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What Philosophy Offers to the Teaching of Thinking

What does philosophy have to do with teaching thinking? In a word, everything.

Much of what is written and done about the teaching of thinking reflects the influence of psychology. This is hardly surprising. In recent years, psychologists have taken major strides toward a fuller understanding of how we generate, process, store, and retrieve information and knowledge. Furthermore, because the training of educators often includes study in psychology or some subject closely related to it, we seem quite receptive to what psychologists have to tell us.

As important as psychology is in improving student thinking, however, it provides only one perspective for analyzing and understanding thinking. Philosophy offers another equally valuable, but too often ignored, perspective. Philosophy neither competes with nor negates the findings of psychology, but goes beyond it, adding unique insights into the cognitive processes we use to establish meaning.

Essentially, psychology offers insights into process, into *how* thinking occurs and thus how thinking procedures might be effectively taught. Philosophy, on the other hand, offers substance: it offers insights into *what* ought to be included in any worthwhile thinking skills program. If we fail to include insights from *both* psychology and philosophy in teaching thinking, we are likely to restrict ourselves to a one-dimensional understanding of thinking and to seriously limit our efforts to improve student thinking. I wish here to call attention to what philosophy offers about thinking that psychology does not so that these important dimensions of thinking can be incorporated into our classroom curriculums and teaching.[1]

Philosophy *Is* Thinking

Probably no discipline has more to do with thinking than does the discipline of philosophy, for philosophy and thinking are inextricably interwoven. Experts define philosophy as inquiry based on logical reasoning—it is the love and pursuit of wisdom.[2] Unlike other disciplines, which generally *apply* thinking in specific contexts to particular data or problems, philosophy *is* thinking, the thinking that underlies all assertions, claims, and principles. It is the only discipline that has thinking as both its *subject* and its *method* of inquiry.

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Philosophers study, apply, and evaluate rules and standards for thinking and for judging the substance of thinking. By focusing on the *standards* of good thinking, philosophy brings to us a different—and philosophers think more sophisticated—conception of thinking.

At the risk of oversimplifying a complex discipline, I would suggest that six concepts in philosophy have immediate relevance to improving students' thinking. A brief analysis may clarify how each can contribute to classroom efforts to improve student thinking.

Reasoning. Reasoning, the most distinctive feature of philosophy, is the systematic inferring of information according to rules of logic so as to demonstrate or ascertain the validity of a claim or an assertion. It is the

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process by which we draw conclusions from observations or invent hypotheses and beliefs. The use of reasoning gets us from given, perhaps fragmentary, evidence to a conclusion. Indeed, we reason for many purposes, including the need to find unstated assumptions to distinguish the relevant from the irrelevant, to justify claims, to determine the validity of others' claims, and so on.

Reasoning usually presents itself in the form of arguments, or sequences of statements presented to demonstrate the truthfulness of some assertion. This, for example, is an argument: "It's my turn to use the hall pass. I'm done with my work, and everyone else who has finished has already used it." By itself, the assertion "it's my turn to use the hall pass" is not an argument; it is simply a claim with no supporting reasons.

Argumentation can be thought of as a structure within which the various skills and dispositions of thinking are exercised. Levels of argumentation, from the simple to the complex, include recognizing arguments, analyzing arguments, evaluating arguments, and producing arguments.

Argument recognition consists of the ability to distinguish a communication that presents a claim with one or more supporting reasons from a communication that simply describes or explains. *Argument analysis*, as defined by philosophers Michael Scriven, Steven Toulmin, and others, involves examining a communication to identify (1) the claim (what the author is trying to make one believe or accept), (2) the stated reasons that are invoked to support this claim, and (3) the stated and unstated premises or assumptions that underlie the given reasons (the claimant may not prove or even state these but oft-times implicitly asks that they be accepted as true).[3] In *argument evaluation*, the extent to which the argument works or does not work is judged. In *argument making*, lines of valid reasoning must be produced to support an assertion. This complicated process applies argument analysis and evaluation, as well as more generative skills.

The abilities to recognize, analyze, judge, and formulate valid arguments through the application of reasoning and rules of logic are central to critical thinking.

Critical judgment. Philosophical thinking is critical thinking, which means a willingness (indeed, a predisposition) and an ability to scrutinize and evaluate thinking—one's own as well as others'—to determine truth, accuracy, or worth and to construct logical arguments to justify claims or assertions.[4] Such thinking is called *critical* because it judges according to prescribed criteria, not because it is negative or accusatory. The results of critical thinking can be positive or negative, depending on whether or not the criteria are met.

Critical thinking is discriminating, disciplined, and questioning. We often naively assume that the opposite of critical thinking is creative thinking, but its actual opposite, as Matthew Lipman points out, is *un*discriminating, *un*disciplined, and *un*questioning thought—in short, the gullible acceptance of claims without careful analysis of their bases of evidence, reasons, and assumptions.[5]

One of the most essential aspects of critical thinking is critical judgment, which to philosophers means the inclination to evaluate objectively rather than to accept blindly.[6] Philosophers examine reasoning to judge the extent to which it meets accepted standards of reasonableness and logic.[7] Critical judgment consists of applying appropriate criteria to any sort of communication—an oral statement, a written document, a film, a painting, an action, or an event.

Philosophers have identified many specific critical judgment skills that good thinkers are able to execute. These include, for example, the ability to make logical inferences, to identify logical fallacies, and to judge the logical consistency of arguments.

Because critical thinking is concerned with what is reasonable to accept, critical judgments must also be made about the accuracy and reliabil-

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ity of information in the premises of arguments and in the evidence offered in support of claims. Matthew Lipman, Robert Ennis, and Richard Paul have identified a number of critical thinking skills that can be employed to judge the quality of reasoning.[8] Among the skills they believe all of us should master are:

- determining the credibility of a source,
- distinguishing the relevant from the irrelevant,
- distinguishing facts from value judgments,
- identifying and evaluating unstated assumptions,
- identifying bias,
- identifying point of view,
- evaluating evidence proffered in support of a claim.[9]

For philosophers, being able to think means being able to execute these and other thinking operations within the context of searching for truth. For Lipman, reasoning at the lowest level means being able to execute each of these critical judgment skills. The highest level of reasoning demands the ability to combine these skills in a concerted, simultaneous fashion for highly sophisticated purposes.[10]

Criteria. Philosophy, as Lipman and others frequently point out, is unlike other disciplines in that it provides criteria for judging the *quality* of thinking.[11] More important, philosophers continuously submit these criteria to intensive critical analysis in an effort to devise the best criteria to use in their search for truth.

To examine the claims and arguments with which we are bombarded (and which we ourselves devise), we must understand and be able to apply criteria for determining the reasonableness of given claims and arguments. Experts generally agree, for example, on the criteria for identifying bias, the criteria that a line of reasoning must meet to be considered valid, and the criteria that a written document must meet to be considered credible. For a written source to be credible, for instance, the author must be recognized as expert on the subject, must have a reputation for accuracy, and must have no vested interest in distorting the truth in what has been written.[12] The criteria used in critical thinking are a knowledge dimension unique to this kind of thinking.

Philosophers have formulated (or, some would say, discovered) rules of reasoning that have come to constitute logic. These rules serve as guidelines for producing reasoned arguments as well as criteria for judging the quality—the reasonableness—of any claim or argument. One such rule, for example, is often expressed as:

1. If A, then B.
2. If B, then C.
3. Therefore, if A, then C.

Translated into an everyday example, such a statement might read:

1. If Jane gets a 90 on this exam, she gets an A as her average in this course for this semester.

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2. If Jane gets an A average for this course for this semester, she makes the honor roll for this semester.

3. Therefore, if Jane gets a 90 on this exam, she makes the honor roll for this semester.

This argument is perfectly logical according to this rule, which holds that the truth of premises 1 and 2 *necessarily* leads to a true conclusion (as stated in number 3).

Logic, it should be noted, deals not with the substance of what is said, but with its structure, with the rules of how to put statements together so that one leads invariably to the next. These rules help us determine the validity of conclusions in terms of the reasons upon which they are based. Generating and judging valid arguments call for knowledge of the rules of logic as well as the skill and inclination to apply them. Critical thinkers must think critically about the criteria and standards on which thinking is based and use these standards to judge thinking and its products.

Point of view. When philosophers think about the substance of thinking, they focus not only on its elements, process, and structure, but also on the context in which thinking occurs. One important feature of this context is the point or points of view taken, represented, or expressed by the individuals involved.

The phrase *point of view* means different things to different people. To some, it simply means one person's opinion. For philosophers, however, it is a much more complicated and sophisticated concept. In terms of critical thinking, a point of view is the position from which one views thinking, and that position, in turn, is a product of one's accumulated experience.[13] An individual standing on the rim of the Grand Canyon, for example, sees a different scene than does one standing along the riverbed at the bottom of the canyon. Furthermore, what is seen differently is interpreted differently, according to each viewer's prior knowledge, interests, motives, assumptions, biases, predilections, and similar variables. So, in examining ideas, events, or experiences, different individuals often see altogether different aspects of the subject, depending on where they are and where they have been. Only when different viewpoints are put together is the whole comprehensible.

Full understanding of an explanation or a description requires an understanding of the point of view that produced it. Thus, detecting points of view and taking them into account are important aspects of philosophical thinking, as is the ability to look at a subject from different points of view. It should be noted, however, that the rules of logic are valid for all persons regardless of their points of view.

Dialogue. One major method by which individuals exercise their critical thinking abilities is dialogue. Paul defines dialogue as an interchange among two or more individuals or points of view on a given topic, claim, or subject in an effort to ascertain the truth.[14] Such an interchange involves giving and analyzing evidence, reasoning logically, identifying assumptions, looking at consequences, and representing differing points of view. This dialogue may be conducted between or among people, or it may even be carried on by an individual through critical self-reflection.

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Asking and answering questions is one way that dialogue is stimulated, directed, and critically evaluated. Of course, not all questions call for critical thinking. Some simply call for a literal report of what some source has asserted or what appear to be the attributes of an object, a scene, a process, or a claim. Questions that require critical thinking, on the other hand, call for sustained efforts to reason and to evaluate reasoning. Such questions require respondents to clarify statements, define terms, and judge the relevance, accuracy, and nature of statements.[15] A typical line of questioning that activates critical thinking might include the following questions:

- Why is your claim true?
- What reasons or evidence can you give for saying what you said?
- If that is so, what is likely to follow?
- What are you assuming? If that is so, aren't you also assuming that . . . ?
- What are other ways of looking at this?

This line of questioning (sometimes called Socratic questioning) provides an opportunity, a stimulus, and a guide for applying critical thinking. The process probes the thinking by which an individual makes and justifies assertions. Socratic questioning does not teach anyone how to *do* critical thinking, but it provides a device for *exercising* critical thought. Engaging in dialogues guided by questions like these moves a thinker closer to understanding a particular claim or topic and to ascertaining what is true. Many philosophers assert that the ability to think rationally is thereby enhanced.

Dispositions. Some philosophers emphasize that thinking is much more than simply technique or skill, that in addition to criteria, rules, and procedures, critical thinking is a particular mental set that calls for distinct, habitual ways of behaving. These ways—called *dispositions* by Ennis, *passions* by Paul—constitute the spirit, or affective dimension, of critical thinking,

making it much less mechanistic than it is customarily portrayed to be.

Paul asserts that skilled thinkers are driven by a passion for getting to the bottom of things, are devoted to seeking the truth rather than to self-aggrandizement, are inclined to ask probing questions about why things are believed to be as they are asserted to be, are persistent in thinking their way through perplexing problems, and are deeply averse to sloppy, ambiguous thinking.[16]

Ennis claims that skilled thinkers are also disposed to continually seek more information, to use credible sources; to volunteer and seek reasons and evidence in support of claims, to suspend judgment, to examine issues from different points of view, and to be willing to change their positions when evidence and reasoning warrant.[17]

Notice the words used to describe these operations: *driven*, *devoted*, *persistent*, *disposed*, *seek*, and *be willing*. These attributes of dispositions, which reflect emotions and feelings, show that while critical thinking is objective, it is hardly value-free. Critical thinkers attach great value to seeking understanding, determining worth, and searching out truth. The continuing, persistent disposition to know what is true motivates critical thinking and guides it by basing its execution on a clear underlying value.

Philosophy and Teaching Thinking

Of course, philosophers deal with concepts other than the six just highlighted. Some, such as matters of free will and determinism, do not seem especially relevant to efforts to improve critical thinking or its teaching.

Others may be relevant but are at the moment receiving little attention from philosophers interested in furthering the teaching of critical thinking. One of these is reasoning about moral and ethical issues and principles. Another is the analysis and conceptualization of concepts such as *truth*, *fairness*, and *equality*, which are central to our democratic way of life. Indeed, the conceptual repertoire of philosophy is one of the treasure houses of the humanities. Only a portion of these riches has yet been uncovered or applied to the teaching of thinking.

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Regardless of the kind of "thinking curriculum" educators might develop, it should include at the very least the six basic concepts of philosophy outlined here. Moreover, no matter which cognitive skills are selected as learning objectives, reasoning—inductive, deductive, analogical—ought to be included, for this skill is foundational to all thinking, including recall.

Critical judgment and the specific operations by which it is carried out should also be included because of the crucial role they play in generating and evaluating the hypotheses, theories, and conclusions that thinking produces.

In addition, any viable thinking skills curriculum should provide instruction in the criteria by which we judge the worth, accuracy, and truth of our own thoughts and those of others, especially the rules of reasoning, the principles of logic, and the evaluative criteria used in critical thinking. Identifying, analyzing, and evaluating point of view should be included among those concepts.

Finally, to be worthwhile and effective in producing skillful thinkers, a K-12 thinking skills curriculum should attend to the methods philosophers use to stimulate and guide thinking as well as to the dispositions that support and motivate this thinking.

Such a curriculum should employ dialogue and structured, *student-generated* critical thinking questioning, not simply as devices for exercising thinking, but as frameworks for instruction and as devices for guiding practice and application following instruction. The values and attitudes that support critical thinking should also be explicit goals of instruction, for such dispositions, as much as skill with cognitive operations and criterial knowledge, carry thinking forward.[18]

Those of us who want to improve student thinking ignore these six *qualitative* attributes of philosophic thinking at some peril. Unfortunately, in our desire to infuse thinking skills into the K-12 curriculum, many of us have been focusing almost exclusively on information-processing skills and cognitive strategies (such as decision making, problem solving, and creative thinking) to the exclusion of reasoning and the other thinking skills and dispositions associated with philosophy. We should do more.

If we do not begin to incorporate the concepts of philosophy into programs to improve thinking, we run the risk of producing form without substance, technique without purpose, performance without measures of quality. If we do incorporate what philosophy has to offer, however, we can enable students to claim, as Descartes did, "I think, therefore I am."□

[1]A small number of philosophers, deeply committed to the teaching of thinking, have made cogent efforts to refine, clarify, and interpret aspects of philosophy that relate to thinking. Three who have made especially noteworthy contributions are Matthew Lipman, Robert Ennis, and Richard Paul.

From Lipman's incisive interpretations of critical thinking came his ingenious invention of very specific classroom approaches for teaching children to sharpen their thinking skills and dispositions. See: M. Lipman et al., 1980, *Philosophy in the Classroom*, 2nd ed. (Philadelphia: Temple University Press).

Ennis's ground-breaking analyses of the nature of critical thinking and his explora-

tion of ways to assess it have made an immense contribution to our understanding of this complex mental phenomenon. See: R. Ennis, (Winter 1962), "A Concept of Critical Thinking," *Harvard Educational Review* 32, 1: 81–111; Ennis, (1987), "A Taxonomy of Critical Thinking Dispositions and Abilities," in *Teaching Thinking Skills: Theory and Practice*, edited by J. Baron and R. Sternberg (New York: W.H. Freeman and Company).

Paul's analysis and advocacy of philosophical thinking have inspired appreciation of philosophy as a tool for improving thinking. See: R. Paul, (September 1984), "Critical Thinking: Fundamental to Education for a Free Society," *Educational Leadership* 42, 1: 4–14.

The points in this paper distill the work of Lipman, Ennis, and Paul, as well as that of Steven Toulmin, John Chafee, Vincent Ruggerio, Tony Blair, and Philip Pecarino. Along with their thoughts and claims are insights I have derived from applying their ideas to the teaching of thinking.

[2]W. Morris, ed., (1973), *American Heritage Dictionary of the English Language* (Boston: American Heritage Publishing Company and Houghton Mifflin Company), p. 985.

Psychology provides only one perspective for teaching thinking. Philosophy provides a second—and too often ignored—dimension.

[3]M. Scriven, (1976), *Reasoning* (New York: McGraw-Hill Book Company), pp. 39–45; S. Toulmin, R. Ricke, and A. Jarik, (1984), *An Introduction to Reasoning*, 2nd ed. (New York: Macmillan).

[4]R. Paul, (September 1984), "Critical Thinking: Fundamental to Education for a Free Society," *Educational Leadership* 42, 1: 4–14; Paul, (1987), "Dialogical Thinking: Critical Thought Essential to the Acquisition of Rational Knowledge and Passions," in *Teaching Thinking Skills: Theory and Practice*, pp. 127–148, edited by J. Baron and R. Sternberg (New York: W.H. Freeman and Company).

[5]M. Lipman, (September 25, 1987), "What Is the Thinking Skills Movement Doing to American Schools?" Address at the Conference on Thinking and Education of the Virginia Department of Education, Williamsburg, Virginia.

[6]M. Lipman, (September 1988), "Critical Thinking—What Can It Be?" *Educational Leadership* 46, 1: 38–43.

[7]R. Paul, "Critical Thinking: Fundamental . . . ", *op. cit.*, pp. 4–14; Paul, (1987), "Dialogical Thinking: Critical Thought Essential to the Acquisition of Rational Knowledge and Passions," in *Teaching Thinking Skills: Theory and Practice*, *op. cit.*

[8]R. Ennis, "A Concept of Critical Thinking," *op cit*; R. Paul, *et al.*, *Critical Thinking Handbook: 4th-6th Grades* (Rohnert Park, Calif.: Center for Critical Thinking and Moral Critique, 1987) p. 4.

[9]B.K. Beyer, (April 1985), "Critical Thinking—What Is It?" *Social Education* 49, 4: 270–276.

[10]Lipman, (September 1984), "The Cultivation of Reasoning through Philosophy," *Educational Leadership* 42, 1: 51–55; Lipman, "What Is the Thinking Skills Movement . . . ?" *op. cit.*

[11]Lipman, "Critical Thinking—What Can It Be?" *op. cit.*

[12]R. Ennis, (Winter 1985), "Critical Thinking and the Curriculum," *National Forum* LXV, 1: 28–31; Ennis, (October 1985), "A Logical Basis for Measuring Thinking Skills," *Educational Leadership* 43, 2: 46.

[13]Paul, "Dialogical Thinking," *op. cit.*

[14]Paul, *ibid.*; Lipman, "The Cultivation of Reasoning," *op. cit.*

[15]Paul, *ibid.*; Lipman, "The Cultivation of Reasoning," *op. cit.*; Paul, "The Critical Thinking Movement," *op. cit.*, p. 32.

[16]Paul, "Dialogical Thinking," pp. 141–142.

[17]Ennis, "A Concept of Critical Thinking," *op. cit.*; Ennis, "A Logical Basis for Measuring Thinking Skills," *op. cit.*, p. 46.

[18]For detailed approaches to developing such a curriculum, see, for example, B.K. Beyer, (1988), *Developing a Thinking Skills Program* (Boston: Allyn and Bacon, Inc.).

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