

John I. Goodlad • Herbert P. Ginsburg  
John Brockman interviews Howard Gardner  
Robert J. Sternberg • Robert R. Spillane  
Dorothy S. Strickland • Arthur L. Costa

TEACHING FOR  
**Intelligence**  
SECOND EDITION

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Theodore R.Sizer • John Barell  
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# *Introduction*

The second edition of this volume is a testament to a good idea that is much more than a decade old. *Teaching for Intelligence*, the record of a conference held in New York City at the end of the twentieth century, remains a powerful focus for education in the twenty-first century. This is due not only to the reasons cited at the original conference, but because we are in a post–September 11, 2001, world. Also, in America, the experience of an educational policy dominated by No Child Left Behind legislation makes this position of teaching for intelligence even more significant.

The first section of this volume examines what teaching for intelligence actually means: emphasizing the *intent* that students and teachers need in order to value inquiry, critical thinking, problem posing, and problem solving. This position suggests that *how one thinks* is a prime concern for classroom interaction. This target is a long way from testing goals that lie on a pass or fail continuum or that define 100 percent achievement as an assessment priority. Rather, one might examine Sizer’s praise of the skeptical mind or Greene’s faith in rich conversation and dialogue as important bases for instruction. How could you capture such objectives on a timed test? Cognitive scientists like Sternberg and Gardner emphasize *process* as well as *content*, and open the door to questions about teaching methodology and the pursuit of *depth of meaning* in classroom exchange. They raise issues such as who is the learner, and under what conditions can teachers actually instruct for intelligence development? In the second and third sections of this volume, writers such as Darling-Hammond, Barell, and Fogarty provide responses to these queries and report empirical research findings that demonstrate the efficacy of teaching for intelligence.

The papers in this collection also challenge educators to review the reform period in education at the end of the last century. They

suggest a need for examining how teaching for intelligence makes a difference to issues raised in several key documents of that period: *A Nation at Risk* (1983) and *Academic Preparation for College: What Students Need to Know and Be Able to Do* (1983), as well as those in the more recent No Child Left Behind Act (2001).

In terms of the first two documents, writers in this volume suggest American schools have failed to serve their constituencies well because the goal to have all students learn to be intelligent has not really been pursued. Every student can learn and, given appropriate conditions for learning, can succeed academically in terms of his or her potential. But merely covering curriculum or subject matter is not sufficient when the question of sound academic preparation is faced. The curriculum must also be *accessible* to the learner. Whether it is in reading or mathematics or the wisdom of making moral choices, according to Strickland, Gardner, Ginsburg, and Sternberg, teaching for intelligence enables learners to master the developmental skills and cognitive operations that underlie the “frames of mind” necessary for every thinker’s lifelong learning.

Teaching for intelligence also highlights *how* students learn to think within and between content areas. In this context, the subject-specific medical model that underlies the basic approach to No Child Left Behind legislation requires further review. The so-called rigorous scientific evidence sought in the recommended content programs supported by this national effort *are* classroom interventions, to be sure, but they have not been found to be foolproof medications. As Eisner suggests in this volume, student outcomes measured by standardized tests of core subjects rarely assess the critical dimensions taught by experience and exposure in studying fine arts, for example—a subject matter not advocated by No Child Left Behind legislation. Nor can purposeful instruction to transfer reasoning to other forms of decision making be included in narrowly conceived, content-specific programs. There are many goals of learning involved in teaching for intelligence; they need to be addressed and researched to help students face the new and varied issues that arise in a complex, fast-changing, and terror-threatened world.

An important educational development is notably addressed in this unique volume. At the end of the last century, a great deal was learned about actual classroom instruction for intelligence. From understanding the requisites of a thinking classroom, to appreciating the importance of teacher support and building university partnerships with schools, to learning from research about thinking in specific

student populations, the reform period of the 1990s provides sound guidance for practical implementation. Writers such as Cooper, Levine, and Renzulli demonstrate many successes of particular instructional implementations that prepare students for thinking. These research studies need to be followed up today by new efforts to apply this past research and to reclaim an empirical base on which to build further applications. Although the documents in this volume speak for themselves, it is important to see that their message is shared throughout.

Last, but hardly least, contributors to this volume address the needs of special students in their studies. The fourth section demonstrates how crucial teaching for intelligence is for children from poor, depressed, and immigrant backgrounds. These are children who are school-dependent for learning higher order thinking skills. Whether it is Kozol or Comer describing the desperate conditions of children with such needs, it is very important to know that here, too, there are successes to report. The importance of developing a *community* of learning is a well-known goal in a post-Vygotsky world. Child-centered environments—places that nurture thoughtfulness and focus on appropriate development-based learning and experiences—can make all the difference in a child’s ultimate ability and skill. The continuing challenge today is to provide such rich and caring environments for all youngsters in need.

What can we learn by looking back at the educational movement centered on teaching for intelligence? We can see that such a movement still holds great promise for *all* of America’s learners. It advises us to study more carefully where we have been educationally and where we can hope to go in the future. In a world overwhelmed by too much dumbed-down information, this past reform period encourages us to realize there are alternate paths. Beyond current schooling’s narrow focus on IQs, standardized test scores, pass or fail assessment dimensions, and minimal curricular requirements, there is a vast and exciting world of knowledge, thought, inquiry, wisdom and beauty eager to help educate all children. Open this volume and see what a treasure we already have—pedagogical knowledge on *teaching for intelligence*.

—Barbara Z. Presseisen

## SECTION 1

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# *The Value of Intelligence Theory*

For centuries, there have been numerous philosophers and educational theorists who have called for “intelligence” in schooling. In America, such advocacy has sometimes clashed with demands for practical knowledge and empirical application. During periods of reform, however, researchers and educational leaders become more energized about intelligent teaching because they actually see policies and practices in place that run counter to this long-held approach. They also see the potential and promise of bringing intelligence development to the center of American schools.

This initial section reveals many of the essential arguments embedded in the need for intelligence in schooling. They have emerged over the last half century of educational research and represent the philosophical, psychological, and sociological underpinnings of theory about pedagogy and achievement. Whether it is Sizer’s informed skepticism or Goodlad’s intended learning, these writers call for the development of an inquiring mind and the cultivation of critical skill. Above all, these experienced educators argue that habits of thoughtfulness need to be accessible to all students so that, as learners, they become part of a stimulating sensory environment—the “surround” of Goodlad’s study. Such belongingness in a learning community is critical to upholding the basic ideals of democracy and capitalism.

The content or subjects of schooling are also entwined with their intelligent pursuit. Teaching thinking has long been associated with learning the disciplines of knowledge, but classroom educators are cautioned not to strive for mere “coverage” of academic content. Gardner and Greene both emphasize the importance of depth of

meaning in the student's developing mastery. Intelligent education requires more than the mere transmission of knowledge from one generation to another; rather, the active use of information calls for instruction that creates uncommon experience, forges new relationships, and sometimes raises uncomfortable issues and innovative challenges. Greene, in particular, emphasizes the importance of rich dialogue in learning, of conversation amidst new experience, so as to weave intricate nuances of thought into a creative, human act. The school of intelligent thinking must be a cauldron of invention and, at heart, advocates of teaching for intelligence believe it is important to be avid humanists as well.

Among the supporters of intelligent education, the cognitive scientists question what the abilities that constitute intelligent behavior are. Gardner's multiple "frames of mind" are held in high repute and, to Goodlad, are only a starting point of a more fully defined education. Sternberg acknowledges that teaching for intelligence, based in constantly growing memory, involves building analytic, creative, and practical skill, as he has long advocated in his triarchic theory. Sternberg also calls for a new understanding of wisdom, which he defines as an educated person's power to judge rightly, and ultimately select a sound course of action. Sternberg's approach emphasizes tacit knowing; the learner needs to become sensitive to what is not openly expressed, to what may only be implied and silently understood. It is in this sensitivity that intuition comes to play an important role in more complex thinking. It is in this sensitivity that values of the larger community can come to mediate the thought and reasoning generated by "book knowledge." Teaching for intelligence, with a goal to develop wisdom, can thus influence the moral base of society and, at the same time, strive for the achievement of the common good. In teaching for intelligence, then, Sternberg seeks to develop a new model of a balanced, wise education. He pushes the blueprint on teaching for intelligence forward into the realm of social, emotional, and ethical behavior.

The larger landscape of teaching for intelligence is outlined in the writings of this initial section. While not an easily mastered body of readings, they are rich in ideas and represent many years of research and thought about productive teaching and lifelong learning. These selections also raise many of the issues that others will address in later entries: the role of questioning in the interplay between teacher and student, the rare understandings built by study of the various



arts, the interdisciplinary relationships among several academic content areas, and the special needs of certain groups and particular kinds of learners. Yet, these thoughtful studies speak in one voice about the importance of teaching for intelligence. In a world where communication grows so rapidly that how teaching occurs must be altered daily, these major educational thinkers underscore that the central importance of teaching has not changed for centuries.