



*Thinking-based Learning: Promoting Quality
Student Achievement in the 21st Century*
**By Robert J. Swartz, Arthur L. Costa, Barry K. Beyer,
Rebecca Reagan, & Brian Kallick**

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I confess that, though I have co-authored a book with five colleagues, I am slow to pick up a book when the list of co-authors sparks the urge to name large groups of beings, a clowder of cats, a gaggle of geese, a school of fish, a herd of buffalo. My worry is always voice. But, Swartz, Costa, Beyer, Regan, and Kallick, a group of colleagues including emeriti professors of education, a classroom teacher, and an educational consultant, come together with clear voice to make an argument. Thinking requires something that is to be thought about. When thinking skills are taught as a set of processes aside from content, learning is short-changed. There are mental habits that help, and plenty that hinder, skillful thinking. Teaching, when disciplinary content and skillful thinking are melded, can be of help to students in more powerful ways than presentation of packaged study skills or step-by-step critical thinking strategies.

Thinking-Based Learning presents the theory that skillful thinking is uniquely tied to the disciplinary content being thought about. Thus, thinking-based learning requires “specific and appropriate mental procedures for the kind of thinking engaged in by the thinker” (p. 1). Skillful thinking is a mindful engagement with content; it is an experience with content knowledge as ideas, issues, patterns, questions, rationales, perspectives, structures, functions, theories, etc. The writers define and use the term skillful thinking, not critical thinking, a concept they believe suffers abuse when oversimplified as a set of classroom strategies. Skillful thinking is a mindful engagement with the stuff of necessity for learning the particular content being thought about. The authors define terms and provide chapters with examples from K-12 classrooms, as well as a final chapter detailing the experience of a school principal leading teachers in on-going consideration of thinking, learning, and teaching.

The authors of *Thinking-Based Learning*, having written a text likely to be used in teacher education courses in curriculum and instruction or for teacher in-service or book circle reads, make a point and define supporting terms. While skillful thinking is what happens to yield learning in content areas, habits of mind are the supporting life lines. Habits of mind are teachable mental processes and organizational procedures that “driv[e] the use of [skillful thinking] in ways that manifest broad and productive task-related mental behaviors” (p.1). My favorite is persistence. From my own experience, I recognize a kind of necessary doggedness required to bring ideas to fullness, turn them around, extend them beyond the horizon, catch them up in a net with other ideas, ask them to give up their structure and functions, and then encourage them to try on new clothes. Persistence, open-mindedness, flexibility, control of impulsivity, striving for accuracy, understanding reliability of resources, decision-making, remaining open to wonder, and questioning are all habits of mind that give energy and footing to the work of skillful think-

ing. As it occurs, again from experience, a mind filled with these habits will need to contend with some sparring. The habit of mind most essential, for these authors, is metacognition. Its essentialness is such that it risks becoming confused with skillful thinking, as though synonymous. While skillful thinking requires disciplinary content on which to operate, metacognition operates on thinking itself.

A helpful aside the authors make is that some habits of mind hinder skillful thinking. I imagine we all can recognize ourselves, as well as some of our students, here. But, metacognition, and direct teaching, can work wonders in helping students recognize unhelpful mental habits such as closed-mindedness, dependence on unquestioned or insufficient resources, rushes to judgment or closure, and inability or refusal to extend an idea or turn a concept inside out.

The eight chapters in the text, each apparently co-authored, present examples of teaching and learning in K-12 classrooms where skillful thinking yields thinking-based learning. The content areas and grade levels present a fairly full curriculum. The No Child Left Behind legislation and state standards are addressed, with a close look at the language of thinking included in standards. Assessment practices, too, are considered through the lens of skillful thinking supported by habits of mind that assist learners in coming to know content. Critical to the authors' argument, and visible in examples, is the idea that teachers "should infuse instruction in skillful thinking into their content instruction" (p.29). The goal is for skillful thinkers to become "self-initiated, self-monitored, self-corrected (if necessary), and goal-directed" (p. 3). The role of teachers, the necessity of disciplinary content, the requirement for both exercising and harnessing mental habits, and the utmost necessity of thinking about one's thinking in a reflective act of self-assessment combine toward thinking-based learning. They work together toward the ends of independence, positive interdependence, and quality student achievement. The aim is a fullness of skilled thinking that the authors see as a 21st century life skill. Doubtful any readers will contest the point. A life infused with skillful thinking would appear worth living, regardless of the century.

Thinking-Based Learning opens with a quote from Seneca: "As the soil, however rich it may be, cannot be productive without cultivation, so the mind without culture can never produce good fruit" (p. 1). Less artfully, perhaps, though functionally, my father, who owned and operated an office supply store, liked to say "you can't sell out of an empty box." Is it too little too late to remind 21st century teachers and students that a person can't learn with an empty brain? Where and how does technology attach itself to content, skillful thinking, habits of mind and self-assessment? The content to be learned and the skilled thinking required to engage with that content need cultivation by teachers and students. I see thinking-based learning becoming critical comprehension, and the 21st century is in need of a box full of that.

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