

## Critical Thinking in the Elementary Classroom: Problems and Solutions

by Vera Schneider, author of *Stepping Stones*

Critical thinking has been an important issue in education for many years. After the 1948 Convention of the American Psychological Association, Benjamin Bloom took the lead in developing “the goals of the educational process,” including knowledge, comprehension, application, analysis, synthesis, and evaluation. Critical thinking in education has been hotly debated since then. This article shares some definitions, outlooks, and questions to inspire you to begin thinking critically about critical thinking. *What is it? Should we teach it? Why...and how?* Here are some helpful suggestions for incorporating critical thinking in the classroom—the solutions are up to you.

The definition of critical thinking has changed somewhat over the past decade. Chance (1986) says critical thinking is “the ability to analyze facts, generate and organize ideas, defend opinions, make comparisons, draw inferences, evaluate arguments and solve problems.” Tama (1989) calls it “a way of reasoning that demands adequate support for one’s beliefs and an unwillingness to be persuaded unless support is forthcoming.” Ennis (1992) defines critical thinking as “reasonable reflective thinking focused on deciding what to believe or do.” The definition will probably continue to change in the following decades, but one thing will remain constant—the need to provide effective solutions to complex problems. Experts on critical thinking explain that students feel their work gains significance when it is toward a purposeful end (Elder & Paul, 2001). When students are asked to address a purpose and come up with a solution, they truly begin to identify, analyze, and solve problems through critical thinking.

Students will need to draw on their ability to solve problems throughout their lives. With so many technological and informational advances, living and working in the world will change dramatically in the next millennium. People will have an ever-increasing need to obtain, understand, analyze, and share information. Mariam Jean Dreher predicts that “workplace literacy in the next millennium will be synonymous with problem-solving (2000).” The future will call for “multiliteracies” and “high

literacy,” which involve, among other things, self-regulating and monitoring, understanding and empathizing, analyzing and evaluating—all of which are “tied together by the core construct of thinking.”

The question is how to best instruct students in critical thinking skills. In the 1980s there was a movement to bring the explicit teaching of thinking into the classroom, which stimulated the creation of a variety of special courses, programs, and materials. Today the research shows that the transfer of these thinking skills into important academic subject areas is not automatic (Swartz, 2000). Critical thinking instruction is not effective when taught in isolation. It must be a holistic and integrated component of the classroom curriculum (Carr, 1988; Rowland-Dunn, 1989; Smith, 1990).

It is our job as educators to equip young students with the skills and strategies to think critically in order to solve problems. The challenge is how to transform these important instructional objectives into real, developmentally appropriate activities that are integrated into lessons across the curriculum. Implementation of these objectives and strategies may appear difficult, but often requires only a slight shift in one’s approach to the curriculum. Teachers can provide daily opportunities for students to identify the materials they are working with, analyze their characteristics, and consider similarities and differences between them. Teachers can provide the time and space for brainstorming and for the making and testing of plans. Here are some ways that educators can help young students explore problem-solving tasks and learn through their own personal and purposeful discoveries.

**Do not readily find solutions for students.** Instead, identify even the simplest tasks as a problems for them to solve. Young children often get upset if they do not immediately have a chair to sit in, cannot find the crayon they want, or accidentally rip the paper they are working on. It is easy and expedient to say, “get a chair from over there,” “here is a red crayon,” or “get some tape,” but it is far better to respond, “let’s think about how we can solve this

problem,” and let the student come up with his or her own idea—and test it, regardless of whether or not it is, in the teacher’s opinion, the best solution. Even though a mended project may not look perfect, students are usually proud of their attempts to fix it themselves.

**Always seek opportunities for brainstorming.** Before reading a book, take time to look at the cover and discuss it. Look at the pictured setting and characters. If the cover has a barn on it, ask students whether they think the story may be about space aliens or farm animals. Have them brainstorm a list of things they might see in the book. Record their answers and review them later. Because so much critical thinking at this age is done aloud, it is always helpful to keep a written account of student’s improvement.

**Compare and contrast anything and everything.** Before beginning a sponge-painting activity, compare and contrast a sponge and a paintbrush and how they might be used in different or similar ways. During apple season, compare and contrast the shape, size, taste, and color of different varieties. Compare and contrast yesterday’s weather with today’s weather, sunflower seeds with poppy seeds, the Mayflower with a cruise ship, the numeral 6 with the numeral 9, or a ruler with a tape measure. Compare two words for letter and syllable count, beginning and ending sounds, or meaning. Encourage students to look closely at details and to think about the purpose and significance of each one.

**Categorize.** Sort sets of objects and be open to each student’s ideas. When given a set containing a ruler, a roll of tape, and a candy bar, and asked to choose the one that does not belong, one child may eliminate the candy bar because it can be eaten. Another child may eliminate the roll of tape because it is round. Accept both answers and explore others as well. It is not the answer, but the process of thinking and self-questioning that is important.

**Encourage creativity.** Do not always give students teacher-prepared projects. Try to provide a wide variety of materials (construction paper, cotton balls, felt, paint, etc.) and tools (scissors, brushes, crayons, glue, etc.) and give very broad instructions. If you simply ask students to create a snowman of a certain size, they must consider what they know about snow, snowmen, and measurement. They must consider the possibilities and limitations of the materials provided. They must consider and evaluate their own fine motor strengths and weaknesses. They must make a plan, test it, and come up with a solution. They must be critical thinkers—they must create a snowman.

**Teach students to think critically across the curriculum.** In science, students can plan and construct a habitat for an animal. In math, they can divide a set of different sized cookies equally amongst their classmates. In social studies, they can chart a map of their neighborhood. Critical thinking is also a crucial component of the beginning reading curriculum (Fitzpatrick, 1994), as it boosts reading comprehension and story knowledge. Have children reconsider a character or setting of a given story to retell it in a different way. Written language—a list of words, usages, definitions, and a basic recipe of rules—also holds incredible potential for the critical thinker. When students learn to use language to solve a problem or achieve a purpose, the result is powerful and memorable.

It is important that teachers recognize and respect the value of thinking skills and introduce them early on in the educational process (Carr, 1998). Primary grade students are capable of surprisingly complex thoughts and often have insights beyond the realm of teachers’ expectations. This is, in part, due to the fact that very young children are less bound by preconceived limitations, are typically more open to the wonder of the world, and in most cases, sincerely believe that all things are possible.

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