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Critical Thinking as a Crucial Issue in Education: The Effect of the Teacher`s Performance and Cross-Culture Response

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ABSTRACT: *The movement to the information age has focused attention on good thinking as an important element of life success (Huitt, 1995; Thomas & Smoot, 1994). These changing conditions require new outcomes, such as critical thinking, to be included as a focus of schooling. Old standards of simply being able to score well on a standardized test of basic skills, though still appropriate, cannot be the sole means by which we judge the academic success or failure of our students.The purpose of this brief overview is to review what we know about critical thinking, how it might be differentiated from creative thinking, and to suggest future research and implementation activities.*

KEY WORDS: appropriate, implementation, critical thinking, basic skills.

INTRODUCTION

The definition of critical thinking has changed somewhat over the past decade. Originally the dominion of cognitive psychologists and philosophers, behaviorally-oriented psychologists and content specialists has recently joined the discussion. The following are some examples of attempts to define critical thinking:

- ...the ability to analyze facts, generate and organize ideas, defend opinions, make comparisons, draw inferences, evaluate arguments and solve problems (Chance,1986, p. 6);
- ...a way of reasoning that demands adequate support for one's beliefs and an unwillingness to be persuaded unless support is forthcoming (Tama, 1989, p. 64);
- ...involving analytical thinking for the purpose of evaluating what is read (Hickey, 1990, p. 175);
- ...a conscious and deliberate process which is used to interpret or evaluate information and experiences with a set of reflective attitudes and abilities that guide thoughtful beliefs and actions (Mertes,1991, p.24);
- ...active, systematic process of understanding and evaluating arguments. An argument provides an assertion about the properties of some object or the relationship between two or more objects and evidence to support or refute the assertion. Critical thinkers acknowledge that there is no single correct way to

understand and evaluate arguments and that all attempts are not necessarily successful (Mayer & Goodchild, 1990, p. 4);

- ...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 (Scriven & Paul, 1992);
- Reasonable reflective thinking focused on deciding what to believe or do (Ennis, 1992).

Contributions to our thinking about critical thinking

Each of the separate groups has made significant contributions to our understanding of critical thinking. Contributors from the area of cognitive psychology (such as Paul Chance and Richard Mayer) delineate the set of operations and procedures involved in critical thinking. They work to establish the differences between critical thinking and other important aspects of thinking such as creative thinking.

Contributors from the area of philosophy (such as Richard Paul) remind us that critical thinking is a process of thinking to a standard. Simply being involved in the process of critical thinking is not enough; it must be done well and should guide the establishment of our beliefs and impact our behavior or action.

Contributors from the area of behavioral psychology help to establish the operational definitions associated with critical thinking. They work to define the subtasks associated with final outcomes and the methodologies teachers can use to shape initial behaviors towards the final outcomes. They also demonstrate how educators can establish the proper contingencies to change behavior.

Content specialists (such as Hickey and Mertes) demonstrate how critical thinking can be taught in different content areas such as reading, literature, social studies, mathematics, and science. This is an especially important contribution because it appears that critical thinking is best developed as students grapple with specific content rather than taught exclusively as a separate set of skills.

How is critical thinking related to Bloom et al.'s Taxonomy of the Cognitive Domain?

Bloom and his colleagues (1956) produced one of the most often cited documents in establishing educational outcomes: The Taxonomy of the Cognitive Domain. They proposed that knowing is actually composed of six successive levels arranged in a hierarchy: Knowledge, Comprehension, Application, Analysis, Synthesis, Evaluation. Research over the past 40 years has generally confirmed that the first four levels are indeed a true hierarchy. That is, knowing at the knowledge level is easier than, and

subsumed under, the level of comprehension and so forth up to the level of analysis. However, research is mixed on the relationship of synthesis and evaluation; it is possible that these two are reversed or they could be two separate, though equally difficult, activities (Seddon, 1978).

Synthesis and evaluation are two types of thinking that have much in common (the first four levels of Bloom's taxonomy), but are quite different in purpose. Evaluation (which might be considered equivalent to critical thinking as used in this document) focuses on making an assessment or judgment based on an analysis of a statement or proposition. Synthesis (which might be considered more equivalent to creative thinking) requires an individual to look at parts and relationships (analysis) and then to put these together in a new and original way.

There is some evidence to suggest that this equivalent-but-different relationship between critical/evaluative and creative/synthesis thinking is appropriate. Huitt (1992) classified techniques used in problem-solving and decision-making into two groups roughly corresponding to the critical/creative dichotomy. One set of techniques tended to be more linear and serial, more structured, more rational and analytical, and more goal-oriented; these techniques are often taught as part of critical thinking exercises. The second set of techniques tended to be more holistic and parallel, more emotional and intuitive, more creative, more visual, and more tactual/kinesthetic; these techniques are more often taught as part of creative thinking exercises. This distinction also corresponds to what is sometimes referred to as left brain thinking (analytic, serial, logical, objective) as compared to right brain thinking (global, parallel, emotional, subjective) (Springer & Deutsch, 1993).

One problem with the definitions provided above (which is common to most definitions from philosophers such as Paul and Scriven), is that of labeling "good" thinking as critical thinking. This implies that creative thinking is a component of critical thinking rather than a separate, though related, thinking process with its own standards of excellence. To classify all "good" thinking as critical thinking is to expand the definition beyond its usefulness and obfuscates the intended concept. It also has the danger of overselling the concept and having both educators and the general public reject the benefits of focusing on critical thinking. We need to recognize that "good" thinking requires both critical and creative thinking. For example, Duemler and Mayer (1988) found that when students used techniques associated with reason and logic as well as creativity and divergence, they were more successful in problem solving.

A second problem common to several definitions is that of confusing attitudes and dispositions towards thinking with the actual thinking process (i.e., emotion versus cognition; feeling versus reasoning.) For example, Tama (1989) includes an "an unwillingness to be persuaded unless [adequate] support is forthcoming" (p. 64) while Mertes (1991) includes using "reflective attitudes" in his. This makes it very difficult to separate out the cognitive processing skills from the attitudes or dispositions to use those skills. It is likely that two separate educational methods are necessary to impact these very different desired outcomes.

Proposed definition

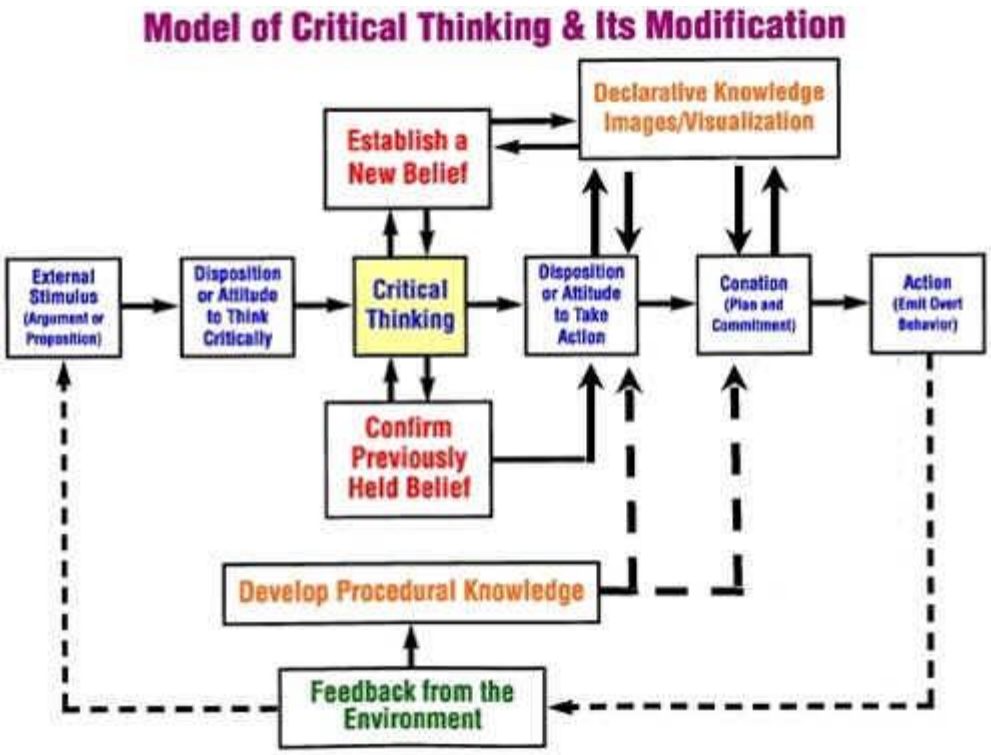
I believe Ennis' (1992) definition comes closest to the mark of a useful generic definition for critical thinking. I offer yet another definition only to more closely align the concept to the evaluation level as defined by Bloom et al. (1956) and to include some of the vocabulary of other investigators. The following is my proposed definition of critical thinking:

- Critical thinking is the disciplined mental activity of evaluating arguments or propositions and making judgments that can guide the development of beliefs and taking action.

It is important to have a definition of critical thinking so that it can be compared and contrasted with other forms of thinking (i.e., non-critical thinking). For example, non-critical thinking can take the form of habitual thinking (thinking based on past practices without considering current data); brainstorming (saying whatever comes to mind without evaluation); creative thinking (putting facts, concepts and principles together in new and original ways); prejudicial thinking (gathering evidence to support a particular position without questioning the position itself); or emotive thinking (responding to the emotion of a message rather than the content.) Each of these types of thinking may have advantages and disadvantages relative to a particular context. There are situations when each might be more appropriate while the other types would be less appropriate.

Model of critical thinking and its modification

The following is a proposed model of critical thinking:



This model proposes that there are affective, conative, and behavioral aspects of critical thinking that must be considered in addition to the cognitive processes involved. This supports the definitions of Mertes (1991), Scriven and Paul (1992), and Ennis (1992) that include some component of beliefs and behavior. First, a stimulus presents an argument or proposition that must be evaluated. There is an affective disposition to use critical thinking that must activate the critical thinking processes if it is to take place. As a result of critical thinking a previously held belief is confirmed or a new belief is established. This will be established as a component of declarative memory in its semantic form although there may be episodic information associated with it. There may also be images or visualizations formed or remembered as part of the critical thinking process.

There is then an affective disposition to plan and take action in order for the critical thinking to act as a guide to behavior. The conative components of goal-setting and self-regulation must be activated in order to develop and implement a plan of action. As action is taken it results in feedback from the environment and a corresponding increase in procedural knowledge. This new learning is then available as either

necessary corrective action is taken to guide action toward the desired goal based on beliefs or a new situation presents itself that requires additional critical thinking.

A complete critical thinking program will successfully deal with each of the components in the model. As stated previously, the most appropriate teaching methods are possibly different for each component. For example, if one is most interested in impacting declarative knowledge (facts, concepts, principles, etc. that are stored in semantic and episodic memory), the most appropriate teaching method is probably some form of didactic, explicit, or direct instruction. On the other hand, if the focus is on procedural knowledge it is likely that modeling and/or personal experience would be more appropriate teaching methods. Likewise, if one were trying to impact the memory of images or visualizations, then modeling, active visualizations, or working with pictures might be more appropriate. Attitudes are probably impacted most directly by socialization and the teaching method of cooperative learning. Learning the process of critical thinking might be best facilitated by a combination of didactic instruction and experience in specific content areas. Impacting conation might best be done through goal-setting exercises and action learning. Finally, overt behavior and learning to use feedback might best be accomplished using positive and negative reinforcement.

Interaction, Achievement and Teacher`s Expectations

Though classroom instructional strategies should clearly be based on sound science and research, knowing when to use them and with who is more of an art. In The Art and Science of Teaching: A Comprehensive Framework for Effective Instruction, author Robert J. Marzano presents a model for ensuring quality teaching that balances the necessity of research-based data with the equally vital need to understand the strengths and weaknesses of individual students. He articulates his framework in the form of 10 questions that represent a logical planning sequence for successful instructional design:

Clear strategies carried out by the students and supervised by the teacher may put the students` performance on the correct track. For instance, it is commonly believed that Nigerian students perform very poorly in the English language. Many reasons adduced to be the causative variables for students' poor performance in the English language are located away from the students themselves. What the above scenario portends is that no effort has been made to find out the strategies which the students themselves use in their efforts to learn the English language; it also implies that no effort has been made to find out the relationship between such strategies and the level of students' performance in the target language. The problem which this study addressed was not only to evaluate the language learning strategies which the sampled study population use in their efforts to learn English, but also to determine the extent to which their mean achievement scores in English depend on their use of various language learning strategies. The study was carried out using a descriptive survey research design. Its population consisted of Senior Secondary School (SSS) form II students in three states of south-eastern Nigeria. Random sampling technique was used to select a total of one

thousand, four hundred and one (1401: 747 = males, 654 = females) students used for the study. Two sets of instrument were used to collect data for the investigation: appraisal instrument (cloze test), and questionnaire. Two research questions and corresponding two null hypotheses were formulated to guide the study. Results of the study revealed that 1) the greatest proportion of the Igbo learners of English in SSS II (84.3%) made use of socio-affective language learning strategy, while cognitive strategy had the lowest proportion of users (50.9%); 2) there was a significant difference, in the English language performance, between the users and non-users of the various language learning strategies.

Cross-cultural response to failure:

The teacher`s performance and expectations may be faced by other aspects that need remedy, such as negative cross-cultural responses. A related case view that, under the current international background, more and more enterprises begin to hire employees from different countries, which is more common in international enterprises. Employees from different cultural backgrounds have different understandings and perceptions about management and leadership, and they also have different perspectives and behaviors. In order to improve the effectiveness of management, enterprises must face the challenges of cultural differences in human resource management, and must seriously consider and solve the problems caused by cross-cultural factors.

Employee incentive is an important part of human resource management in enterprises, which means the incentive to motivate employees. In other words, it is to mobilize the enthusiasm and initiative of employees in a variety of ways, so as to finish the task and realize the goal of enterprises with full of quantity and quality. Effective incentive mechanism can ignite the enthusiasm of employees and stimulate their inner potential, so that they can make unremitting efforts and dedicate themselves to the realization of enterprises' goals.

CONCLUSION

Variety of attempts are presented to define critical thinking most obviously through systematic process of understanding and evaluating, added to that, the intellectually disciplined process, as explained above. Critical thinking is one of the most worthwhile things we can pursue in our classrooms. critical thinking ability had a greater association with real life decisions, and it added significantly to explained variance, beyond what was accounted for by intelligence alone." "Critical thinking is the foundation of strategic thinking, creative thinking, good judgments and good decision making. This paper discusses the significant contributions to our understanding of critical thinking, and how critical thinking is related to the Cognitive Domain. A

proposed model of critical thinking and its modification is presented to illustrate and interpret the concepts discussed. The teacher`s performance and expectations may be faced by other aspects that need remedy, such as negative cross-cultural responses.

References

Blakey, M. (1970). The relationship between teacher prophesy and teacher verbal behavior and their effect upon adult student achievement. *Dissertation Abstracts International, 31*, 4615A. (UMI No. 4615A).

Bloom, B. S. (1976). *Human characteristics and school learning*. New York: McGraw-Hill.

Bloom, B. S. (1984). The search for methods of group instruction as effective as one-to-one tutoring. *Educational Leadership, 41*(8), 4–18.

Cornbleth, C., Davis, O., & Button, C. (1972). Teacher–pupil interaction and teacher expectations for pupil achievement in secondary social studies class. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago.

Darnell, D. (1970). "Clozentropy": A procedure for testing English language proficiency of foreign students. *Speech Monographs, 37*, 36–46.

Merrett, F., & Tang, W. M. (1994). The attitudes of British primary school pupils to praise, rewards, punishments and reprimands. *British Journal of Educational Psychology, 64*, 91–103.

Moriarity, B., Douglas, G., Punch, K., & Hattie, J. (1995). The importance of self-efficacy as a mediating variable between learning environments and achievement. *British Journal of Educational Psychology, 65*, 73–84.

Hattie, J., Biggs, J., & Purdie, N. (1996). Effects of learning skills interventions on student learning: A meta-analysis. *Review of Educational Research, 66*(2), 99–136.

Grant, H., & Dweck, C. (2001). Cross-cultural response to failure: Considering outcome attributions with different goals. In F. Salili, C. Chiu, & Y. Hong (Eds.), *Student motivation: The culture and context of learning* (pp. 203–219). New York: Kluwer Academic/Plunum.

ophy, J., & Good, T. (1974). *Teacher–student relationships: Causes and consequences*. New York: Holt, Rinehart, & Winston.

Scriven and Paul (1992).

Spinger and Duetch (1988).