"Critical thinking" has become an educational buzzword with many diverse and sometimes conflicting definitions and teaching approaches. Though the critical thinking movement in education seemed very promising at the beginning of the 1980s, it is not fulfilling all its promises for a number of reasons. For example, teachers are inadequately trained; the teaching of critical thinking is not sufficiently based on the social sciences and philosophy; and the critical, creative, and caring dimensions of thinking are not properly connected in the teaching and the curriculum. Given the current situation, and the obvious importance of improving our students’ reasoning abilities and measuring their improvement, educators need to understand definitions of "critical thinking" that clearly indicate just what critical thinking is, what a significant improvement of thinking is, how its improvement can be made operational, and how critical thinking can be effectively taught. Mathew Lipman’s second edition of *Thinking in Education* proposes constructive and creative guidance without pretending to be the final definitive word on this complex and challenging matter.

Mathew Lipman is not an armchair educational philosopher, but one who has been in the "trenches" for many years. He began over thirty years ago at Montclair State University the Philosophy for Children program, which is now an international movement. The readings and pedagogy in this program are quite unlike academic philosophy studied in college. The kernel of this program consists of two components. First, students read out loud fictional stories of children of about their own age who genuinely explore among themselves various philosophical issues naturally arising from their everyday activities. The issues inquired into are, however, quite standard: personal identity, right actions, truth, reality, beauty, justice, God, love, friendship, thinking, dreams, etc. Lipman wrote these books in such a way that the main characters in them are children who model critical, creative, and caring thinking. Second, a properly trained instructor carefully guides each student to raise questions about what s/he considers important in what has just been read; guides the group to choose democratically the questions they wish to answer; and coaches them to explore and evaluate collaboratively their answers. This "community of inquiry" is proposed as a social context within which to teach critical thinking. It encourages exploration, curiosity, and organization, and gives back to students some of the natural incentives to venture they experienced after
their own birth and began exploring and figuring out their world. Thinking in Education is a theoretical work, sprinkled with some practical suggestions, partly based on his experience and research in this program, and on his reflections on thinking in general.

In the first chapter Lipman begins to explore how we are to educate for reasonableness, which he defines as rationality tempered by judgment. He proposes—without blaming teachers—a tentative explanation of children's early loss of curiosity and inquisitiveness once in school: schooling provides few natural incentives to thinking in the way that the home environment does during the first five exploratory and inquiring years of a child's life. The typical educational practice consists predominantly in the transmission of knowledge rather than inquiry. He then attempts to come to grips with core concepts (e.g., inquiry, community, rationality, judgment, creativity, and autonomy) that contribute to reflective education in the classroom.

The first half of the second chapter sketches the recent sources of the critical thinking movement from Dewey to the present in the U.S. and Britain, but it is done in a way that is consistent with the central goal of the book. He then proposes other approaches to help students to guide their behavior by good reasons; addresses some of the challenges of teaching for transfer; and discusses different definitions of "critical thinking".

Chapter three addresses some disagreements over the nature of thinking, the proper psychological approach to teaching, the role of philosophy, and preferred educational approaches to improving students' thinking. Lipman then discusses six significant misconceptions regarding the teaching for critical thinking that have hindered students' learning: teaching for thinking is equivalent to teaching for critical thinking; reflective teaching will necessarily result in reflective learning; teaching about critical thinking is equivalent to teaching for critical thinking; teaching for critical thinking requires drill in thinking skills; teaching for logical thinking is equivalent to teaching for critical thinking; teaching for learning is as effective as teaching for critical thinking.

The fourth chapter is an important one because it explores some of the theory and pedagogy underlying the community-of-inquiry-approach to teaching critical thinking. Over thirty years ago this approach applied a pedagogical belief that has only recently become popularized: learning is a social activity to which a child brings his/her experience. The final goal of each session of a community of inquiry is a tentative judgment, arrived at by means of reasonable argumentation in an open and respectful dialogue in which students learn from each other. The inquiry has procedural rules that are logical and ethical in nature. This chapter elaborates on the logic and art of conversational discourse, and the role of the community of inquiry in education. The pedagogy of the Philosophy for Children program preceded the popularization of collaborative or cooperative learning. However, they differ in an important respect: collaborative learning stresses noncompetitive discussion while the community of inquiry stresses shared collaborative inquiry (119). The ease of teachers accustomed to collaborative or cooperative learning in incorporating the community of inquiry approach, as practiced in the Philosophy for Children
program, will depend on how well grounded they are in inquiring approaches.

The fifth chapter applies the community of inquiry approach to an important issue in contemporary education: violence reduction. If students are to learn to apply methods of conflict resolution in their daily lives, they must first learn to question together, reason together, and make judgments together in an exploratory dialogue in which the other sides are fairly considered. "Students can acquire significant practice in mediating with one another and in arriving at settlements, only if they are first confronted with problems that speak to them directly and are genuinely unsettling"(106). Since philosophy is so persistently contestable, it can be quite useful when suitably reconstructed for schoolchildren to help them perform at their level of linguistic, logical, and conceptual competencies. If violence has been experienced or observed, it can become an opportunity for reasonable dialogue about the context in which it occurred, and evaluation of the reasons for and against the violence. This approach helps students critically examine what is normally taken for granted in moral discourse. This chapter offers a wealth of suggestions on educating for values and meaning through the community of inquiry.

The sixth chapter explores the role that emotions play in thinking and education, an unfortunately neglected topic in the teaching of critical thinking. The common and inadequate view in our culture is that emotions blur and distort thinking, and that we have no control over them: they just happen to us. Such thinking overlooks the cognitive, behavioral, and physiological basis of emotions, over all three of which we do have some varying degree of control. We thus indirectly do have some control over emotions. Given our common faulty beliefs about emotions, a better understanding of them from childhood onwards would not only contribute to our emotional health, but also to our ethical growth, for our flawed views make us use emotions as excuses for various behaviors. A proper education about emotions would make us realize how responsible we are for our emotions, which will not be an easy task in a culture in which we still commonly believe, "I feel angry (sad, worried, etc.) because you did ___". Emotions can be appropriate or inappropriate according to the circumstances in which they are expressed, and according to the cognitions upon which they are based. To educate children about emotions, we have to begin by teaching them the words used to identify emotions, the connections between different emotions (e.g., despair and desperation, love and being in love); helping them to identify and evaluate the judgments underlying their emotions; and providing them with a suitable sounding board for their ideas, such as a community of inquiry.

The seventh chapter helps us to explore, deepen, and broaden our theory of mental acts. In order to improve students' reasoning, they must learn to reflect on their thinking, for it is only from an awareness of their own thinking that they will properly orchestrate their thinking, and correctly apply the appropriate standards of reasoning to their own thinking for self-correction. Our ability to guide such thinking about thinking will depend on our own theory of mental acts, such as deciding, selecting, gathering, postulating, etc. Just as with emotions, we need to teach children the terms of various mental acts and mental states, and to use literature and the community of inquiry to give them a context to explore and discuss them.
This chapter offers a wealth of information, interspersed with pedagogical suggestions. It needs to be reread a number of times, not because of any ponderous obscurity, but rather because of the wealth of ideas it offers to help us become aware of our own thinking, and to reflect on our tacit theory of thinking and its appropriate application in the classroom.

The eighth chapter continues to develop the author's theory of thinking on another educational buzzword: "thinking skills". He describes some of the skills and dispositions encouraged and developed in the community of inquiry; distinguishes between inquiry skills, reasoning skills, and information-organizing skills, and expounds on the orchestration of skills. The latter is particularly important, for too often thinking skills are taught in a fragmented way, disconnected from each other, thereby making it difficult for students to apply all the skills relevant to accomplish a task in an organized way. The acquisition of inquiry and reasoning skills is not enough: it is necessary to know how, when, and where to apply them. Just as children learn their first language readily when a family calls forth that learning, they readily learn to reason well when schools immerse them in a community of inquiry where they will taught from the very beginning to evaluate what they read, hear, and say, and to argue for their interpretations.

From thinking skills we next move to the dimensions of thinking: critical thinking, which emphasizes standards or reasoning; creative thinking, which focuses on inventiveness; and caring thinking, which stresses ethical values and emotions. This multidimensional thinking is intended to strike a "balance between the cognitive and the affective, between the perceptual and the conceptual, between the physical [body] and the mental" (199-200). Western civilization has traditionally emphasized the cognitive over affective and creative aspects of our thinking, but Lipman proposes an egalitarian and interdependent approach to critical, creative, and caring thinking. The next three chapters focus on each dimension.

The ninth chapter is on the education of critical thinking and begins by showing that what we call "critical thinking" is just a recent version of long-standing intellectual concerns that accompanied the birth and development of our civilization. He then identifies judgment as the outcome of critical thinking; explains the concept of judgment; expounds on the notion of criteria, and its the relation to critical thinking and judgment; discusses the self-corrective nature and the sensitivity to context of critical thinking; presents specific criteria of good reasoning (e.g., relevance, sufficiency), and discusses various fallacies.

The tenth chapter is on the education of creative thinking and touches another neglected topic in the teaching of critical thinking. "Creative thinking (as contrasted with the psychological disposition to creativity per se) is that minimal element of idiosyncratic judgment in every artist's work. Like all judgment, it is expressive of the person making the judgment and appraisive of that person's world" (249). Lipman uses a concrete example of a museum director who is planning an exhibit of paintings to list and describe twelve creativity criteria. He then discusses different kinds of thinking (ampliative, exemplified by inductive reasoning and the use of analogies and metaphors; rule/criterion defiant thinking; maieutic thinking, illustrated whenever we think caringly about the creative thinking of our students) and relates
them to creativity. The author examines the relationships between creative thinking and both caring and critical thinking. He touches on creativity in the dialogues of a community of inquiry, and how creativity relates to thinking for ourselves. Lipman suggests that an individual's creative thinking resembles the dialogue between good teachers and their students, and that to acquire an art is to enter into a dialogue, whether actual or mental, with the practitioners of that art, and to build on, reject, or modify various aspects of the others' thinking, until one acquires one's own creative outlook. All this is further reason for instructors to use the critical, creative, and caring vocabularies and criteria correctly as often as possible to help our students internalize reasonable personal dialogues to guide their thinking, emotions, and actions.

The eleventh chapter examines the third dimension of thinking: caring thinking. To care for someone or something is to think about, feel and act toward him/her or it in an appreciative and respectful way. It is a judgment that it matters. Lipman then describes appreciative, affective, active, normative, and empathic thinking. The latter is particularly important in making us understand a common cause of breakdowns of understanding: we attend only to the words and thoughts involved in an exchange, and fail to put ourselves in the other's situation and to experience his/her emotions as if they were our own. Caring is important in improving thinking because it is the dimension that brings in values. If we think about something without any valuation, we will approach it apathetically and indifferently, which inescapably affects the quality of our inquiry.

Just as the product of critical, creative, and caring thinking is judgment, the twelfth and final chapter synthesizes the book by describing theoretical issues pertaining to strengthening the power of judgment. Poor judgment is sometimes a reflection of weaknesses of character, and such defects have been traditionally attributed to poor family upbringing. However, schools, whether they like it or not, have become surrogate homes, and thus share some responsibility in developing students' judgment. Lipman continues to defend his case that elementary school philosophy is ideal for providing a forum where students can reflect on different kinds of judgments. He examines twenty kinds of judgments, e.g., value judgments, causal judgments, inferential judgments, factual judgments, etc., all of which are central to the appreciation and deep understanding of a discipline. Strengthening these judgments involves an explicit consideration of the principles and standards underlying them, and their applications to issues that interest students. This requires less emphasis on the mere acquisition of information (which I sometimes less respectfully name, "mind stuffing"). A curriculum should balance both content and the explicit teaching of critical, creative, and caring judgment. Unfortunately, current teaching practices generally just encourage differences of opinion, open discussions and debate, without giving students tools of inquiry, criteria for judgments, the methods and principles of reasoning, practice in conceptual analysis, etc.

I have often observed very well-intentioned instructors—at all levels—misfire in their attempts to infuse critical thinking into their teaching for a number of reasons. First, states require teachers to cover too much content, most of which is never used beyond the final exam and only serves the purpose of passing an exam.
Second, protestations to the contrary, "higher" education tends to be simply a greater quantity of more complex and intense mind stuffing than what is offered in high schools. This is not exactly ideal pedagogical modeling, and students will be disposed to teach the way they have been taught, unless they are properly trained in faculties of education, or take charge of their own professional development once they are in the trenches, and do whatever is reasonably possible in their challenging situations to compensate for their inadequate training. Third, faculties of education have been improving in various areas, but despite all their public lip service to critical thinking, there is still much work to be done in that area. For example, the recent emphasis and improvements in the area of literacy are unfortunately still disconnected from good thinking. Though Matthew Lipman does not give applications of his ideas to specific disciplines, and some might take issue with his emphasis on philosophy for children, *Thinking in Education* provides some important theoretical guidance for all levels of education: state departments of education, higher education, teacher training, and professional development.

Claude Gratton  
Antelope Valley College  
cgratton@avc.edu