

George Hillocks, Jr. *Ways of Thinking, Ways of Teaching*. New York: Teachers College Press, 1999. 168 pages. \$22.95 paper / \$47.00 cloth.

Review

## Objectivist and Constructivist Knowledge

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In a speech delivered in December of 1854, Louis Pasteur noted, "In the field of observation, chance favors the prepared mind." Pasteur, a renowned empiricist, apparently believed that the observer who is open to data and their interpretation will grasp implications and insight thanks to intellectual preparation for discovery. Pasteur's aphorism pertains to the thesis of George Hillocks, Jr.'s new book: teachers come to their classrooms with prepared minds that profoundly influence their teaching. Hillocks' data establish that composition teachers operate out of knowledge that is variously defined and displayed; however, their beliefs about how knowledge works and whether their students are capable of learning affect their teaching styles in specific ways. Hillocks classifies four "ways of thinking" that, in this study population, connect predictably with "ways of teaching."

The four ways of thinking are derived from two epistemological stances, the *objectivist*—knowledge is "out there" to be apprehended and understood—and the *constructivist*—knowledge is constructed actively by learners as they interact with the world. These positions are modified by the teacher's attitude toward students. The pessimist views students as defective creatures unable to learn without close supervision, whereas the optimist views

students as capable and eager to learn. The four possible ways of thinking become: 1) the objectivist pessimist, who believes that knowledge is readily available in the world, but students lack the tools to apprehend it; 2) the objectivist optimist, who believes that, with careful guidance, students can eventually apply what they are taught; 3) the constructivist pessimist, who believes that students lack the ability to construct knowledge; and 4) the constructivist optimist, who believes that knowledge is mediated and constructed, and that students are capable of working toward knowledge-making. In Hillocks' sample, no teacher was found to be a constructivist pessimist, and all pessimistic teachers were also objectivists. Optimistic teachers displayed both objectivist and constructivist stances.

The study involves observations and interviews of nineteen community college teachers of first-year composition and one high school teacher over a period of two years. The observations and interviews were transcribed, and all of the activities were coded according to an elaborate scheme that allocated time to various kinds of knowledge, methods of instruction, student questions and responses, discussion, procedural activities, demonstrations, and other classroom "episodes."

Hillocks differentiates among several kinds of knowledge at work in the classroom, particularly "declarative" knowledge, which corresponds to a transmission mode, and "procedural" knowledge, which is more attuned to discovery—or preparation for discovery. The pessimistic teachers—particularly with an objectivist stance—use a larger proportion of declarative knowledge to correct their students' deficits, while the optimistic teachers tend to allow students to explore and arrive at their own conclusions.

Three chapters of the book are devoted to extended case studies that include transcripts from classroom observations and interviews that demonstrate the ways of thinking enacted as ways of teaching. One key observation is that the objectivist-pessimistic teachers tend to employ the modes of teaching (lecture, recitation) that purport to provide structure to students who need the discipline of learning rules and applying them through practice. As we all remember, Hillocks' 1986 meta-analysis of effective methods of teaching writing demonstrated that these modes were among the least successful. In contrast, the constructivist-optimistic teachers employ modes of teaching that allow students to reflect on their learning as it happens through group projects, discussion, writing to learn, and other activities that Hillocks' meta-analysis found to be more successful.

Hillocks emphasizes that the most telling implication of this study is the likely resistance to change on the part of teachers with pessimistic attitudes about students and an objectivist epistemology. As his case studies show, such teachers often despair of poor student performance in spite of teaching that, in their view, is correctly planned and delivered. Students do not do their part, thanks to inability, lack of effort, or other deficits. Better exercises, more discipline, and more accountability are attractive to such teachers. Taking the kind of risks common to constructivist-optimistic teachers, such as open-ended activities, group work, and collaborative instruction, amounts to inviting anarchy into a situation already loaded with problems. On the other hand, constructivist-optimistic teachers are more likely to reflect on the learning their students display and constantly refine their approaches to enhance a climate of knowledge construction. Reflection, a familiar theme in Hillocks' work, becomes a touchstone for the kind of teaching that succeeds on many levels, and he worries about the college-level teachers who arrive in the classroom without the benefit of coursework on pedagogy. For those who operate from an objectivist position and also view students as inexperienced beings incapable of serious, scholarly work, problems in the classroom tend to be located exclusively with students rather than with epistemology and pedagogy.

Had Hillocks interviewed students as well as teachers, his case for the effects of reflective practice within an optimistic, constructivist pedagogy would likely become even stronger. In the current study, student voices are present only in classroom transcripts, and their observations on the classroom, their performance, and their teacher's pedagogy could add valuable data. In my experience, teachers and students read one another well; I predict that Hillocks would find that students would name their teachers' pedagogical styles accurately. They would also have opinions about pedagogy that would be worth knowing.

Hillocks' study invites a reflective return to Pasteur's aphorism: Does teaching require a "prepared mind?" Can teaching attitudes be themselves taught? Does current genetics research that seems to provide evidence of genetic bases for many behaviors extend to the complex activities of thinking, knowing, demonstrating, telling, and asking that we call teaching? If so, Hillocks would have yet another reason for us to consider whether our ways of thinking impede development of reflective teaching practices. The challenge for all of us is to surface our underlying—and often tacit—beliefs about knowledge, students, and education itself to prepare our minds for discovery.

