

TECHNOLOGY, PROGRESS, AND EDUCATIONAL STANDARDS

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Will the use of technology lead to progress in Education? To answer, let's use an analogy: If technology is to help a dentist, say, make progress in his work, he must study teeth and gums, etc. The activity of dentistry must make technology match his patients' inner organismic requirements or standards. But the analogy also illustrates an important difference between these two activities. Dentistry is done with technology, and progresses in efficiency based on such improved technological tools. But Education is not "done" with technology. "Education" (noun) is not a practice, but a hypothesized set of guidelines to enhance Life itself (as John Dewey argued). Educating and teaching (verbs) are practices, it is true, and they can use technological tools as well, but still such practices cannot be fully undertaken by means of technology, as can dentistry. Admittedly, a good "chairside manner" for the dentist is desirable, but in Education, that human connection must be the hypothesized actual practical focus for the teacher. It cannot be secondary, as in dentistry. As Brickell puts it,

The three most important ingredients in the school setting are the student, the teacher, and the length of time they are together ... Once those three are established, researchers will discover little if any significant difference among various teaching methods (1982, quoted in Elkind, 54).

Unfortunately, however, politics and economics, which drive public schooling, tend to ignore the first part of my original analogy, while embracing the second. As Livingston observes, "Instead of imaginatively constructing meaning, the child becomes a computer, trained, programmed, and tested for the job market" (1994, 133). Here the standards that guide educating become external and social, not internal and organismic, and the child itself then becomes the technology used to create social "progress".

Witness the Minister of Education for New Brunswick in 1993, who said that New Brunswick schools have "got to be industry driven", and "the first mistake is assuming schools and teachers will teach our kids", since to produce "better prepared students" or "products", is "too important to be left just to educators". The McKenna government and every government since then, Liberal or Conservative, Provincial or Federal, has seen schools and technology as social tools to produce technologically skilled, computer-oriented, adaptive workers, such that New Brunswick and Canada would then be able to use children-as-future-workers in order to make economic progress, and by this means rise to "world-class status." This is a purely instrumental conception of "excellence". And all of this was to be done as efficiently and quickly as possible, with Mr. McKenna touting "the Wal-mart quality model" in order to affect better educational control, complete with outcome accountability.

It is all reminiscent of Dickens' stern Grammar School teacher Mr. Gradgrind, who wanted to input "imperial gallons of facts" into his passive, spiritually deadened students, in order to increase their scientific/technological reasoning abilities, aka information processing, for integration into the new Industrial Age.

Once this political/economic/scientific "incubus" (Dewey's term) took over, technology, as Postman said, would tend to "undo" a lot more, for the purposes of educating, than it might "do". Livingston again: "Children, like all domesticates, may thus be seen as the artifacts of high-tech civilization ... Indentured as we are to the ideology of how-to-do-it, we are able to see the world, including our own children, and including nature, only in instrumental terms" (1994, 133).

Darwin's theory of evolution, coupled with the Romantic account of the natural origins and experiences of human beings as living organisms, most profoundly influenced the Educational Philosophers of the last 150 years. To them, the child was seen as an actively adapting natural creature, possessed, as Rousseau had argued, of a transcendent human nature that required natural or normal environments in order for its inner design and potential to be freed to function according to their intrinsic purposes. The result of this "freeing of the life process" (Dewey) would be the child's own actively constructed knowledge and understanding. I refer to this account of the child as the "biological child", being as it is transcendent in form and function.

This line of thought, with the universal child seen as developing or evolving through its own active adaptation and construction of knowledge, reached its peak in Piaget, who, elaborating on Rousseau, and adding self-conscious direction to evolutionism by wedding biology with psychology, saw the child as evolving from a state of narrow egocentrism to a wider objectivity in its reasoning, and during that individually defined form of progress, the child, seen as a budding scientist, would gradually develop the cognitive tools to adapt to the physical world more effectively, and ultimately, perhaps, be able to contribute to the progress that Piaget saw as intrinsic to the history of science.

Piaget's almost exclusive focus on science was attractive to public school systems, but about the time of Piaget's death in 1980, the unstoppable rise of the new computer technology changed Piaget's evolutionary paradigm for the child's thinking-as-constructing-meaning, to the computer paradigm of information processing again. Reverting back to the empiricist views of Mr. Gradgrind, the child was now seen more as a mechanical, input-output model, processing curricular inputs and outputting them in the form of standardized "outcomes". This appears to be a very convenient switch for those who would control children toward the manifest destiny of the technological/economic imperative.

This epistemological distortion created by the use of technology has only served to warp the organismic concept of evolution into an unwarranted generalization of Darwin's theory, known as "Social Darwinism", or "survival of the fittest", in which the most "fit" nations would achieve economic excellence, that is, continuing future "progress".

There are two other types of child besides the biological child. One type is the social child, or that child as envisaged as the ideal prototype by the prevailing status quo, a child which is then standardized and reproduced in as prolific numbers as possible. This allows for the "efficient" carrying out of social agendas. The other type of child is the academic child, or that child which is theoretically described by philosophers and others who, in doing so, try to accurately portray the characteristics of the biological child, and in the process to also imply suggestions for improved practice.

Rousseau had said that these universal inner human standards defining the biological child were "invisible" to us, because, "as in algebraic equations, common factors count for nothing" (1762, 33). Because of this invisibility, much like the self-conscious status of the eye in the act of seeing, we shift the standards which should be used to guide educating to our technology and its role in carrying out the agendas for the social child, as such agendas are held by the status quo. In short, we see Education itself as a technological/scientific pursuit, like dentistry. But if we do see Education as mere training in this way, then true Educational standards, as a result of such myopia, will simply continue to remain the only invisible factors in that convoluted and unsolved equation.

Consequently, it is a very grim task to be a "teacher trainer", something intrinsically hazardous to one's well-being, like being a "lion tamer", with Educational Administrators all the while cracking the whip, and leaving defenseless philosophers caught in the political/economic jaws of the struggle for "survival of the educational fittest".

References:

The Daily Gleaner, March 22, 1993.

Dewey, John. (1916). Democracy and Education. New York: MacMillan.

Dickens, Charles. (1854). Hard Times. London: Bradbury & Evans.

Elkind, David. (1982). The Hurried Child. London: Addison-Wesley.

Livingston, John. (1994). Rogue Primate. Toronto: Key Porter Books.

Rousseau, Jean-Jacques. (1974). Emile. London and Toronto: Everyman's Library.

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