Chapter 1
Teaching for Critical Thinking

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ABSTRACT

This chapter reviews the core process of critical thinking—hunting assumptions—and explains how this process differs according to the context of what is being taught and the different intellectual traditions that inform teachers' backgrounds. It outlines a basic protocol of critical thinking as a learning process that focuses on uncovering and checking assumptions, exploring alternative perspectives, and taking informed actions as a result. Three different categories of assumptions—paradigmatic, prescriptive, and causal—are defined, and the teaching methods and approaches that most help students to think critically are explored. The chapter examines in detail the fact that critical thinking is best experienced as a social learning process, and how important it is for teachers to model the process for students.

INTRODUCTION

In this chapter, I review the core process of critical thinking—hunting assumptions—and I try to explain how this process differs according to the context of what is being taught and the different intellectual traditions that inform teachers' own backgrounds. I outline a basic protocol of critical thinking as a learning process that focuses on uncovering and checking assumptions, exploring alternative perspectives, and taking informed actions as a result. I explain three different categories of assumptions—paradigmatic, prescriptive, and causal—and I argue that assumptions are rarely universally right or wrong, but that they are more or less contextually appropriate.

One of the problems in holding conversations with colleagues about how to get students to think more critically, is that different conceptions of what critical thinking looks like are held by teachers in different disciplines. I explore four different interpretations of this idea framed by, in turn, analytic philosophy and logic, the hypothetical-deductive method in the natural sciences, pragmatism, and critical theory. Where possible, I try to show connections between these traditions, and to argue that aspects of the basic protocol outlined earlier can be found in all of them.

I then turn my attention to a crucial question: what do students say are the teaching methods and approaches that most help them learn to think critically? Two of these I examine in detail are (1) that critical thinking is best experienced as a social learning process, and (2) that it is important for teachers to model the process for students. I explore teaching approaches suggested by these

insights and suggest some specific exercises. My objectives for this chapter are that readers will be able to apply the critical thinking protocol I advance to a number of classroom contexts, and that they will be able to design a sequence of activities to help students think more critically about ideas and actions.

BACKGROUND

Although I use the term critical thinking to refer to the general process of hunting and checking assumptions it is not an unequivocal concept, understood in the same way by all who speak or write the term. In fact it is a contested idea. How the term is used reflects the ideology of the user and her disciplinary background. In fact there are at least four distinct intellectual traditions shaping understandings of critical thinking and these differ substantially, perhaps explaining why so many efforts to teach critical thinking across the curriculum fail so dismally. In rough order of their prominence in the discourse of critical thinking these traditions are (1) analytic philosophy and logic, (2) natural science, (3) pragmatism, and (4) critical theory.

Analytic Philosophy and Logic: Detecting Language Tricks

This is by far the most influential intellectual tradition informing how critical thinking is understood and taught in North America. Boiled down to its simplest level, it focuses on getting students to give reasons for any opinions, conclusions or statements they made, whether these were in calculus, social studies or science. Furthermore, these reasons are judged to be more or less valid according to the evidence adduced in support of them. The great majority of texts currently published that have the words 'critical thinking' in their title spring from this tradition. They focus on things such as recognizing logical fallacies, distinguishing between bias and fact, opinion and evidence, judgment and valid inference, and becoming skilled at using different forms of reasoning (inductive, deductive, formal, informal, analogical, and so on).

Although the analytic philosophy and logic tradition may seem to be primarily technical, concerned with the mechanics of putting arguments together and taking them apart, it is often linked to a moral purpose. Diestler (2009) argues that the reason for assessing the validity of arguments is so that one can spot manipulative, false reasoning and protect oneself against it. She, and others such as Bassham, Irwin, Nardone and Wallace (2007) maintain that a familiarity with language games helps one understand how language can be powerful and potentially misleading, derailing effective critical thinking. The analytic philosophy tradition argues that if one can understand how bias and prejudice masquerade as empirical fact or objective interpretation, one is better placed to know what to believe and what to do. In his analysis of how we judge the claims people make, Vaughan (2009) argues that if we can comprehend better where our beliefs come from, we can judge whether or not those beliefs are worth having. One of the Paul and Elder (2006) 'mini guides' to critical thinking deals with detecting media bias and propaganda.

Some of the most common language tricks that the analytic philosophy tradition tries to expose are as follows:

- Attaching an abstract argument to a highly personal, dramatic narrative – so people associate the argument with an easily remembered personal story.
- Repeating a distorted argument often enough so that it becomes fact and gains legitimacy through frequent repetition.
- Taking one part of an opponent's argument out of context, changing its meaning, and highlighting it in such a way that it is presented as the main element in an opponent's platform.

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