

Critical Thinking: Competency Standards Essential for the Cultivation of Intellectual Skills, Part 1

By Linda Elder and Richard Paul

Much lip service is given to the notion that students are learning to think critically. Studies consistently show that though faculty say that critical thinking is important to their instruction, they have difficulty articulating a clear conception of it and demonstrating how they foster it (Gardner 1995; Paul, Elder, & Bartell, 1997).

In order for students to learn critical thinking, instructors need to explicitly teach it through focused instruction. And standards for doing this are essential. Thus in the next few columns we focus on some essential critical thinking competency standards. In this first column of the series, we essentially argue for the importance of critical thinking to instruction. In the several columns that follow, we provide examples of the competencies (Paul & Elder, 2007).

These competencies serve as a resource for teachers, curriculum designers, administrators, and accrediting bodies. The use of these competencies across the curriculum will ensure that critical thinking is fostered in the teaching of any subject. Large groups of students can be expected to achieve these competencies only when most faculty within a particular institution are fostering critical thinking standards in their subject(s). It is unreasonable to expect students to learn critical thinking at any substantive level through one or a few semesters of instruction. However, basic critical thinking competencies can be achieved by most students. The most basic and important competencies must be reinforced across the curriculum. Some competencies might well be taught in a more restricted way.

As you read this series of columns, it should become clear that any well-educated student or citizen needs the abilities and dispositions fostered through the critical thinking competencies articulated herein. To transform classrooms into communities of thinkers, one must take a long-term view. Educators need to reflect widely and broadly as well as to be systematic, committed, and visionary. The task is challenging indeed. But it is a challenge ignored at the risk of the well-being of both students and that of the entire society.

Assessing Students' Critical Thinking Abilities

The critical thinking competency standards articulated in this series exemplify the standards needed for assessing students' critical thinking abilities. They enable administrators, teachers, and faculty to determine the extent to which students are reasoning critically within any subject or discipline. These standards include outcome measures useful for teacher assessment, self-assessment, as well as accreditation documentation. In short, these standards include indicators for identifying the extent to which students are using critical thinking as the primary tool for learning.

By internalizing the full range of critical thinking competencies, students will become more self-directed, self-disciplined, self-monitored thinkers. They will develop their ability to

- raise vital questions and problems (formulating them clearly and precisely),
- gather and assess relevant information (using abstract ideas to interpret it effectively and fairly),

- come to well-reasoned conclusions and solutions (testing them against relevant criteria and standards),
- think open-mindedly within alternative systems of thought (recognizing and assessing, as need be, their assumptions, implications, and practical consequences), and
- communicate effectively with others in figuring out solutions to complex problems.

Students who internalize these competency standards will come to see that critical thinking entails effective communication and problem-solving skills as well as a commitment to overcoming one's native egocentric and sociocentric tendencies.

It is important to note that, only when instructors understand the foundations of critical thinking can they effectively teach for it. The simple truth is that teachers are able to foster critical thinking only to the extent that they themselves think critically. This may be the single most significant barrier to student achievement of critical thinking competencies. For teachers to aid students in becoming deep thinkers, they must themselves think deeply. For teachers to aid students in developing intellectual humility, they must themselves have developed intellectual humility. For teachers to foster a reasonable, rational, multilogical worldview, they must themselves have developed such a worldview. In short, teaching for critical thinking presupposes a clear conception of critical thinking in the mind of the teacher.

The Concept of Critical Thinking

The concept of critical thinking can be expressed in a variety of ways, depending on one's purpose (though, as with every concept, its essence is always the same). A definition most useful in assessing critical thinking abilities is as follows: Critical thinking is the process of analyzing and assessing thinking with a view to improving it. Critical thinking presupposes knowledge of the most basic structures in thinking (the elements of thought) and the most basic intellectual standards for thinking (universal intellectual standards). The key to the creative side of critical thinking (the actual improving of thought) is in restructuring thinking as a result of analyzing and effectively assessing it.

As instructors foster critical thinking skills, it is important that they do so with the ultimate purpose of fostering traits of mind. Intellectual traits or dispositions distinguish a skilled but sophisticated thinker from a skilled fair-minded thinker. Fair-minded critical thinkers are intellectually humble and intellectually empathic. They have confidence in reason and intellectual integrity. They display intellectual courage and intellectual autonomy.

It is possible to develop some critical thinking skills within one or more content areas without developing critical thinking skills in general. The best teaching approach fosters both, so that students learn to reason well across a wide range of subjects and domains.

Critical Thinking and Learning

The key insight into the connection of learning to critical thinking is this: The only capacity we can use to learn is human thinking. If we think well while learning, we learn well. If we think poorly while learning, we learn poorly. To learn a body of content, say an academic discipline, is equivalent to learning to think within the discipline. Hence to learn biology, one has to learn to think biologically. To learn sociology, one has to learn to think sociologically.

Students need to think critically to learn at every level. Sometimes the critical thinking required is elementary and foundational. For example, in studying a subject there are foundational concepts that define the core

of the discipline. To begin to internalize understanding one needs to give voice to those basic concepts, that is to state what the concept means in one's own words; to elaborate what the concept means, again in one's own words; and then to give examples of the concept from real-life situations.

Without critical thinking guiding the process of learning, rote memorization is likely to become the primary recourse, with students forgetting at about the same rate they are learning and rarely, if ever, internalizing powerful ideas. For example, most students never take genuine ownership of the concept of democracy. They memorize phrases like, "a democracy is government of the people, by the people, for the people." But they don't come to understand what such a definition means. And when they don't know what a definition means, they cannot elaborate or exemplify its meaning.

Through critical thinking, then, one is able to acquire knowledge, understanding, insights, and skills in any given body of content. To learn content it is essential to think analytically and evaluatively within that content. Thus critical thinking provides tools for both internalizing content (taking ownership of content) and assessing the quality of that internalization. It facilitates constructing the system (that underlies the content) within the mind, to internalize it, and to use it reasoning through actual problems and issues.

Critical Thinking and the Educated Person

Developing critical thinkers is central to the mission of all educational institutions. Ensuring that students learn to think critically and fairly-mindedly also ensures that students not only master essential subject matter but become effective citizens, capable of reasoning ethically and acting in the public good.

Education, properly so called, alters and reworks the mind of the student. Educated persons function differently from uneducated persons. They are able to enter and intellectually empathize with alternate ways of

looking at things. They change their minds when evidence or reasoning requires it. They are able to internalize important concepts within a discipline and interrelate those concepts with other important concepts both within and among disciplines. They are able to reason well enough to think their way through complex problems. If students are to become educated persons, teachers must place thinking at the heart of the curriculum; they must require students to actively use their thinking to work ideas into it.

Conclusion


In this column we have introduced the concept of critical thinking competency standards and argued for the importance of critical thinking to education. In the next few columns, we will detail some of the competency standards by providing the relevant critical thinking principle, performance indicators and dispositions, and expected outcomes.

References

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