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Commentary on: Don Hatcher's "Is critical thinking across curriculum a plausible goal?"

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1. INTRODUCTION

Don Hatcher's answer to the title question is, No—and by the way, he adds, it's not clear that even dedicated critical thinking instructors know how to teach critical thinking or teach instructors how to teach it. He's tried to conquer that Everest, with a good team and exceptional support. He didn't get to the peak, but mountaineering heroes rarely do. What they do is to tell us about the approaches that don't work, or look as if they might work if tackled in a slightly different way.

I'll suggest a couple of next steps that will build on his efforts. But they're just as hard to do as his plan, which we'll take as defining the starting point.

2. THE NEXT STEPS IN TAMING THE BEAST

2.1 The true 'treason of the intellectuals' is their failure to turn their talents on themselves—to evaluate and improve their teaching, their research, and their service. It should be a required duty of all faculty, with the added sting that failure to make progress on this duty should be a fatal flaw in all faculty reviews, a bar to continued employment that must be cleared within two years of appointment. How to improve the teaching and learning of critical thinking skills should be one of the recommended topics in the answers to FAQs that are provided to all new appointees struggling with this requirement. Getting work going at that level is a step beyond the rhetoric of smart presidents that see the need, many of them quoted by Don, but think it's a problem like teaching statistics to social science majors. It's not an 'add-on' problem, you have to change the value system of the school or college. I think an answer to the problem of how to do this should be on the list of qualifications for presidential and professorial candidates, *and the interviewers*, and covered in the basic interviews of all candidates. I doubt if there's a board of trustees in the land who would refuse to go with this suggestion, given a little publicity for it in local and national media. Baker deserves to lead the way on this initiative; they won't be sorry.

2.2 Next, let's not walk past the gold that Don turned up on his way to the top. He was discouraged by the variability of his trainee faculty: I am excited by the high-end outlier he found. When you find gold, don't worry that you didn't get to your

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original target; gold is gold, whether it's what you were looking for or not. Let's hope it's not too late to take the appropriate next steps, which are: (i) Grab that guy (no gender implied) who was producing a six sigma gain score, find a few pennies to have him repeat the course his way, and let's all pray he doesn't regress to the mean! In the hope that he keeps doing very well, get two cameras into his classroom *and two good mics,* with VOX switches on them and a (paid) student volunteer to set them up and pick them up. (ii) I'd like to get the guy who produced negative gain scores for the comparison group, but it would be too embarrassing for him, which leaves us with just you and your two cameras/mics for the comparison, an essential part of the design anyway. (iii) When we have all the discs *but not before,* we'll assemble a jury to view them: I'd suggest you (essential) and one or two guys from education who are very experienced at classroom observation, and Dr. SuperTeacher. Your task: identify what he or she is doing that you aren't doing and vice versa. Then *you* try teaching, using his pedagogy; he's going to watch the disc for your first few classes and make suggestions. To continue, we'll assume his performance continues to be stellar. You need more money to continue? Talk to any big publisher to get an advance for a book called Dr. SuperTeacher, co-authored by you and the person by that name. Write it and send me a copy, please! (I'll pay for it.)

2.3 Your next project! Or, if this doesn't appeal, let's say you have a colleague who likes what I'm about to describe, or perhaps someone in today's audience. The time has come to kick into our superteacher soup the two best ideas from all higher education pedagogical research over the past 20 years. The first of these is what I've been calling the HIP approach (highly interactive pedagogy). The defining feature of this is that classes avoid all didactics, which will be found in the text that they read between classes, and instead focus on question-asking and answering, guided by the results of their homework questions, that being also done between classes, and graded by a computer at the door where they hand it in (or using the 2.4 method below, which is much slower but reasonably valid at grading critical thinking, unlike the computer grading). It's preferable that the class have clickers so that the instructor can ask more questions in class to see if they're keeping up with him, and they can ask questions of him or her. (Richard Hake is the chronicler for this movement; check Google for his latest postings.)

2.4 The second flavor we'll toss into superteacher soup depends for its success on a crucial research finding, namely that computers can't grade essays on their critical thinking content, though they can do pretty well on many other worthy characteristics. This conclusion is hotly disputed by most of the commercial players in the field, and a good many others, but talk to Bob Ennis or me for the very interesting reasons why we think differently. Assuming for the moment that we're right (and remember that the computer Watson won at Jeopardy but that wasn't an argumentation exam) then we need to solve the labour problem about teaching critical thinking, i.e., the problem of grading large numbers of critical thinking essays. Then call to mind all the research that shows teaching students to grade student essays (or other types of answer) *from your rubrics* turns out to be an

extremely successful way to teach them the subject matter of the essays. The combination of 2.3 and 2.4 is the pedagogical trick that the Stanford-led consortium of top rank universities has adopted for its great project, Coursera, that is putting many of the best courses in the country onto the Internet (check Google for more details).

2.5 WORKERS AND WARRIORS NEEDED. We have a hundred textbooks in critical thinking. None of them are blindingly superior, most of them have significant flaws, and many—including mine—are wildly out of date. We need a text that goes in the new directions indicated above, but before that we need something we could test it on. We just don't have the very large item pool we need—at least a thousand items, each of them with a scoring rubric that has been evaluated as valid by some other critical thinking people besides the author. I think it's bad policy, though often done, to keep a bunch of these secret for test construction; there are too many hackers for the security to be worth much. Tests can be made up by altering key variables in the items. We still need a thousand to cover trial (i.e., self-testing) work by students plus official test construction (10 competencies x 10 subject matters x 10 grade levels). I think AILACT might consider some funding of this effort, e.g., by offering a buck or four for each item accepted, along with its rubric and the rationalization for that. We might be able to get the collection started and then look for foundations as helpers to carry its cost the rest of the way.

3. A SMALL DEMURRER

One small disagreement with Don's comments on the nature of critical thinking. He stresses quite strongly, and illustrates with a number of examples, that he does not thing summarising events or documents or processes is a critical thinking process. But he does think clear presentations are. I think the latter involve the former, and not accidentally: I think insightful précis is a rare but rather reliable indicator of good critical thinking.

4. CONCLUSION

The thrust of the preceding remarks is that Don may not have reached the top of Everest, but he took us up far enough to greatly improve our view of the territory that lies ahead. I hope I've provided some useful suggestions as to how we might find a path from there.