



The
Foundation
for
Critical Thinking

3735 Tomales-Petaluma Road
PO Box 196 Tomales, CA 94971
707.878.9100
criticalthinking.org
cct@criticalthinking.org

Amendment Needed for Critical Thinking in Education

On the Importance of Federal Congressional Support for the Advancement of Critical Thinking Throughout United States Education - Elementary Through Secondary and Beyond

Linda Elder, Ed.D., Educational Psychologist, Senior Fellow

Policy Recommendation

Throughout education, we need to advance a robust framework for critical thinking that can ultimately contribute to the development of critical societies. We ask Congress to support critical thinking in our schools through the following recommended language - to be included in the Every Child Achieves Act, S.1177 (Title 2 – Professional Development).

It has long been established that American students have a fundamental right to education in our democratic society and that fostering critical thinking is essential to developing a thoughtful and skilled citizenry. Research into critical thinking shows that though most teachers believe they are fostering critical thinking in their instruction, very little substantive critical thinking is actually being fostered in the typical American school on a typical class day. We therefore strongly recommend that elementary and secondary schools advance robust critical thinking through the professional development moneys provided through this bill. Teachers should learn, as a matter of course, to infuse critical thinking into their instruction at all levels and in all subjects across the school, district and state.

Critical thinking is the foundation for all subjects. We strongly recommend that professional development funding is recommended for training teachers in critical thinking, no matter the discipline.

Background and Research Support

According to research into critical thinking conducted in the past half century, there is very little rigorous critical thinking occurring at any level of schooling today (Boyer 1983; *National Commission on Excellence Report: A Nation at Risk* 1983; Thomas 1999; Pascarella & Terenzini 2005; Blaich 2007; Higher Education Research Institute [HERI] 2009; Arum and Roska, 2011). This is true, despite the fact that the vast majority of teachers 1) typically perceive critical thinking to be of primary importance to instruction, and 2) even believe themselves to be fostering critical thinking on a typical class day (Gardiner, 1995; Paul et al. 1997; Thomas, 1999; Bok, 2006; HERI 2009).

Decades after U.S. governmental and educational leaders began to call for critical thinking in school reform as a national imperative (*National Commission on Excellence Report: A Nation at*

Risk 1983; *American Federation of Teachers Report*, 1988) students still characteristically leave our schools, colleges and universities without the requisite intellectual skills and dispositions for reasoning through complex questions, for reasoning within multiple viewpoints, or for thinking through possible implications and consequences of the decisions they make (Bloom 1987; Readings 1996; Wilshire 1990; Reich 1992; Bok 2006).

Prospective teachers are still typically neither taught to think critically themselves through the instruction they receive in departments of education, nor to encourage critical thought in teaching and learning, nor to help students come to understand content as modes of thinking rather than disconnected pieces of information (Paul et al. 1997). Students are still failing to learn the explicit tools embedded in a rich conception of critical thinking which make for the educated person and make possible the enlightened democratic societies envisioned by our forebears.

The business community, parents, administrators, teachers, and the civic-minded would generally agree that critical thinking is essential to skilled reasoning - in public life and the workplace, in schooling and daily decision-making. Still, very little is being done to address the lack of critical thinking instruction in American schooling today, and relatively few professional development dollars are now being designated at the state level for critical thinking. Critical thinking cannot be significantly cultivated in American schools when the majority of teachers themselves lack an explicit conception critical thinking, and when they have not been taught how to effectively bring substantive critical thinking into instruction.

Since the states are not now taking sufficient steps to foster critical thinking in instruction, despite the vast amount of research now extant illuminating the fact that critical thinking is profoundly lacking in our schools, critical thinking must become an educational imperative of the Federal government. It is essential for Congress to support the realization of critical thinking across all American schools.

The Federal government should take the strongest stand in encouraging the states to use professional development moneys procured through Federal funding in advancing robust, fairminded critical thinking across all instruction, in all classes, at all levels.

Critical Thinking is of Seminal Importance to Education and Yet Often Misunderstood By Teachers

Critical thinking, arguably, is presupposed in every subject and discipline. It is necessary for reasoning skillfully through every complex problem and issue. And it is required for intelligent decision-making and higher order thinking in every domain of human thought and action. For these reasons as well as others, the expression “critical thinking” has for several decades been increasingly included in education mission statements, strategic plans and academic objectives (Arum and Roska, 2011). Unfortunately, though use of the phrase ‘critical thinking’ has mushroomed in the past half century, its meaning is often vague, narrow, or misleading in the minds of individual teachers. Again, teachers often assert that they are fostering it in their instruction when there is little evidence to support this assertion. Consequently, students predictably leave our schools, colleges and universities without developing the critical reasoning abilities they will need in all aspects of their lives.

Since 2009, the Army Field Manual has supported a robust conception of critical thinking for military leaders in educational training throughout all U.S. military branches (*Intelligence Analysis, Department of the Army*). And still, critical thinking is still woefully missing from our schools.

The Basic Concept of and Impetus for Critical Thinking

To cultivate critical societies, we need a clear, coherent, accessible framework for critical thinking that can be used throughout education. Though critical thinking is not yet an established field of academic study, the most foundational *concept* of critical thinking is well established. Its most fundamental premise lies in the understanding that *because humans do not automatically reason logically, clearly, reasonably, or fairly, we need tools for intervention in our thinking – to analyze and assess it, and where necessary or useful, to improve it.* A broad consideration of the literature on critical thinking reveals similar overlapping conceptions of critical thinking (Siegel, 1988; Ennis 1996; Lipman 1995; Paul et al. 1997; Mosely et al. 2005). An early use of the phrase “critical thinking” can be traced to the first empirical study on critical thinking, conducted in 1941 by Edward Glaser. Glaser articulated this foundational concept of critical thinking, which is at the core of any substantive approach to critical thinking and dovetails with the best theoretical work relevant to critical thinking instruction today.

[critical thinking]...calls for persistent effort to examine any belief or supposed form of knowledge in the light of the evidence that supports it and the further conclusions to which it tends...[It] requires ability to recognize problems, to find workable means for meeting those problems, to gather and marshal pertinent information, to recognize unstated assumptions and values, to comprehend and use language with accuracy, clarity, and discrimination, to interpret data, to appraise evidence and evaluate arguments, to recognize the existence (or non-existence) of logical relationships ...to draw warranted conclusions and generalization at which one arrives, to reconstruct one’s patterns of beliefs on the basis of wider experience, and to render accurate judgments about specific thinking and qualities in everyday life (p.6).

Primary critical thinking theoreticians will agree that critical thinking entails - at minimum - self-directed, self-disciplined, self-monitored, and self-corrective thinking, and that it entails an abiding interest in the problematics in thought. By implication, critical reasoning requires rigorous standards of excellence and mindful command of their use. A well-cultivated critical thinker (Paul and Elder, 2014, p. 2):

- raises vital questions and problems, formulating them clearly and precisely;
- gathers and assesses relevant information, using abstract ideas to interpret it effectively;
- comes to well-reasoned conclusions and solutions, testing them against relevant criteria and standards;
- thinks openmindedly within alternative systems of thought, recognizing and assessing, as need be, their assumptions, implications, and practical consequences; and
- communicates effectively with others in figuring out solutions to complex problems.

If we are ever to realize American societies in which reasoned discourse, dialogical reasoning, and the general development of criticality become *fundamental* human values, Congress will need to take a proactive role in moving our schools toward a robust conception of critical thinking - one that:

1. is integrated and can be contextualized across all subjects and disciplines.
2. offers explicit tools for instruction, and an explicit critical thinking language that all students can learn (based in everyday language, rather than specialized, languages).
3. illuminates content as a mode of thinking rather than as disjointed facts.
4. offers conceptual tools for analyzing reasoning in order to examine it for quality.
5. entails intellectual standards by which all reasoning within the disciplines should be judged - standards such as *clarity, accuracy, relevance, depth, breadth, significance, logicalness, and fairness.*

6. advances the cultivation of intellectual dispositions (such as intellectual empathy, intellectual courage, intellectual autonomy, intellectual perseverance, confidence in reason, and intellectual humility).
7. encourages *disciplined, reasonable* thought throughout schooling and in every part of life.

References:

- American Federation of Teachers Report (1988). *The goal of critical thinking: From educational ideal to educational reality*.
- Arum, R. & Roska, J. (2011). *Academically adrift: Limited learning on college campuses*. Chicago: The University of Chicago Press.
- Blaich, C. (2007). *Overview of findings from the first year of the Wabash National Study of Liberal Arts Education*. Wabash College, Center for Inquiry in the Liberal Arts.
- Bloom, A. (1988). *The closing of the American mind*. NY, NY: Simon & Schuster.
- Bok, D. (2006). *Our underachieving colleges: a candid look at how much students learn and why they should be learning more*. Princeton, NJ: Princeton University Press.
- Boyer, E. (1983). *High School*. NY: Harper and Row Publishers.
- Ennis, R.H. (1996). *Critical Thinking* (p. xvii, 4-9). Upper Saddle River, NJ: Prentice Hall. Esterle & Clurman, eds. (1993).
- Gardiner, Lion. (1995) *Redesigning higher education: producing dramatic gains in student learning*. ASHE-ERIC Higher Education Report Volume 23, No. 7. Washington, DC: The George Washington University, Graduate School of Education and Human Development.
- Glaser, E. (1941). *An experiment in the development of critical thinking* (p. 6). Columbia University: Bureau of Publications, Teacher's College.
- Higher Education Research Institute (HERI). 2009. *The American college teacher: National norms for 2007-2008*. Los Angeles: HERI, University of California, Los Angeles.
- Intelligence analysis*. (2009). Washington, DC: Department of the Army. TC 2-33.4.
- Lipman, M. (1995). *Thinking in education*. Cambridge: Cambridge University Press.
- Mosely, D., Baumfield, V., Elliott, J., Gregson, M., Higgins, S., Miller, J., Newton, D., 2005. *Frameworks for thinking: a handbook for teaching and learning*. Cambridge: Cambridge University Press.
- National Commission on Excellence Report. (1983). *A nation at risk*. Washington DC.
- Pascarella, E. & Terenzini, P. (2005). *How College Affects Students: A Third Decade of Research*. San Francisco, CA: Jossey-Bass.
- Paul, R. & Elder, L. (2014) *The Miniature Guide to Critical Thinking Concepts and Tools*. Tomales, CA: Foundation for Critical Thinking Press.
- Paul, R., Elder, L. & Bartell, T. (1997). *California teacher preparation for instruction in critical thinking: research findings and policy recommendations*. Sacramento, CA: California Commission on Teacher Credentialing.
- Readings, B. (1997). *The university in ruins*. Cambridge, MA: Harvard University Press.
- Reich, R. (1992). *The work of nations*. New York, NY: Vintage Books.
- Siegel, H. (1988). *Educating reason: rationality, critical thinking and education* (p. 32, 39). New York: Routledge, Chapman and Hall, Inc.
- Paul, R. (1992). *Critical Thinking: What Every Person Needs to Survive in a Rapidly Changing World*. Santa Rosa, CA: Foundation for Critical Thinking Press.
- Paul, R. & Elder, L. (2014). *The Miniature Guide to Critical Thinking Concepts and Tools*. Tomales, CA: Foundation for Critical Thinking Press.
- Shields, R. (2011). 'ICT or I see tea? Modernity, technology and education in Nepal'. *Globalization, Societies and Education*, 9(1), 85-97.
- Thomas, P. (1999). *Critical Thinking Instruction in Greater Los Angeles Area High Schools*. Doctoral dissertation: Azusa Pacific University:
http://www.criticalthinking.org/files/Azusa%20Pacific%20University_opt.pdf
- Wilshire, B. (1990). *The moral collapse of the university: professionalism, purity, and alienation*. NY, NY: State University of New York Press.

{Dr. Linda Elder is President of the Foundation for Critical Thinking (FCT). The FCT is an educational non-profit organization (501c3) that, along with the Center for Critical Thinking, has worked toward fundamental change in education and society through the advancement of critical thinking for more than 35 years. The Center for Critical Thinking is affiliated with Sonoma State University in Northern California. criticalthinking.org}