

RESEARCH

School's Impact out of School

BY GERALD W. BRACEY

DESPITE recent passage of the "America Competes Act," we can hope that the obsession with mathematics and science will abate somewhat. People as disparate as Rep. George Miller (D-Calif.) and Chester Finn and Diane Ravitch (see "Not by Geeks Alone," *Wall Street Journal*, August 8) have addressed the need to get the arts, music, social studies, and history back into the curriculum. Maybe Bill Gates and the Business Roundtable will give it a rest for a while. More than that, I hope all of this means we can start paying serious attention to how schooling affects or influences students' experiences and lives outside of school.

I admit that's an un-American goal. Aside from Dewey and the progressives, Americans have overwhelmingly viewed education as instrumental — as something that leads to something else, rather than as a valuable entity in itself. Typically that "something else" is a job. I think if more attention were paid to making school relevant to later experiences outside of school and outside of the workplace, we might see Americans enjoying richer personal, social, and communal lives off the job, and we might see them less enthralled by "American Idol" and Britney.

Looking at the impact of schools outside the school setting gets into the realm of "transfer" of learning and knowledge. Space is too short for a general treatment of transfer studies — a tricky and subtle field. (I dealt with those to some extent in the May 1992 column.) Specific aspects of transfer, as they relate to the question of school affecting experience outside of school, were examined more recently by Kevin Pugh and David Bergin. They reviewed and summarized the research literature in the December 2005 issue of *Educational Researcher*.

Pugh and Bergin begin by noting the distinction be-

tween *high-road* and *low-road* transfer. Low-road transfer involves the automatic transfer of highly practiced skills, with little need for reflective thinking. High-road transfer requires conscious formulation of an abstraction that permits a connection between two situations.

A sad finding from the research literature is that students often cannot take either road. An 11-year-old baking cookies asked her father, "Do two one-quarters make two fourths? I know it does in math, but what about in cooking?" Pugh and Bergin write that learning must be deep and connected and must involve metacognitive activity if much transfer to new contexts is to take place. Alas, most research in this field has involved transfer from one setting to another *within* the school, not from the school setting to some other context. Thus we know even less about what conditions of learning in school facilitate the transfer of that learning to situations and events out of school.

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How does in-school learning affect learning in other contexts? How, for instance, does learning science in a classroom affect learning experiences in a museum or a zoo? The little research that has been done suggests both that students need careful preparation for their zoo/museum experience and that they seldom get it.

Another area of research is out-of-school learning that is prompted by in-school learning. This is where experiences with a subject in school lead to continued interest in and pursuit of the topic outside of school. The rate of such interest appears to be low. One study interviewed students and found that 47% reported no instances of school-prompted interest, while 38% reported only one. Students in this study were asked such things as whether they ever examine their parents' bank statements because they have taken an accounting class or whether they draw people because they have taken an art class. In another study, researchers found that 45% of students never used things when they were outside of school that they had learned in school, never read during leisure about school subjects, and never talked with friends outside of school about school subjects.

One group of students did show considerable school-prompted interest in one area. African American students who studied the U.S. civil rights movement became interested in the topic and also tended to read such books as *Roots* and *The Autobiography of Malcolm X* on their own time. School-prompted interest was also found in some students who read unassigned plays and novels

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as a consequence of a literature class.

Pugh and Bergin never discuss how subjects are presented in school. One stereotype of American classrooms is that they consist mostly of teacher talk, and one stereotype about teachers is that they are obsessed with “covering” the material. Unfortunately, studies indicate that students are least engaged when they are being lectured to (see Research, March 2001). What’s more, in math and science, American teachers have more material to cover than their Asian and European counterparts. No doubt the onset of testing mandates in *No Child Left Behind* (NCLB) has increased the power of this got-to-cover-it obsession.

At the elementary level, NCLB seems to have changed pedagogical techniques. Although no hard research exists, it is difficult to imagine that the scripted curricula now in place in many schools stimulate children’s extra-school interest in the topics covered. In *How to Survive in Your Native Land*, James Herndon described Frank Ramirez, a fellow teacher at their working-class school.

If they were “studying” some place which was an island, they studied it O.K., read the book, answered them questions on ditto sheets, and then the kids would find themselves with big sheets of paper inventing an island, drawing and painting in its geography, describing its people, its kings and rulers, the way people ate, or what they lived in, or how they celebrated Christmas. Or they went to the library and got books and wrote to the authors, and put the authors’ answers up on the board telling where they were born and how they got the idea of writing such and such a kid’s book. (p. 24)

Well, that was the 1960s. It’s hard to imagine many teachers teaching that way under the time pressures of NCLB and scripted curricula. The teachers in Linda Perlstein’s 2007 *Tested* lament the ways they used to teach but don’t anymore because their time is eaten up with test-related activities. Once the test is over, the school returns to its old ways: Petri dishes reappear in the science class, kids take field trips to the National Aquarium and the Smithsonian museums, they go to the Naval Academy to watch the Blue Angels, etc. In a third-grade class, kids gather in a circle to hear a story with complicated vocabulary that would never show up on the test. “After thirty minutes, she sent them back to their desks. When they have free time during the school day, she told them, they should read chapter 3 [of a book about Helen Keller]. Then she had to explain what free time was” (p. 251).

Pugh and Bergin discuss two views of education: the mimetic and the transformative. “The mimetic relates to a ‘transmission’ model of teaching and focuses on transmitting predetermined, measurable information

to students. The transformative focuses on the transformation of the individual, particularly transformation of values, character, morals, attitudes, outlooks, and so on.”

Standards-based education leans toward the mimetic, and NCLB is the ultimate mimetic program. It is the realm of the transformative, however, that opens doors to conflicts between parents and schools and among various groups in the education community. “[Transformative] perspectives focus on how education can be empowering in the sense that it liberates individuals from existing frames of reference or ideologies and allows them to imagine new possibilities, ideas, and actions — particularly with respect to issues of race, gender, income, and power.” And, I would add, the study of origins.

Pugh and Bergin give several examples. One is of a boy who applies the ideas of adaptation and evolution to his perception of animals: “I now don’t just look at [an] animal and say, ‘That’s cute.’ I stop and think a little harder. . . . I wonder if they are closely related to me as a human. I also think about their markings and how it helps them. . . . [The concept of adaptation] made me look past the animal and made me try to understand more about it.”

But a transformative experience doesn’t have to develop from study in such a potentially explosive arena as evolution. After a course in geology, one fourth-grader explained it this way:

I think about the rocks I have differently than I did before. When I don’t have anything to do, I look at a rock and try to tell its story. I think about where it came from, where it formed, where it’s been, what its name is. . . . I wasn’t all that interested in rocks before but now I am. I used to pick them up on the beach and throw them in the water. Now I couldn’t throw all those stories away.

One of the more succinct and elegant statements about the transformative aspect of education was formulated some years ago by the philosopher Israel Scheffler. Scheffler defined education as “the formation of habits of judgment and the development of character, the elevation of standards, the facilitation of understanding, the development of taste and discrimination, the stimulation of curiosity and wondering, the fostering of style and a sense of beauty, the growth of a thirst for new ideas and visions of the yet unknown.”

I have no illusion that education will attain such a lofty state in the immediate future. But some people do appear to be moving in that direction. As I said at the outset, we can hope. K

File Name and Bibliographic Information

k0711bra.pdf

Gerald W. Bracey, RESEARCH: School's Impact out of School, Vol. 89, No. 03, November 2007, pp. 236-237.

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