

Classroom Questioning and Critical Thinking

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Abstract:

In the globalized environment, the students must possess the capacity to make use of the extensive amount of information which is encountered every day. With easy access to information the importance of asking questions has become increasingly obvious. An increasingly complex society requires individuals to base their judgments and decisions on careful evaluation of evidence. Coupled with expectations to make timely and oftentimes immediate decisions, this is especially salient given the exponential amount of available information and individuals' need to reflect on what they decide to believe or to do.

Education requires a forward-looking approach that includes the fundamentals of knowing how to learn and how to think clearly. One of the most important thing a teacher can do in the classroom is to make students aware of the processes involved in their own thinking. Students should be able to examine what they are learning about and, raise questions, accept challenges, find solutions that are not immediately apparent, explain concepts, justify their reasoning, and seek information. Good critical thinkers raise vital questions, gather and assess relevant information, arrive at well-reasoned conclusions, remain open minded and communicate effectively with others to arrive at a solution. Students should be able to examine what they are learning about and, raise questions, accept challenges, find solutions that are not immediately apparent, explain concepts, justify their reasoning, and seek information

If teachers are not educated on how to develop the thinking skills themselves, they are unable to teach their students how to develop these skills. Asking good questions is an art that can be learned and refined with practice and with conscious effort.

This paper highlights my understanding of critical thinking, the role of questioning and the strategies which can be used to enhance critical thinking in the classroom.

Key words: critical thinking, questioning skills.

Critical thinking

A variety of definitions have been formulated by theorists, and it is important that these diverse constructions be valued to make important features of critical thinking apparent. Most of the understanding of critical thinking comes from the field of philosophy and psychology. Philosophers tend to conceptualize critical thinking in an abstract way and focuses on the qualities and characteristics of a critical thinker rather than the capacity for certain behaviours or actions. In contrast, the psychological perspective focuses on how people think and the mechanisms they use. The psychological perspective emphasizes the importance of skills and their utilization in problem-solving in practice. The contributions of Dewey, Locke, Ennis, Facione, Halpern and Kuhn all suggest that critical thinking is necessary and important aspect of education. Their definitions point towards critical thinking being a 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.

Although a variety of definitions for critical thinking have been offered, most include the underlying principles with their reference to the use of cognitive skills or strategies that increase the probability of desirable outcomes. For that reason, it is purposeful, reasonable, and goal directed. Educators are required to devise activities that stimulate and inspire the skill of critical thinking in learners through repeated

practice to become an automatic ability within the individuals. Critical thinking is an active process, and the instructional strategies represent a form of active learning. There are several different instructional strategies that can be used with learners to promote critical thinking skills. Some of the strategies can be used simultaneously. For example, case studies, questioning techniques and discussion. When teaching critical thinking skills educators need to expose their learners to situations and experiences where they can exercise the principles of critical thinking.

Effective questions can be a means to engage students in the learning process and enable them to take charge of their own learning. Students engage with a wide variety of sources of information and evidence and developing skills to make judgements about this evidence to form own views and to present them clearly is essential. Not all sources of information are equally credible or relevant. Questioning and examining helps to eliminate irrelevant information and prepare the ground for analysing and evaluating sources which help us navigate our way through an information-rich world.

The next section focuses on questioning as a technique to enhance critical thinking.

Questioning to enhance critical thinking

Questions may be a regular part of a teacher's practice, however there is a big difference between using questions to check students for understanding and using questions to frame a teaching and learning inquiry (Grant, 2013). One of the important aim as educators should be to teach students to think. One method is the use of effective questioning. This piques interest, curiosity, and involvement of the learners. Questions enable the learner to negotiate meaning through interaction with others in meaningful, thought-provocative discussions. It helps in generating to new insights, discussion and promote exploration of subject matter. Effective questions asked in a psychologically safe learning environment support student learning by probing for understanding and enhancing confidence. Poor questions can stifle learning by creating confusion, intimidating students, and limiting creative thinking.

Various taxonomies are present to assist student teachers to develop their questions. A taxonomy provides a framework for a variety of questions, and advocates what should be done to broaden them. However, the construction of a good question classification system does not guarantee that teachers will automatically ask good question. Teachers need to be instructed in the use of the system before questioning techniques can be improved. The widely used taxonomy by Benjamin Bloom (1956), later modified by Anderson and Krathwohl (2001) addresses various levels of cognitive processes from recall of facts to processes that require critical thinking. Paul & Elder (2005) provided a taxonomy which can serve as a guideline to promote and develop reasoning and critical thinking skills. Questions may address various levels of cognition ranging from mere recall of memorized facts to processes that require deep critical thinking. (Wilen, 1991) Questions can address various cognitive domains with the intent of achieving specific learning outcomes. Each domain is further categorized as lower or higher order in terms of cognitive difficulty. Asking good questions is central to learning and sometimes can be more important than getting the answers, particularly when the questions encourage students to think critically. Skill in the art of questioning lies at the basis of all good teaching. The next section provides a preview of strategies which can be used for formulating questions in the classroom.

Strategies for formulating questions and the role of educators

There are different strategies which teachers can use in the classroom to promote the development of critical thinking. By making use of the strategies, teachers increase their repertoire of questioning techniques, and the quality of instruction can be significantly improved. The commonly used strategies include the use of Socratic questioning, question circles and use of question stems.

Socratic method of questioning promotes discussion through inquiry by use of probing questions. In questioning circles, students move from superficial responses to deeper discussions of the content. As students engage in critical thinking, they can view situations from multiple perspectives and apply solid

reasoning skills to decision making. Careful cultivation of critical thinking produces individuals who engage in creative, disciplined, and reflective thinking as a regular practice. Question stems can be developed as per the different critical thinking skills such as skill of interpretation, analysis, synthesis and evaluation which can promote student engagement. Few common question stem examples which can be used by teachers for the different skills are as follows. For the skill of interpretation questions such as What does this mean? how should we understand that (e.g., what he or she just said)?, What is the best way to characterize/categorize/classify this? , In this context, what was intended by saying/doing that? can be asked. For the skill of analysis, the teacher can ask questions such as What is your conclusion? what assumptions must we make to accept that conclusion? For the skill of synthesis, what would happen if.....? , How can you improve.....? For the skill of evaluation, questions such as how strong are those arguments? how confident can we be in our conclusion, given what we now know?

The above question stems can be used by teachers in the classroom at varying intervals depending on the content to be taught. By varying question stems, teachers can sustain engagement and promote critical thinking.

When teachers plan their questions, it is important that there is space for questions which encourage discussion and assist learners to draw deeper connections and generate critical thinking in students.

Conclusion

It is important to realize that the process of encouraging critical thinking is a slow, evolutionary one- one that proceeds on many fronts simultaneously. Students will need time and encouragement to come to terms in being critical thinkers. A sensitivity to the many ways we can help students to make their thinking more clear, accurate, consistent, relevant and fair is required. Constructing lessons with critical thinking infused into content instruction means “providing continuing instruction in the thinking skills, strategies, and dispositions”

While the ability to think critically is important, the actions that result from critical thinking and subsequent reflection on the appropriateness and relevance of those actions are equally important. Teaching and learning is a continuing process, the level of the questions asked by teachers and students should be evaluated and improved in the classroom. To achieve this aim, importance should be attached to questioning exercises and activities in teacher training programmes. Careful cultivation of critical thinking produces individuals who engage in creative, disciplined, and reflective thinking as a regular practice.

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