in addition; 2) the social environment or 3) the culture might also count in a variety of manners. Critical thinking always takes place in response to a particular task, question, problematic situation or challenge, and always arise in particular contexts, which are highly complex in education. The curriculum design (Pithers & Soden 2000), the teaching method (Pithers & Soden 2000), the level of sophistication and the concept of the task (Norris, 1985), the way in which a subject and assessment task is presented (Jones, 2005), affective factors, such as disagreement with the test or teacher sanction (Norris, 1985, p. 42) have already been discussed as vital contextual determinants.

In addition, some social determinants, such as teacher behaviour (Pithers & Soden 2000), or the impact of authority (Norris, 1985), teachers' attitude to student role (Bailin & Siegel, 2003; Merrifield, 2018), or to their own role (Pithers & Soden, 2000), over caring (Ennis, 1996) have been highlighted as major influencing factors in the application of critical thinking. Although the social factors in the immediate environment of the critical thinker might have great impact on his thinking behaviour in the classroom, literature still seems to lack a systematic description of what this environment means, and what variables might be closely related to critical thinking in the classroom.

The same applies to the study of a wider scope of the environment of the critical thinking concept. The impact that the socio-cultural or cultural factors in this environment might have on the thinker's

behaviour have hardly been integrated in the conceptual framework of critical thinking. In other words, the cultural environment of the thinker and the thinking process on the one side, and the education culture within which the interaction takes place on the other side are often left out from the debate over the critical thinking concept.

Cultural anthropology suggests that the personality is shaped by both genetic and environmental influences. Among the most important of the latter are cultural influences. People abstract and interpret the world through the frame of reference of their own culture. Their dispositions, beliefs and actions are influenced and depend on their cultural background assumptions. An example of that is thinking dispositions, which are culturally based (Guo, 2013), and which might be reinforced by the formal education settings based in the particular cultural environment. In other words, the individual dispositions reflect what dispositional attitudes the individual has been transmitted by the cultural environment.

Interestingly, further evidence of the importance of the cultural environment of the critical thinker is provided by relevant literary discourse over teaching critical thinking. Critical thinking is seen as an ideal, and furthermore, an ultimate goal in most Western academic settings, which is not always the case in many non-Western education environments. What is more, many question the appropriateness of teaching critical thinking skills in non-Western contexts on a variety of grounds. Atkinson (1997) claims that critical thinking embodies values and beliefs specific to Western societies. Some research seems to support this claim with pointing out that the cultural dimensions of the classroom have a great impact on the thinking of students in a variety of ways, and may become barriers to the development of critical thinking skills (Fabian, 2014). However, this does not mean that teaching critical thinking is invaluable in non-Western contexts. There is growing evidence that the adaptability of students to different educational contexts allows non-Western students to be suited for critical thinking the same as their Western peers (Jones, 2005). Thus, the problem for the educator is how and when to introduce critical thinking, and not whether critical thinking has value for people belonging to other cultures, or has not got any value for them (Ennis, 1996).

Although research is still seeking evidence for cultural differences in critical thinking, the only valid statement we can make at this stage of our understanding is that there might be differences in the way and in the extent different cultural contexts encourage or discourage critical thinking among individuals.

In this issue, I acknowledge Merrifield's (2018) results, which emphasise the need to include an awareness of cultural location in understanding, developing and assessing critical thinking in the classroom. I claim that understanding the critical thinking behaviour of an individual or a group of students requires the understanding of the cultural context they have experienced and the thinking styles and behavioural manners they have acquired informally or formally in their original context.
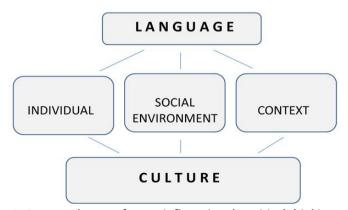
OVERT AND COVERT FACTORS FOR ANALYSIS

Figure 3. Overt and covert factors influencing the critical thinking process

Finally, I would like to draw the attention to the role of language in measuring and developing critical thinking in education. Critical thinking occurs as a covert cognitive process overtly manifested in behavioural manners. Behavioural manners comprise both verbal and non-verbal behaviours. The same way, one verbalises his agreement with others, or uses the language to understand the evidence read or heard, expresses his own ideas, argues for or against a thought, or makes his conclusions clear to others, on a particular cultural attitudinal impact one might decide not to do all these, instead, one might show non-verbal signals of obedience, passivity or silence in the classroom. Thus, observations that rely on the overt signals, such as language, of critical thinking in the performance of the individual or of the student group, might easily misinterpret these signals when relating them to the covert cognitive process. Since many of the critical thinking-related empirical data are gathered through observation, and many of the research methods apply language as vehicles of data collection, the question how much importance language use-related traditions or language competencies play in formulating the research results is still unclear.

The same applies to the language competences of the individual. The growing body of foreign language education related classroom research suggests an increase in the interest of teachers and educators in the efficiency, the barriers or the potentials of developing critical thinking in the language classroom. Some research suggests that the lack of language competencies in revealing and expressing critical thinking related ideas in a group might hinder the critical thinking of the individual or the process within the group (Okada, 2017). It means that not only the skills, the abilities and the dispositions or affective factors, but also the language competencies of the individual are equally fundamental for the practice of critical thinking.

One might claim that the importance of language in critical thinking is not new. The idea appears to have been with us for centuries. The philosophical school of critical thinking has been concerned with the 'good' ways of the linguistic formulation of the thought for centuries. However, the question how to formulate the critical thought in the language of a culture where critical thinking is not in harmony, or is even in conflict with the traditional cultural values requires professional effort not only at the level of the individual, but also at the level of group conversations as well, incorporating input in both written and oral language forms. Professionals working on the improvement of language competencies will also need support in handling opposition or bias, and might be challenged in a variety of other ways in how to deal with traditional beliefs, cultural practices and values during the process. Research on the relationship of language competence development and the change in cultural beliefs, practices and values would also provide valuable implications for critical thinking development planning and practices in the classroom.

4. Conclusion

Kumaravadivelu (2003) claims that classroom behaviors of L2 learners are the result of a complex interface between several social, cultural, economic, educational, institutional, and individual factors. It is almost impossible to control a multitude of variables in order to isolate culture as the sole variable that can be empirically studied to determine its impact on classroom behavior.

I have come to a very similar conclusion in my researching the concept of critical thinking in education and education research. My claim is that critical and non-critical thinking instances of the learner are the results of a complex interface between several social, cultural, educational, institutional, as well as various individual factors comprising emotions. Thus, it seems difficult to control a multitude of variables in order to isolate one or the other as the sole variable that can be empirically studied to determine its impact on critical thinking. The overt and covert factors influencing critical thinking are activated at three levels (Figure 3), and no one level can be singled out as the only appropriate level of analysis of critical thinking instances.

As a conclusion, I claim that understanding critical or non-critical thinking instances in the classroom will need a more complex approach of analysis. This approach incorporates the level of the

language, the level of the individual in a particular environment and the level of the background culture, which influence the process. The critical thinking instances are formed in the intersection of the variables incorporated in our model, which we call the MLM of critical thinking.

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