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Hamby, Benjamin Ph.D., "Why NOT teach critical thinking." (2016). *OSSA Conference Archive*. 121.
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Why *Not* Teach Critical Thinking

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Abstract: There is a mounting case to be made for *not* teaching critical thinking. Given recent evidence suggesting that cognitive biases are intractable, that students who receive comprehensive, long term, explicit instruction for critical thinking “across the curriculum” reap negligible benefits, and meta-analyses that suggest only certain limited approaches to critical thinking instruction produce meaningful gains, this paper offers a critical challenge to teaching critical thinking, especially as a general education requirement for a baccalaureate degree.

Keywords: Critical thinking, pedagogy, bias, informal logic, argumentation, Abrami, Hatcher, Kenyon, Govier, McPeck

1. Introduction

To what extent, if any, should critical thinking be taught, especially “across the curriculum”, as a general education requirement for a baccalaureate degree? The answer is not so obvious, given recent evidence that suggests: 1) the intractability of cognitive biases in light of “intuitive” approaches to teaching about them in a critical thinking course (Kenyon and Baulac 2014); 2) the negligible gains for those students who receive comprehensive, long term, and explicit instruction in critical thinking across the curriculum (Hatcher 2013); and 3) meta-analyses that conclude only certain limited approaches to critical thinking instruction produce meaningful gains (Abrami et al. 2008 and 2015, and Ortiz 2007). Coupled with classic critiques of critical thinking pedagogy like that of McPeck (1981), and more recent (and more mitigated) versions of his argument, such as Willingham (2007), both of whom stress that critical thinking instruction without content specificity is empty, there is more than ever the need to reevaluate our efforts to instruct for critical thinking: it seems clear that despite intensive and widespread efforts, students are not becoming better critical thinkers as a result of taking a single course in college or university. The case for *not* teaching critical thinking, or at least not teaching it in the way it has usually been taught, is stronger than it has ever been. This paper offers reflections on some fundamental questions that proponents of new and existing critical thinking programs should address if those programs are to be well-justified given these many plausible critical challenges. I argue that institutional-wide efforts to teach critical thinking, and in large measure, explicitly requiring students to satisfy a critical thinking requirement for a baccalaureate degree, is unwarranted in light of this evidence and the fact that it is largely ignored.

If there is any truth to these claims, it is troubling to say the least, since there is obviously a kind of bandwagon effect happening in the effort to teach critical thinking: after almost 40 years one can no longer call it an educational “fad” without at least cracking a smile. It is implausible to think it is merely coincidental that institutions of higher learning continue to develop new critical thinking requirements, while Forbes magazine (Casserly 2012; Farrington 2014) along with others, has said that among the skills businesses see as being most important (and most lacking in their workforce and especially in their new recruits), “critical thinking” and its cognates ranks highest.

See, in particular, the National Association of Colleges and Employers: “2015 Job Outlook” (<https://www.umuc.edu/upload/NACE-Job-Outlook-2015.pdf> p. 35). See also the report commissioned by the Association of American Colleges and Universities, which in one of its key findings said that “employers indicate that they prioritize critical thinking, communication, and complex problem-solving skills over a job candidate’s major field of study when making hiring decisions” (2013, p.4) Found at: https://www.aacu.org/sites/default/files/files/LEAP/2013_EmployerSurvey.pdf)

At a minimum, this might suggest that new and existing programs are not as efficacious as they should be given their near ubiquity: if we were being successful, one would think hiring managers would not be complaining so much about the dearth of critical thinking ability among new hires. At worst, however, it suggests abject failure and irresponsible kowtowing to popular pedagogical sentiment, for colleges and universities press ahead despite the contraindications to success, such as evidence that now suggests transforming students into thoroughgoing critical thinkers might not be possible to achieve to any great extent in four years of college education, let alone in one term satisfying a general education requirement (Arum and Roska 2011). It should make administrators and instructors at the very least skeptical of programs such as the university-wide “core” requirement in critical thinking beginning in Fall 2017 at my home institution, Coastal Carolina University, and of the recently revised (2008) general education requirements (Executive Order 1033) in the California State University system, which left the critical thinking requirement unchanged from the version it first articulated in 1980 (Executive order 338). To answer the question “should critical thinking be taught” immediately in the affirmative might therefore indicate a pernicious bias—a predictable one that should be checked by serious reflection on the merits of such a position. This paper attempts to do that.

My purpose in this paper is therefore to showcase the evidence that suggests the difficulty in teaching critical thinking, and to express pessimism at the prospect of succeeding in such institutional-wide endeavors without accommodating that evidence in our pedagogical approach. It is meant to wake practitioners out of whatever dogmatic pedagogical slumber they find themselves in, but to do so without denying the *potential* value of critical thinking pedagogy. So I want to skate a Humeanesque line: my skepticism on critical thinking pedagogy a mitigated one, for I also wish to argue that critical thinking should nevertheless be an educational goal and that organized efforts to make it such at institutions of higher education are worthwhile, since business managers rightly see it as an important criterion in making hiring decisions, since better decision-making at public institutional levels demands it, and since to not at least attempt to teach students critical thinking is an abdication of the ideals of liberal education. Most importantly, however, it should be undertaken because as instructors interested in teaching critical thinking, we have an opportunity to do better, so we should at least try. This, coupled with the fact that critical thinking requirements aren’t going anywhere, we have to try, at least, to make them worthwhile. The stakeholders who have an interest in seeing critical thinking continue to be taught, but taught better, are the students themselves, businesses both profit and non-profit alike, educational institutions of both higher education and primary and secondary education, and society as a whole. Better decisions should get made if people are making better judgments. Even should we fail in our endeavors to teach critical thinking, from these perspectives, we should still make the effort to improve.

Having said that, we need to make our efforts more informed and directed, and they need not be requirements for a degree, available for any department to pursue whatever their approach to satisfying the requirements. Perhaps narrowing our administrative expectations will allow us to

also narrow our pedagogical focus to offer better quality of pedagogy over sheer quantity. And to do this we need to be aware of the pitfalls of teaching critical thinking, of which there are many. Do textbooks and course goals, student learning outcomes, and syllabi contain a “dog’s breakfast” (Johnson & Blair 2009) of failed attempts to teach critical thinking? Do they perpetuate the mistakes of the past, ignorant of the current state of the art? Do they dogmatically assert the benefits of such instruction without substantiating them with the very thing they are supposedly teaching, namely, critical justification? Then cast them to the flames, like so much metaphysical nonsense incapable of rational justification. So my answer to the question “should we teach critical thinking” is nuanced: “no”, I say, if the approach is business-as-usual; but “yes” I say, qualified by the understanding that if we are to be successful, we must be aware of the host of problems which good intentions will not suffice to mitigate: the most salient obstacles to effective pedagogy in critical thinking obtain even among well informed and prepared instructors, and while we might grant that most instructors are well-intentioned, it is not at all clear that they are well informed, so continued diligence and increased pedagogical oversight are required if it is all to be worth our efforts, and we should not be requiring students to jump through critical thinking hoops that we have not sufficiently thought through ourselves in a manner consistent with critical thought. We should indeed teach critical thinking, but not as we currently do: we need a change in approach that comes from the bottom up. It will not do to cruise along on auto pilot, waiting for administrative direction, since apparently, and I speak anecdotally here, administrators are concerned less with substance and more with the *appearance* that critical thinking is being taken seriously: instructors need to empower themselves by staying current in the literature on critical thinking, and by taking it seriously not just as a pedagogical aim, but as an area that they can actively improve in their self-reflective (and scholarly-informed) classroom endeavors. In other words, critical thinking instructors need to be more motivated to do better, since the status quo is clearly inadequate to the worthy educational goals we seek.

2. Pedagogical perils of teaching critical thinking

The major research finding critical thinking instructors need to be aware of, and modify their approach in light of, is the meta-analysis of Abrami, et al. (2008 & 2015). In this analysis of 117 single studies (27 true experiments), with over 20,000 total participants, they found that given Ennis’ (1989) taxonomy of four approaches to critical thinking instruction, only one of these approaches bears significant pedagogical fruit: namely, the “mixed” approach, whereby general critical thinking skills are explicitly introduced and instructed as a separate track alongside other content in a content-specific course (Abrami, et al. 2008, p. 1121). The researchers found that the “infusion” approach yielded some benefit (whereby general critical thinking concepts are introduced in the context of subject specific content, but not as a separate track), and that the “general” approach (whereby *only* general critical thinking skills and concepts are introduced *absent* any subject specific content), and the “immersion” approach (whereby *no* explicit instruction in general critical thinking concepts are introduced among subject content), yielded the poorest gains. Furthermore, they concluded that faculty development both prior to and during instruction is necessary for learning gains in students, and that assuming that students will become better critical thinkers without explicitly attending to critical thinking goals in course planning and delivery, is a misplaced expectation.

The biggest warning in this analysis comes from the idea that the least effective way to inculcate critical thinking skills and dispositions is to assume that whatever an instructor does to

teach the content of their course, in effect they are thereby teaching critical thinking. The second serious warning is that a critical thinking course that takes the general approach, where subject specificity is ignored and only general critical thinking skills are introduced without the context of applicable knowledge, is a recipe for failure. In effect this evidence corroborates McPeck's (1981) criticisms and more recently, Willingham's (2007), which suggests that a major competent of critical thinking is being ignored if general skills are focused on without the context of discipline, or at least content, specific knowledge. While McPeck unjustifiably put the case too strongly, the mitigated position of subject specificity seems well grounded in light of Abrami et al's study: the generalist approach is pedagogically weak; while there are certainly generalizable skills that should be instructed, it only makes pedagogical sense to instruct them in light of specific content through which those skills have some chance of being relevantly applied.

3. The pedagogical paucity of critical thinking across the disciplines

Having said that, we are met with another serious problem, one that is at odds with Abrami's conclusion that embedding explicit tracks of generalized critical thinking content in a subject specific course is the most effective pedagogical tactic: the recent paper by Hatcher (2014) summarizing the disappointing results of 18 years of organized, systematic, and thoroughgoing (not to mention very well-funded) critical thinking instruction across the curriculum at Baker University. Given nearly two decades of work implementing a year-long critical thinking and composition course across the curriculum, he reluctantly concludes "that current approaches to teaching [critical thinking] are not working very well, and, while in theory [critical thinking across the disciplines] sounds like a terrific idea, I believe the likelihood that professors from across the disciplines will actually teach the knowledge and skills necessary for effective [critical thinking] is small" (p. 3). Specifically, on the Cornell Critical Thinking Level Z test, Hatcher found "that after a year-long course integrating [critical thinking] and written composition, the average student gained only 2.7 points on a 52-question test" (ibid.). What explains these poor outcomes? Hatcher is ruthlessly candid when he says the reason is "that, even under more or less ideal conditions, faculty from across the disciplines cannot effectively teach the basic skills necessary for [critical thinking]" (p.9). This even with expert faculty development training which instructors in the Baker University program underwent, as suggested by Abrami et al. (2008 & 2015).

4. The failure of the intuitive approach to teaching debiasing

Kenyon and Beaulac (2014) have offered another perspective that speaks for increased caution in any attempt to teach critical thinking as an institutional-wide requirement. In what they call the "intuitive approach to teaching debiasing (IA)" (p. 342), they disparage the common approach of teaching *about* bias, through taxonomic and factual content, as a means of achieving in students the necessary skills that are required to notice and work to attenuate bias, especially in their own thinking (p. 342). In spite of the evidence they cite that casts serious doubt on the efficacy of such an approach, rather than conclude that debiasing should not be taught in a critical thinking curriculum, they suggest "that knowledge of biases has the best chance of effectiveness when it leads one generally to accept and construct nudges or contextual engineering of one's own" (p. 356). In other words, if teaching debiasing is to be at all effective, it must go significantly beyond facts, the traditional content of bias and fallacy identification. To have the outcomes pedagogues

should truly want (the mitigation of bias and fallacious reasoning in practice among individual students) requires much more than what current educational practice is capable of delivering.

5. Paul et al. and the self-delusion of critical thinking pedagogy

Finally, couple all these recent findings with Paul, Elder, & Bartell's (1997) important survey and analysis that found that critical thinking instructors often consider that they are teaching critical thinking, but that they are mostly ignorant of whether they succeed. They state that,

From either the quantitative data directly, or from minimal inference from those data, it is clear that a significant percentage of faculty interviewed (and, if representative, most faculty [in general, who teach critical thinking--BH]):

- do not understand the connection of critical thinking to intellectual standards.
- are not able to clarify major intellectual criteria and standards.
- inadvertently confuse the active involvement of students in classroom activities with critical thinking in those activities.
- are unable to give an elaborated articulation of their concept of critical thinking.
- cannot provide plausible examples of how they foster critical thinking in the classroom.
- are not able to name specific critical thinking skills they think are important for students to learn.
- are not able to plausibly explain how to reconcile covering content with fostering critical thinking.
- do not consider reasoning as a significant focus of critical thinking.
- do not think of reasoning within disciplines as a major focus of instruction.
- cannot specify basic structures essential to the analysis of reasoning.
- cannot give an intelligible explanation of basic abilities either in critical thinking or in reasoning .
- do not distinguish the psychological dimension of thought from the intellectual dimension.
- have had no involvement in research into critical thinking and have not attended any conferences on the subject.
- are unable to name a particular theory or theorist that has shaped their concept of critical thinking.

These results are troubling to say the least. It is hard to imagine that much has changed in the intervening 19 years, except that critical thinking requirements have exploded in more institutions, with the knowledge required to teach such classes not keeping pace. As a plausible justification for this claim, I need only cite my own anecdotal evidence from the 2016 APA Eastern conference in Washington D.C., where in the Association for Logic and Critical Thinking (AILACT) group session devoted to examining critical thinking textbooks, in an authors meet critics scenario, only about a dozen people attended, and about 8 of those were people who were presenting.

6. Conclusion

Given the many voices that have sounded these alarms to the perils and pitfalls of teaching critical thinking, I submit that instructors and especially administrative officials should re-evaluate critical thinking requirements and how they are satisfied. While we rightly want students earning a bachelor's degree to be better critical thinkers by the time they graduate, it is not at all clear that they are becoming so as a result of our concerted and explicit efforts to achieve these outcomes. The way to mitigate this apparent failure is for practitioners and advocates of critical thinking instruction to better inform themselves of the relevant literature, and to shape their pedagogical and administrative expectations and tactics accordingly, by training teachers, honing course goals and student learning outcomes, and teach every critical thinking class through a "mixed" approach, where a separate track of critical thinking skill and disposition instruction is introduced alongside a content specific curriculum. In effect, what critical thinking instruction needs most at this juncture is more critical thought directed towards this endeavor, by the very people who are responsible for implementing such efforts, and without which, we risk the danger of preaching the skills we refuse to practice: surely a recipe for poor pedagogical outcomes, not to mention moral culpability.

Acknowledgements: I would like to acknowledge the Ontario Society for the Study of Argumentation (OSSA), and the OSSA 11 conference organizers, for their work in providing a venue for this paper, and for the other important research presented at the 2016 conference in Windsor, Ontario, Canada.

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