Defining Critical Thinking: How Far Have We Come?

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Abstract

While there is no shortage of scholarship on the topic, there appears to be no widely accepted definition of critical thinking. This is coupled with the troublesome fact that those in higher education often believe their definitions are the norm. In this article, we demonstrate a lack of uniformity through a representative sample of historically influential definitions for critical thinking. These definitions are then classified into two distinct categories: context specific and cross-disciplinary definitions. From this lack of uniformity we argue that at least two problems in higher education arise: lack of proper critical thinking assessment and difficulty in interdisciplinary collaboration on the topic of critical thinking. Given the current focus on critical thinking assessment alongside a movement toward greater interdisciplinary collaboration within higher education, we conclude with a call for a uniform definition of critical thinking.

Keywords: defining critical thinking

In Spring 2008, ten faculty members from Lone Star College – CyFair representing eight different disciplines embarked on a scholarly exploration of the concept, application, and assessment of critical thinking in higher education. This essay is one of seven essays resulting from the faculty learning community.

As philosophers, the authors were immediately struck by the varying definitions for critical thinking given by the participants in the faculty learning community. The offered definitions were as diverse as the disciplines and teaching styles from which they originated. Jane S. Halonen (1995) claimed if you “ask 12 psychology faculty members to define the term critical thinking, you may receive 12 overlapping but distinct definitions.” (Halonen, 1995, p. 75). Our faculty learning community not only confirmed Halonen’s claim, but even amplified the distinctiveness of the definitions mirroring the distinctiveness of the disciplines represented. This motivated the authors to explore the scholarly research defining critical thinking.

A Summary of the Problem

There is certainly no shortage of scholarship on critical thinking, but a single, widely-accepted, cross-disciplinary definition for critical thinking still does not exist. Stakeholders in higher education presume they know the definition of critical thinking and enter into discussions on critical thinking as if their personal or discipline-specific definitions are consistently shared by all. (Halonen, 1995) The root of this willingness to assume clarity where considerable ambiguity exists may stem from critical thinking being viewed as a positive concept. No educator opposes critical thinking. According to Wales and Nardi (1984), faculty may unintentionally contribute to the problem by over-asserting claims to critical thinking activities with hopes of attaining benefits by association with the prestigious concept of critical thinking.

As attractive as the concept of critical thinking may be, serious problems arise from the lack of consensus as to the definition of critical thinking. This essay explores two of these problematic areas, assessment in higher education and cross-disciplinary collaboration.

Assessing Critical Thinking

In 1983, President Ronald Reagan’s National Commission on Excellence in Education published a report, A Nation at Risk: The Imperative For Education Reform, that generated a wave of educational reform efforts at both the state and federal levels. The report warned that America’s educational system was failing its students, and called for reform:

Our concern, however, goes well beyond matters such as industry and commerce. It also includes the intellectual, moral, and spiritual strengths of our people which knit together the very fabric of our society. (…) For our country to function, citizens must be able to reach some common understandings on complex issues, often on short notice and on the basis of conflicting or incomplete evidence. (National Commission on Excellence in Education, 1983, p. 10).

The call for reform was heard again in 1989 when President Bush and state governors designed Goals 2000 to urge institutions of higher education to:

(…) take critical thinking objectives more seriously by improving the abilities of college students to be more effective critical thinkers, communicators, and problem solvers. (Edgerton, 1991, p. 8).
By 1997, the educational reform movement focused on critical thinking skill development and assessment had firmly made its way to many states, including Texas. The 75th Texas Legislature mandated the Texas Higher Education Coordinating Board, an agency of the Texas state government responsible for overseeing all post-secondary education in the state of Texas, to adopt rules that include “a statement of the content, component areas, and objectives of the core curriculum” (Tex. SB 148, SS,5.390-5.404). In response, the Texas Higher Education Coordinating Board set forth basic intellectual competencies to be included in core curriculums at all Texas colleges and universities. (THECB, 1999, from www.thecb.state.tx.us/). These intellectual competencies included, among other things, critical thinking. Teaching and assessing critical thinking was now clearly on the political agenda at both the federal and state levels.

The practicability of teaching and assessing critical thinking is undermined by the apparent lack of awareness among many stakeholders in higher education that no uniformly accepted definition of critical thinking currently exists. Morgan (1995) recognized this problem, stating:

Perhaps the greatest threat to implementing critical thinking instruction has been the passage of the term into the common vernacular of educators, legislators, businesspeople, and the public. What was not too long ago a very restrictive notion of thinking based first on formal logic and then on informal logic has become so broad a notion that it has become nearly meaningless. The plethora of definitions may have lead to a conviction that conceptualizing critical thinking is relativistic, with any definition or conceptualization as good as any other. (Morgan, 1995, 339).

If the term critical thinking is to be a more meaningful concept, achieving some consensus as to its definition is imperative.

Collaborating Across Disciplines

In addition to concerns about the effect of a lack of uniform definition for critical thinking has upon assessment, the authors are also interested in the impact such a lack of consensus has upon collaboration among educators from varying disciplines. The traditional landscape of higher education in the United States has been one focusing on rather isolated fields of specialization earning many disciplines the title of ivory towers, but the environment at many colleges is shifting to a more collaborative-friendly environment where academics are encouraged to create bridges between the ivory towers. As team-taught learning communities, combining two or three different discipline subjects into one mega-course addressing a common cohort of students, are increasing in popularity, educators readily become aware of the overlapping critical thinking goals in their various disciplines but nonetheless struggle to find a uniform definition for what is meant by critical thinking.

The challenge faced by educators from varying disciplines searching for a common definition for critical thinking is further complicated by the fact that an individual discipline may lack consensus on a definition for critical thinking. The Videbeck study (1997, as report by Gordon, 2000) evidences the lack of a common definition for critical thinking among nursing programs. It points out that:

(...) 55 nursing programs used 10 different definitions of critical thinking and assessed critical thinking using a variety of measurement tools, including standardized tests and locally developed instruments. (Videbeck, 1997, as discussed by Gordon, 2000, p. 340).

The need for consensus is evident if collaboration across disciplines is to involve the development of critical thinking skills.

Chronological Literature Review of Critical Thinking Definitions

A review of the literature easily reveals a plethora of definitions for critical thinking. The following is not intended to be a comprehensive literature review, but rather a chronological mapping of the more influential definitions for critical thinking. Definitions are included from John Dewey, Edward Glaser and the Watson-Glaser Test of Critical Thinking, Benjamin Bloom and the influences of cognitive psychology, Robert Ennis, John McPeck, Richard Paul, The American Philosophical Association, Stephen Brookfield, Joanne Kurfiss, and Diane Halpern.

John Dewey

John Dewey was an American philosopher, psychologist, and educational reformer during the early 1900s. Dewey (1910) articulated reflective thought as:

Active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that supports it, and the further conclusions which it tends. (Dewey, 1910, p. 6).

The process identified by Dewey as reflective thought possesses the same characteristics currently identified by
Critical thinking originates in the doubt of the thinker (a “perplexed” situation) that prompted hypotheses (“suggestions”), while observation and reason allowed the thinker to refine his hypotheses. These mental processes do proceed in a linear fashion but are “recursive and mutually influential” (Dewey, 1910 as discussed by Kurfiss, 1988, p. 7).

Learning should be active and education should center on judgments, not merely knowledge. Judgment, for Dewey, is reflective thinking that consisted of three features:

1. a controversy, consisting of opposite claims regarding the same objective situation;
2. a process of defining and elaborating these claims and of sifting the facts adduced to support them;
3. a final decision, or sentence, closing the particular matter in dispute and also serving as a rule or principle for deciding future cases. (Dewey, 1910 pp. 101-102).

Judgment allows the critical thinker to analyze all of the facts, determining whether they are facts or not, relevant or not, and synthesize the appropriate factual information into a whole. To fully exercise judgment, it is necessary to maintain an open mind along with a healthy skepticism.

Out of Dewey’s ideas came the movement called “progressive education” that was designed to make changes to education and improve the critical thinking ability at the elementary school level. These changes, however, had little impact in secondary schools (Morgan, 1995).

**Edward Glaser and the Watson-Glaser Test of Critical Thinking.**

Edward Glaser (1941) proposed three key components of critical thinking:

1. an attitude of being disposed in a thoughtful way to the problems and subjects that come within the range of one’s experiences;
2. knowledge of the methods of logical inquiry and reasoning; and
3. some skill in applying those methods. (Glaser, 1941, p. 5-6)

Glaser argued that “American Education is freely criticized today because the ability to think critically is not well developed among secondary pupils and even among college graduates” (Glaser, 1941, p. 8).

In order to address this shortfall, Glaser developed an instructional program that “consisted of eight lessons or topic related to critical thinking, including definition, evidence, inference, scientific method and attitude, prejudice, propaganda, and values and logic” (Kurfiss, 1988, p. 8). In order to test that these skills were indeed being taught Glaser developed the Watson-Glaser Critical Thinking Appraisal. The multiple choice exam tests “skills of arguments, specifically drawing inferences, recognizing assumptions, evaluating conclusions, and assessing the strength of reasons offered in supporting a claim” (Kurfiss, 1988, p. 8).

The Watson-Glaser exam incorporated the later work of Dressel and Mayhew, who identified further skills and abilities of critical thinkers, and it has been modified throughout the years to increase clarity and remove gender and racial biases. (Morgan, 1995, Watson and Glaser, 1980) The work of Glaser and well as the Watson-Glaser exam still heavily influence thought on critical thinking and are used widely by high schools and colleges as a means of testing the ability of students to think critically.

**Benjamin Bloom**

Benjamin Bloom was an educational psychologist whose career spanned several decades in the 20th century, and who is best known for developing a taxonomy of cognitive thought. Bloom (1956, p. 18, 201-207)) defined the cognitive domain as having three aspects: knowledge, intellectual abilities, and skills that have a hierarchy of six levels:

1. Knowledge: the recall of previously learned material from specific facts to complete theories.
2. Comprehension: the ability to grasp and understand the meaning of the material presented in the forms of translation, interpretation, or the estimation of future trends.
3. Application: the ability to use learned material and apply this material in new specific situations.
4. Analysis: the ability to break down information into parts and examine the relationship among the parts so that organization can be understood.
5. Synthesis: the ability to organize many elements or parts to form a new whole.
6. Evaluation: making judgments or ideas or methods using evidence and based on definite internal (organizational) or external (relevant to purpose) criteria.
Bloom’s hierarchy is excellent for explaining what goes on in the classroom from both the teachers’ and students’ perspectives. Unfortunately, it lacks the specificity necessary for assessment of critical thinking. (Ennis, 1993) For the task at hand, it is important to note that Bloom’s hierarchy viewed the evaluation of judgments as having a purpose or contextually specific component.

**Robert Ennis**

Robert Ennis is currently Professor Emeritus at University of Illinois at Urbana-Champaign. In 1962, Ennis defined critical thinking as “the correct assessing of statements” and distinguished “three dimensions of critical thinking—logical (judging the alleged relationships between the meanings of words and statements), criteria (covers the knowledge of the criteria for judging), [and] pragmatic (impression of the background purpose on the judgment)” and identified twelve “aspects of critical thinking”. (Ennis, 1962, 83-85) The twelve aspects are summed as:

1. Grasping the meaning of a statement.
2. Judging whether there is ambiguity in a line of reasoning 3. …whether certain statements contradict each other. 4. …a conclusion follows necessarily. 5. … a statement is specific enough. 6 …a statement is actually the application of a certain principle. 7. … an observation statement is reliable. 8. … an inductive conclusion is warranted. 9 … the problem has been identified. 10. Something is an assumption. 11. A definition is adequate. 12. … a statement made by an alleged authority is acceptable. (Ennis, 1962, p. 84 as summarized by Curry, 1999, p. 4).

Ennis realized that his definition suffered from the same problem that Bloom’s taxonomy suffered from, namely, an inability to properly assess critical thinking. As a result, Ennis revised his definition to allow for “correct assessing”. This revised definition, however, suffered from “excluding creative aspects of critical thinking”, so the more streamlined definition of critical thinking that Ennis believes will allow for “greater communication among proponents of critical thinking” (Ennis, 1993, p. 180) is as follows: “Critical thinking is reasonable reflective thinking focused on deciding on what to believe or do.” (Ennis, 1993, p. 180) This definition too, Ennis feels, suffers from being too vague, so Ennis adds elaborations (of which the list below is an abridgment) by listing “abilities and dispositions” (Ennis, 1993, p. 180) of the critical thinker that allows for some guidance in assessment. These abilities and dispositions are:

1. Judge the credibility of sources.
2. Identify conclusions, reasons, and assumptions.
3. Judge the quality of an argument, including the acceptability of its reasons, assumptions, and evidence.
4. Develop and defend a position on an issue.
5. Ask appropriate clarifying questions.
6. Plan experiments and judge experimental designs.
7. Be open minded.
8. Try to be well informed.

Ennis considers this definition a ‘working definition’ and went on to co-author the extensively used “Cornell Critical Thinking Tests” and lead the Illinois Critical Thinking Project at the University of Illinois until his recent retirement. (Thayer-Bacon, 2000). For Ennis’ latest thoughts on critical thinking, see his article entitled, “Critical Thinking: Reflection and Perspective Part I” in this issue of Inquiry.

**John McPeck**

In an attempt to clarify and critique work previously done on critical thinking, John McPeck (1981) argued that critical thinking was not a skill that could stand alone; it must always be about something. According to McPeck (1981):

> In isolation from a particular subject, the phrase ‘critical thinking’ neither refers to nor denotes any particular skill. It follows from this that it makes no sense to talk about critical thinking as a distinct subject and that it therefore cannot be profitably be taught as such.” (McPeck, 1981, p. 5).

McPeck goes on to argue, from this premise, that critical thinking is only properly understood when seen as subject-specific. “Critical thinking always manifests itself in connection with some identifiable activity or subject area and never in isolation.” (McPeck, 1981, p. 5). McPeck (1981) emphasizes that critical thinking does include:

> (...)the judicious use of skepticism, tempered by experience...[where] the criterion for regarding skepticism as judicious, as opposed to incorrect or frivolous, must be determined by the norms and standards of the subject area in question.” (McPeck, 1981, p. 7)

It is not sufficient to simply ask questions or to criticize thoughts as they come, but rather, to develop the ability to ask the right questions. This leads McPeck to develop an informal definition of critical thinking:
The core meaning of critical thinking is the propensity and skill to engage in an activity with reflective skepticism. (McPeck, 1981, p. 8).

McPeck acknowledges his informal definition leaves room for ambiguities. McPeck offers further explanation of his ideas concerning skills and reflective skepticism: [The skills] necessary for engaging in an activity, critical thinking cannot be divorced from the skills that make the activity what it is. [Reflective skepticism] like ‘health’skepticism’, refers to both the purpose and the quality of the thinking in question. (McPeck, 1981, p. 9).

McPeck’s definition of critical thinking requires knowledge of the subject at hand, as well as the desire to resolve problems that arise.

McPeck’s informal definition, along with the accompanying clarifications, lead to McPeck’s formal definition of critical thinking:

Let X stand for a problem or activity requiring some mental effort.
Let E stand for the available evidence from the pertinent field or problem area.
Let P stand for some proposition or action within X.
Then we can say of a given student (S) that he is a critical thinker in area X if S has the disposition and skill to do X in such a way that E, or some subset of E, is suspended as being sufficient to establish the truth or viability of P.” (McPeck, 1981, p. 9).

It is noteworthy that McPeck emphasizes two central components of his concept of critical thinking. Siegel articulates the two components as:

There is first, the ability to assess reasons properly… the reason assessment component. There is, second, the willingness, desire, and disposition to base one’s actions and beliefs on reasons; that is to do reason assessment and be guided by the results of such assessment. (Siegel, 1998, p. 23).

Richard Paul

Richard Paul established, and served as director of, the Center for Critical Thinking and Moral Critique at Sonoma State University. He currently organizes the Annual International Conference on Critical Thinking and serves as Director of Research and Professional Development for the Center and Foundation for Critical Thinking. Prior to setting forth a definition for critical thinking, Richard Paul distinguishes between two forms of critical thinking, the ‘weak’ and the ‘strong’ forms. Because a student comes to the post secondary education setting with:

(…) a highly developed belief system buttressed by a deep-seated, uncritical, egocentric and socio-centric habits of thought by which he interprets and processes his or her experience… the practical result is that most students find it easy to question just, and only, those beliefs, assumptions, and inferences that [they] have already rejected and very difficult, in some cases to traumatic, to question those in which they have a personal, egocentric investment. (Paul 1981, p. 2).

Paul concludes that those that learn to think critically in order to merely employ these skills to ward away challenges to what they already believe become more sophisticated rather than less so. Paul classifies the engagement in this type of critical thinking as ‘atomistic’ or the ‘weak sense’ of critical thinking.

However, in the ‘strong sense’ of critical thinking one abandons critical thinking skills as a set of “atomic arguments” and seeks to focus on “argument networks (world views)”; seeks to take a more “dialectical/diagnostic” approach to argumentation where arguments are “appraised in relation to counter arguments”, and realizes that atomic arguments (such as informal fallacies) are rarely employed in the “real world” but that “argument exchanges are means by which contesting points of view are brought into rational conflict…” (Paul, 1981, p. 2). Harvey Siegel (1998) sums the “strong sense” of critical thinking as “appearing to be more a matter of dialogue between opposing perspectives than a series of atomic criticisms and deflections.” (Siegel, 1998, p. 13). This allows for the following definition:

Critical thinking is disciplined, self directed thinking which exemplifies the perfection of thinking appropriate to a particular mode or domain of thought. It comes in two forms. If disciplined to serve the interests of a particular individual or group, to the exclusion of other relevant persons and groups, it is sophistic or weak sense critical thinking. If disciplined to take into account the interests of diverse persons or groups, it is fair-minded or strong sense critical thinking. (Paul, 1990, p. 51).

It must be noted here that Paul’s definition of critical thinking does not exclude other definitions of critical thinking. In fact, Paul argues that there are many limita-
tions in the process of defining critical thinking itself, and goes so far as to argue that it is more desirable to have a variety of definitions for two reasons:

(1) in order to maintain insight into the various dimensions of critical thinking that alternative definitions highlight, and (2) to help oneself escape the limitations of any given definition.” (Paul, 1987, as quoted in Thayer-Bacon, 2000, p. 61).

**The American Philosophical Association Expert Consensus Definition**

In 1988, a panel of experts on critical thinking employed a Delphi process and worked for two years to produce a definition of consensus allowing for uniformity within the field as well as guide assessment. The definition reads:

We understand critical thinking to be purposeful, self regulatory judgments which results in interpretation, analysis evaluation, and inference, as well as explanation of the evidential, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which judgment is based… The ideal critical thinker is habitually inquisitive, well-informed, trustful of reason, open-minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgments, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in the selection of criteria, focused in inquiry, and persistent in seeking results which are as precise as the subject and the circumstances of inquiry permit (…). (Facione, 1990, p. 3).

In addition to providing a general definition for critical thinking, the panel also provided a list of cognitive skills and sub-skills, as well as a list of affective dispositions of critical thinking. The skills include:

(…) interpretation (categorization, decoding significance, clarifying meaning), analysis (examining ideas, identifying arguments, analyzing arguments), evaluation (assessing claims, assessing arguments), inference (querying evidence, conjecturing alternatives), explanation (stating results, justifying procedures, presenting arguments), and self-regulation (self-examination, self correction). (Facione, 1990, p. 12).

The affective dispositions a critical thinker should develop are set in two categories. The first category is *approaches to life and living in general*. This includes things such as, inquisitiveness in many issues, flexibility in considering alternatives, understanding other opinions, honesty in facing ones biases, and a willingness to revise ones ideas when warranted. The second category includes *approaches to specific issues, questions or problems*. This includes things such as, clarity in stating questions, diligence in seeking relevant information, persistence, and precision to the degree allowed. (Facione, 1990). The broad definition and lists of skills and dispositions commonly referred to as the Delphi definition is perhaps the most often cited study on critical thinking in the modern literature on the subject.

**Stephen Brookfield**

Stephen Brookfield (1987), a distinguished university professor at the University of St. Thomas in Minneapolis-St. Paul, focuses on the development of critical thinkers in our society. Consequently, his definition focuses on the activities, traits, and abilities necessary for identification and cultivation of critical thinking in not only education, but also society as a whole. Brookfield believes that critical thinking involves three concepts: (1) emancipatory learning, (2) dialectical thinking, and (3) reflective learning. Emancipatory learning occurs when “a learner becomes aware of the forces that have brought them to their current situations and take action to change some aspect of these situations” (Brookfield, 1987, p. 12). Dialectical thinking focuses on understanding contradictions and arriving at suitable resolutions. Reflective learning involves a process of internal examination brought on by some experience that allows the critical thinker to understand and appreciate a new understanding. (Brookfield, 1987, p. 14).

Brookfield also outlines four components of critical thinking: identifying and challenging assumptions, challenging the importance of context, imagining and exploring alternatives, and reflective skepticism. Critical thinking is a positive activity that should be properly viewed as a process, rather than an outcome. Brookfield (1987) recognizes that “practices, structures and actions are never context-free” (Brookfield, 1987, p. 5). Both positive and negative events within the context of the thinking process can impact the critical thinking process itself. Consequently, the critical thinking process can be “emotive as well as rational” (Brookfield, 1987, p. 7).

**Joanne Kurfiss**

Joanne Kurfiss, director of the Teaching and Learning Center at Santa Clara University, argues that critical thinking is “a rational response to questions that cannot be answered definitively and for which all the relevant
information may not be available” (Kurfiss, 1988, p. 2). The critical thinking process, as outlined by Kurfiss, usually begins with an argument and has two outcomes: a hypothesis or conclusion and the justification for this conclusion.

Kurfiss defines critical thinking as:

(... an investigation whose purpose is to explore a situation, phenomenon, question, or problem to arrive at a hypothesis or conclusion about it that integrates all available information and that can therefore be convincingly justified. (Kurfiss, 1988, p. 2).

Diane Halpern

Diane Halpern, former president of the American Psychological Association, is heavily quoted in modern literature on critical thinking for her conception of critical thinking components in education. Her definition, although very broad, seeks to capture the main elements of the various definitions of critical thinking found in current psychological literature:

“Critical thinking is the use of those cognitive skills or strategies that increase the probability of a desirable outcome. It is used to describe thinking that is purposeful, reasoned, and goal directed...[it is not] merely thinking about your own thinking...it is using skills that will make “desirable outcomes” more likely. Decisions as to which outcomes should be desirable are embedded in a system of values.” (Halpern, 2003, p. 6-7).

Classifications for Critical Thinking Definitions

A review of the literature confirms the lack of consensus regarding a uniform definition for critical thinking, but there does appear to be some common ground among many of the influential definitions. In fact, it appears all of the definitions discussed in this essay can be clustered into one of two classifications: context-specific definitions and cross-disciplinary definitions.

Context-Specific Definitions

Context-specific definitions assume critical thinking cannot occur without a specific context. In other words, the development of critical thinking skills is interdependent with the context within which the critical thinking activity occurs. Under this philosophy, critical thinking should not be taught as a stand-alone course, since the critical thinking skills cannot be isolated from the corresponding subject matter. Critical thinking in chemistry differs from critical thinking in business to the extent the subject matters themselves differ. McPeck’s (1981) definition strongly falls into the context-specific category, but other context-specific definitions include the definitions set forth by Brookfield (1987) and Kurfiss (1988).

With increased attention on assessment, context-specific definitions can be quite useful. When critical thinking skills are well-defined in unambiguous terms, they are much easier to assess. By limiting the assessment to a context-specific domain, the results can be more accurate and far more useful for the specific focal discipline. This is evidenced by the creation of the Texas Assessment of Critical Thinking Skills (TACTS), which was developed by an interdisciplinary team in response to the accrediting association for collegiate schools of business’ (AACSB) decision to include assessment of analytic and reflective thinking in its accreditation standards. (Fair, Miller, Muehsam, & Elliott, 2010, 37). The TACTS team stated:

(... for the sake of assessing how our College of Business is doing in meeting the AACSB standards, it is desirable to use a “special purpose” instrument that has several items built into it that tap quantitative skills especially relevant to business majors. (Fair, Miller, Muehsam, & Elliott, 2010, 41).

It is important to note this only applies to assessments designed to incorporate a specific context familiar to the assessed. If critical thinking skills cannot be isolated from the context within which they occur, then attempting to assess critical thinking skills alone appears futile.

Further challenges arise when context-specific definitions are used blindly in collaborative situations. Context-specific definitions do not lend themselves to inter-disciplinary collaborations involving substantially different disciplines, unless the context is clearly articulated and agreed upon by the participants. The faculty learning community on critical thinking which spurred the writing of this essay is a good example. Of the ten participating members, most joined the group with context-specific definitions for critical thinking, but were unaware that other disciplines may define critical thinking from an entirely different context. It was essential for the group to openly discuss the varying definitions along with their corresponding contexts to work towards a deeper understanding of critical thinking.

Cross-Disciplinary Definitions

Cross-disciplinary definitions clarify critical thinking in very broad terms, enabling critical thinking skills to be taught independent of a specific context. This is not to claim that critical thinking skills occur without
a context, but rather that the critical thinking skills are not dependent upon a particular context. In this way, the skills needed to critically think in chemistry are similar to the skills needed to critically think in business. Dewey (1910) offered a cross-disciplinary definition for critical thinking by identifying its key components as analyzing the facts, determining whether facts are relevant, and then synthesizing the appropriate factual information into a whole. Bloom (1956) also provided a cross-disciplinary definition for critical thinking as involving analysis, synthesis, and evaluation. Other cross-disciplinary definitions for critical thinking include those by Ennis (1962, 1993), American Philosophical Association Expert Consensus (1990), Paul (1981, 1992), Halpern (2003), and Glaser (1941). Cross-disciplinary definitions, by their very nature work well for interdisciplinary collaboration, but using them to guide assessment can be challenging. Even though the feasibility of assessing critical thinking skills is readily acknowledged, cross-disciplinary definitions tend to be rather vague and ambiguous. The broadness of the definitions can lead to confusion, and may cause some to challenge the reliability as well as practicability of the assessment results.

Conclusion

In summary, the current definitions for critical thinking can be classified into two categories: content-specific definitions and cross-disciplinary definitions. Content-specific definitions tend to work well for assessment within particular disciplines, but challenges arise for cross-disciplinary assessment and for collaborative situations involving varying disciplines. Cross-disciplinary definitions appear on the surface to work well for cross-disciplinary collaborations and general critical thinking assessments, but when actually applied, cross-disciplinary definitions tend to be very broad and often vague, creating very real challenges for both collaboration and general assessment. Kennedy, Fisher, and Ennis (1991) claimed “agreement on a definition of and a vocabulary for critical thinking is needed in order to get a better idea of what should be assessed by a critical thinking evaluation instrument. (Kennedy, Fisher, and Ennis, 1991, 29). Twenty years later, the need for such agreement still exists.

Perhaps the greatest lesson can be learned from the ongoing practices of Ennis and Paul. Both researchers continue to analyze and revise their existing definitions for critical thinking. If understanding critical thinking requires doing critical thinking, then Ennis and Paul have provided us with the perfect models for continuing to improve our understanding of critical thinking. Stakeholders in higher education must continue to work towards a definition for critical thinking that is context-specific enough to enable accurate and useable assessment, but cross-disciplinarily enough to encourage effective collaboration across diverse fields and disciplines.

References


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