Reconciling Basic Skills with Education for the Future

Robert F. Madgic

Reading, writing, and mathematics are basic not only because they are useful skills, but because they develop the ability to think.

Educators cannot ignore demands for an emphasis on the basics, but they must be able to distinguish what is valid in the movement from the simplistic notions that often accompany it. What makes reading, writing, and mathematics basic to all learning? Not only the ability to write sentences that are grammatically correct with no misspellings or the ability to compute fractions and decimals. Even more important is the critical role these processes play—or should play—in the development of thinking abilities. I am concerned about the decline in test scores, but not so much because of the apparent deterioration of important societal skills. More serious is the possibility that youth today may not possess the tools to think as cogently and incisively as their counterparts in the past.

Will Technology Make the Written Word Obsolete?

In an earlier article, I postulated that technology is bringing about decreased emphasis on written communication throughout the world and that the development and analysis of written expression is not as important as in the past. Whereas I still believe the first part of that thesis, I have reassessed my earlier conclusions about the importance of the written word in education. Schools possess a far greater responsibility than merely preparing students to operate the technology that awaits them. Young people must be educated to think independently so they can generate solutions to problems that are at present unknown. And it is in the development of this intellectual function that the written word surpasses all other media.

When an idea is written, it remains on the page for analyzing and evaluating. A book or essay not only permits but requires the author to buttress his or her thesis with information and sound reasoning. The reader has the time to ponder the author's ideas. It is this quality of reading, the stimulation of thought, which justifies its central locus in a curriculum. Further, words and concepts are the primary tools with which to think. The more words and concepts one commands, the more thoughts one can generate. Reading remains the single most effective process for acquiring these implements of the human intellect.

Writing Forces Us to Think

Just as reading fosters an in-depth analysis of a subject, so, too, does writing demand from the writer a clear conception of his or her message. One can speak, one can illustrate, one can film, but the most intellectually demanding task is to develop a thought into words and sentences. If the thinking behind the thesis is fuzzy, the lack of clarity and precision will be revealed through

the pattern of words. The act of writing forces the act of thinking, and it is thinking that should dominate the classroom. The mechanics of writing are important, because all tools should be used correctly, but the enhancement of one's mental abilities is the essential goal of education. Because writing advances that goal most thoroughly, schools must stress writing, not only in English classes, but throughout the curriculum, whether or not students are called upon to write in their post-school careers.

Why Mathematics?

A similar case can be made for mathematics. It is true that computers and calculators have reduced the amount of human effort needed to perform complex calculations. However, people must know the mathematical operations involved in simple and complex computations in order to program the technology. A knowledge of basic arithmetic operations is required in order for a person to function in everyday life. So the importance of math remains unquestioned.

What is not generally perceived or explicated in the dialogues on the basics is the role math plays in the learning of logical thought processes. Here the tools are numerical symbols rather than words, and the symbols must be combined in sequential, logical order if problems are to be solved. The primary goal must be growth in reasoning abilities more than mastery of technical operations because the former remains with the educated person long after the latter has faded from memory.

The most important instrument for confronting the problems of the future will always be the human intellect. If the basics are used as vehicles for teaching students to think, for developing their intellectual powers, and hence for preparing them effectively for their futures, they merit their central position in the schools.

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