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Critical Thinking Requires Critical Questioning

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Just what is a critical thinker? According to Richard Paul (1990), a critical thinker is someone who is able to think well and fair mindedly about his or her own beliefs and viewpoints as well as those which are diametrically opposed. The critical thinker does not just think about these beliefs and viewpoints, but explores and appreciates their adequacy, cohesion, and reasonableness. Attitudes and passions are included. To become a critical thinker is not to be the same person you are now, but only with better abilities; it is to become a different person (p. iii).

Critical thinking is expected of students, but it does not automatically and quickly develop of itself. This skill must be developed, however; and it requires a great deal of effort on the part of teachers to help students learn to think critically. In order for students to develop these skills, teachers must learn to incorporate critical questioning into their classes. The responsibility for developing these skills then shifts from the student to the teacher as questioning becomes the guiding force. It is the teachers, not textbooks, that have the power to shape students' ability to think, which means that instructors must be prepared to lead the students toward critical thinking skills (Chalupa & Sormunen, 1995).

Some Erroneous Assumptions

Critical, or Socratic questioning, has come under fire with charges of it being a chaotic free-for-all, a type of classroom activity where teachers can "wing it" and not prepare for class, and a teaching

strategy which requires no talent or preparation. These myths must be dispelled.

Socratic questioning and discussion is, in fact, structured, has distinctive goals, and has ways to achieve these goals, as described below. Teachers must be better prepared in their discipline and the unit of instruction, because the students may, in their discourse, take a different path for discussion than what the teacher had planned.

Socratic Questioning

Socratic questioning is at the heart of critical thinking; it is more than eliciting a one-word response or an agreement/ disagreement from students. In a short sentence, Socratic questioning requires students to make assumptions, distinguish between relevant and irrelevant points, and explain points. It can be highly elaborated or undeveloped, and it may be mono- or multi-logical. Socratic instruction can take many forms. Paul (1990) states that Socratic questioning:

- raises basic issues;
- probes beneath the surface of things;
- pursues problematic areas of thought;
- helps students discover the structure of their own thought;
- helps students develop sensitivity to clarity, accuracy, and relevance;
- helps students arrive at a judgment through their own reasoning;
- and helps students note claims, evidence, conclusions, questions-at-issue, assumptions, implications, consequences, concepts, interpretations, points of view (p. 270).

These are the elements of critical thought.

Socratic questioning, however beneficial, must be learned-both by teachers and by students. It involves more than eliciting one-word responses, and it requires students to make assumptions. The following taxonomy, created and reported by Paul, explains the Socratic questioning format.

A Taxonomy of Socratic Questions

To make the Socratic questioning method readily usable by teachers, identifiable categories of questions have been established (Paul, 1990). These categories are as follows.

- questions of clarification - asking for verification, additional information, or clarification of one point or main idea, with students expounding on an opinion, rephrasing the content, or explaining a particular statement.
- questions that probe assumptions - asking for clarification, verification, explanation, or reliability.
- questions that probe reasons and evidence - requesting additional examples, evidence, reasons for making statements, adequacy for reasons, process which lead to this belief, and/or anything which might change the student's mind.
- questions about viewpoints or perspectives - searching for alternatives to a particular viewpoint, how others might respond to questions, or a comparison of similarities and differences between and among viewpoints.
- questions that probe implications and consequences - describing and discussing implications of what is said, results, alternatives, or cause-and-effect of an action.
- questions about the question - breaking the question into mini-questions and single concepts or determining whether an evaluation is necessary.

Socratic Questioning is Not Easy

Socratic questioning is not easy, and, in fact, places pressure and responsibility on the teacher. The teacher must be well prepared and ready to incorporate a variety of strategies based on student input. This type of discussion requires that teachers develop the art of questioning, develop a working relationship with the various types of questions, and develop a sensitivity to when to ask which questions.

Socratic Questioning Leads to Controversy

Critical questioning does lead to controversy, and it is also a means of bypassing the sponge model of education. Classroom controversy contributes to critical thinking, challenges the sponge model, and serves as a motivational device for encouraging students to think critically (Browne & Keeley-Vasudeva, 1992). Browne and Keeley-

Vasudeva also point out that to challenge the sponge model is commonplace, to combat it is exceptional.

If we support the idea that controversy contributes to the effectiveness of critical questioning and critical thinking, then what is the issue at hand about encouraging controversy? Some people are uncomfortable with controversy because it is almost like replacing the "comfortable old shoe" with a brand new pair. Some educators will tell you they have to sacrifice course content to use this questioning strategy while others say they cannot use it because there is no instructor's manual. This idea of controversy does challenge a teacher's skills; but controversy can, should, and will be a part of the Socratic questioning technique.

Here's What We See in Education

Educators voice displeasure with the sponge model, but praise development of critical thinking skills and rate this skill highly. Yet, we seem - in large measure - to pay little attention to these skills (Browne & Keeley-Vasudeva, 1992). The disparity between what educators say they want and what they strive to get lies in three areas: lack of skills and presence of disparaging/attitudes regarding critical questioning, lack of knowledge of the component parts of critical questioning, and a belief that osmosis works with regard to critical questioning and critical thinking. Paul has provided a lengthy discussion and examples in his book (1990).

Examples of Critical Questioning

As an example of critical questioning, assume the following situation. You are teaching your students to evaluate a WWW site, and your teaching strategies range from straight lecture, to small group discussion, to Socratic questioning. The following questions would be Socratic in nature.

- How do we determine a site's organizational affiliation?
- How does this site's affiliation relate to the site's credibility?
- Who created this Web site?
- Ashley mentioned copyright concerns. How does this relate to our discussion of evaluation of Web sites?
- Are you assuming all sites are reliable, accurate, and correct?
- You seem to be assuming that all Web sites with the edu. and org.

- domains are credible. Is this always the case?
- What would be an example of a credible Web site? Why?
 - How would you respond to a person saying that material found on the Web is "out there" and in the public domain?
 - How would others, such as publishers or authors of copyrighted materials, view your using materials because they are "out there"?

Conclusion

Critical thinking is based on critical questioning. By being well prepared with the discipline content and knowledgeable in the use of critical questioning, today's teacher can help students become critical thinkers. It is through understanding, preparation, and practice that instructors can be ready to meet this challenge.

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