

A Guide for Educators to

CRITICAL THINKING COMPETENCY STANDARDS

Standards, Principles, Performance
Indicators, and Outcomes With a
Critical Thinking Master Rubric

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Letter to the Reader

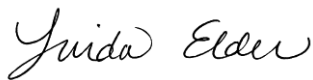
Much lip service is given to the notion that students are learning to think critically. A cursory examination of critical thinking competency standards (enumerated and elaborated in this guide) should persuade any reasonable person familiar with schooling today that they are not. On the other hand, a reasonable person might also conclude that no teacher in any single subject could teach all of these standards. We agree.

The critical thinking competency standards articulated in this guide 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 to all students at every grade level. We can expect large groups of students to achieve these competencies only when most teachers within a particular institution are fostering critical thinking standards in their subject(s) at their grade level. We cannot expect students to learn critical thinking at any substantive level through one or a few semesters of instruction.

Viewed as a process covering twelve to sixteen years and beyond, and contributed to by all instruction, both at the K-12 as well as the college and university level, all of the competencies we articulate, and more, can be achieved by students. We recommend therefore that those responsible for instruction identify which competencies will be fostered at what grade level in what subjects for what students. The most important competencies must be reinforced within most instruction. Some competencies might well be taught in a more restricted way.

We believe any well-educated student or citizen needs the abilities and dispositions fostered through these competencies. We also believe that any reasonable person who closely studies these competencies will agree.

To transform classrooms into communities of thinkers, we need to take a long-term view. We need to reflect widely and broadly. We need to be systematic, committed, and visionary. The task is challenging indeed. But it is a challenge we ignore at the risk of the well-being of our students and that of our society.



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Critical Thinking Competency Standards: Guide for Educators

Education is not the filling of a pail. It is the lighting of a fire.

—WILLIAM BUTLER YEATS, ENGLISH POET

Critical Thinking Competency Standards provides a framework for assessing students' critical thinking abilities. It enables administrators, teachers and faculty at all levels (from elementary through higher education) 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. These competencies not only provide a continuum of student expectations, but can be contextualized for any academic subject or domain and for any grade level. 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 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.

All students (beyond the elementary level) are expected to demonstrate all of the critical thinking competencies included in this battery of demonstrable skills, but not at the same level of proficiency, or in the same subjects or at the same speed. These competencies signal important habits of thought that manifest themselves in every dimension and modality of learning: for example, in student reading, writing, speaking, and listening, as well as in professional and personal activities. It is up to the teacher or institution to contextualize and sequence the competencies, for different disciplines, and at differing levels.

Understanding the Intimate Relationship Between Critical Thinking, Learning, and Education

Let us begin by focusing some attention on the intimate relationships between critical thinking, learning and education. Only when teachers understand these relationships will they see the importance of placing critical thinking at the heart of instruction.

The Concept of Critical Thinking²

The concept of critical thinking can be expressed in a variety of definitions, depending on one's purpose (though, as with every concept, its essence is always the same). The 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 teachers 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. Fairminded 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.

The “What” and the “How” of Education

The “what” of education is the content we want students to acquire, everything we want students to learn. The “how” of education is the process, everything we do to help students acquire the content in a deep and meaningful way.

Most teachers assume that if they expose students to the “what,” students will automatically use the proper “how.” This common, yet false, assumption is, and has been for many years, a plague on education. By focusing on “content coverage,” rather than on learning how to learn, schooling has failed to teach students how to take command of their learning, how to bring ideas into the mind using the mind, how to interrelate ideas within and among disciplines. Most teachers devise instructional methods based on the following assumptions:

² For an overview of the concept of critical thinking, see the Miniature Guide to Critical Thinking Concepts and Tools, by Richard Paul and Linda Elder, 4th ed., 2006. Dillon Beach: Foundation for Critical Thinking, www.criticalthinking.org.

2. Students explain in their own words (clearly and precisely) the purpose of the subject or discipline being studied.
3. Students explain in their own words (clearly and precisely) the purpose of reasoning through a problem or issue (within a discipline or subject, or across disciplines).
4. Students explain in their own words (clearly and precisely) the purpose of reasoning through problems in their own life.
5. Students notice when they or other students are straying from the purpose at hand, and redirect the thinking back toward the purpose.
6. When asked to select a goal or purpose (for example, to choose a problem to solve), students demonstrate the ability to adopt realistic ends.
7. Students choose reasonable secondary (instrumental) goals that make sense in working toward the accomplishment of a more ultimate goal.
8. Students regularly adjust their thinking to fit their ultimate purposes.
9. Students choose purposes and goals that are fair-minded, considering the relevant needs and rights of others (and assess the purposes of others for fairness).

Standard Two: Questions, Problems, and Issues

Students who think critically recognize that all thinking is an attempt to figure something out, to settle some question, or solve some problem.

Critical Thinking Principle

To settle a question, you must know what it is asking and how to go about answering it. In other words, for every question one might ask, there are conditions that must be met before the question can be settled.

Performance indicators and dispositions

Students who think critically seek a clear understanding of the main question they are trying to answer, problem they are trying to solve, or issue they are trying to resolve. They formulate questions clearly and precisely. They recognize when they are dealing with a complex question and they think deeply within its complexities before attempting to answer such a question. They recognize when a question requires them to consider multiple relevant viewpoints and they consider those viewpoints in good faith before attempting to answer the question. Students who think critically also routinely analyze and assess the use of questions in others' thinking (using the same guidelines).

Outcomes include

1. Students express in their own words (clearly and precisely) the question at issue (in a lesson, chapter, assignment, etc.).
2. Students re-express a question in a variety of ways (with clarity and precision).
3. Students divide complex questions into sub-questions (accurately delineating the complexities in the issue).

4. Students accurately distinguish what they understand about a subject from what they do not.
5. Students accurately articulate the extent of their ignorance.
6. Students avoid claiming to know what they have no defensible reason for claiming.
7. Students admit mistakes and change their views (when faced with good reasons to do so).
8. Students demonstrate understanding of the fact that they have been socially conditioned into the belief system and worldview of their culture and nation (and naturally see their culture and nation as “correct” in its views). Students actively seek and carefully study the viewpoints of other cultures in order to gain new knowledge and insights.
9. Students demonstrate understanding of the importance of intellectual humility in thinking within any discipline and profession.

Standard Twelve: Intellectual Courage:

Students who think critically are willing to challenge popular beliefs.

Critical Thinking Principle

The mind does not naturally develop intellectual courage—the willingness to examine beliefs one holds dear. And it is not naturally comfortable standing up for beliefs that, though reasonable, are unpopular. Instead its intrinsic inclination is to protect its beliefs and conform to group standards. The mind avoids, and even fears, discovering its false beliefs. And it is, by nature, afraid of ridicule or exclusion from a social group.

Performance indicators and dispositions

Intellectual courage is the consciousness of the need to face and fairly address ideas, beliefs, or viewpoints toward which one has strong negative emotions and to which one has not given serious hearing. Intellectual courage also entails the willingness to face the disapproval of the group in expressing an unpopular idea or challenging a popular one. Humans are in many ways natural conformists. They live in social groups and unreflectively accept the dominant beliefs of the groups that exercise control over them. Intellectual courage is connected to the recognition that ideas considered dangerous or absurd within a society are sometimes rationally justified (in whole or in part). Conclusions and beliefs inculcated in people are sometimes false or misleading. Since it is natural to seek group approval, courage is required when approval may be withdrawn for non-conformity.

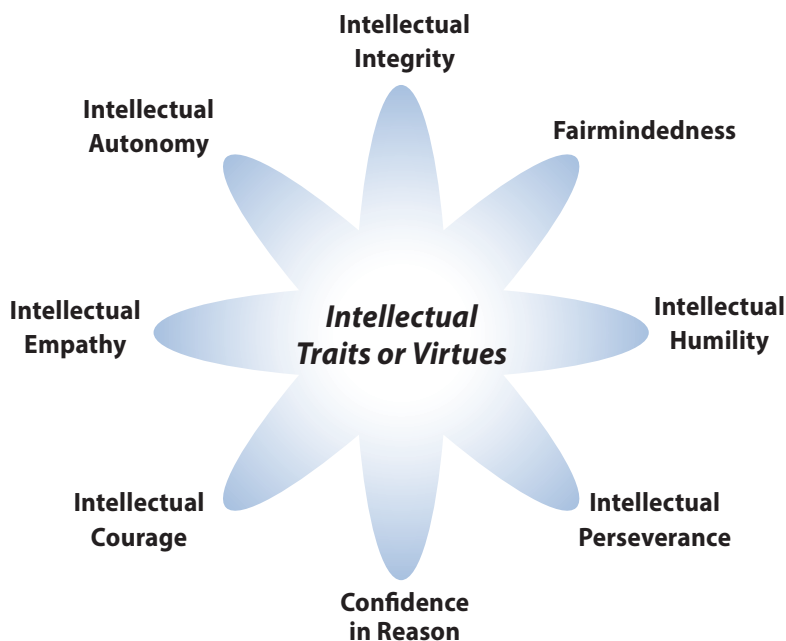
Outcomes include

1. Students demonstrate understanding of intellectual courage by stating, elaborating and exemplifying what it means.
2. Students examine critically any and all of their beliefs, especially those they hold dear.
3. Students fairly evaluate popular and unpopular ideas and beliefs, and determine their reasonability without reference to their popularity.

The Ultimate Goal of Critical Thinking is to Foster the Development of Intellectual Traits or Dispositions

Students need to acquire, not only intellectual abilities (developed through routine application of the intellectual standards to the elements of reasoning), but intellectual dispositions as well. These attributes are essential to excellence of thought. They determine the level of insight and integrity with which persons think.

Diagram 3



The relationship between the elements of reasoning, intellectual standards, and intellectual traits are best understood in the following diagram.