

We need educational leaders who can identify long-range, hidden realities of technological changes in the schools.

Educational Technology and Its Hidden Realities

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HUMAN accomplishments require focused attention and expectation of immediate and practical results. Focused attention prevents wandering, and expectation guides behavior and assists in recognizing success. Whenever good results can consistently be produced, it is not long before man's ingenuity creates a machine or technological addition to accomplish that feat. This addition economically saves human mental and physical energy, and is considered more reliable than the human enterprise for the same act. Society naturally accepts any technological additions that give it aid. Yet society tends to accept these additions at face value and upon practical results. It asks no more than this unless influenced by special persuasion.

Devotees of any new technological development, on the other hand, often attempt to make more of the creation than is evidenced by results. They see the addition as a panacea for many human concerns, even those not directly related to the task for which it was created. Such devotees often have an indoctrinating effect on society. In such instances, society succumbs to the persuasions of the devotees, becomes oversold on the idea of the necessary revolution in existing practices. Instead of accepting technology at its face value, society seems to develop a fanaticism for technological change which can produce harmful effects.

Yet revolutions and reforms are never panaceas. As the English philosopher of education, R. S. Peters, has noted: "In human affairs, well meaning reforms have often unintended consequences which the reformers neither wished for nor anticipated."¹ The reformers become so engrossed in their techniques of persuasion that they are incapable of foreseeing the consequences of their promotions. Hence, they are not good judges of large-scale social consequences. They fail to take into account the hidden realities of change, and especially technological change aimed only for immediate and practical results.

Technology has always played an important role in the affairs of man. It has existed almost since man's beginning, and has had a great effect in determining

¹ R. S. Peters. *Authority, Responsibility and Education*. London: George Allen & Unwin, Ltd., 1959. p. 36.

the course of civilization. It also has had a very important influence on human behavior as it has become part of the mode of living around which society's conveniences and results are produced. This is witnessed by the fact that after any initial excitement in a new technology, the change soon finds its place in the routines and habits of culture, contributing to the total system and effecting definite behavioral patterns in that system.

Many of man's technological developments have had important influences upon children, either directly by way of classroom practices such as books, or indirectly by way of interactions with technology in society, for example, experiences with automobiles. Children's relation with technology becomes routine at a very young and pliable age, and habits of action and strategy are conditioned by the constant contact with technology. It is to be noted that it is a different behavioral circumstance to have grown up with a particular technological development than it is to have gained access to it only in adulthood.

When such a development is fundamental to routine early in life, a definite moral condition surrounds its use affecting even the relationships children have with others. Therefore, it is not merely the practical results of technological additions that become important to society, but the realities of the hidden influences in the course of new developments. An excellent illustration can be found in the technological advance of print, which brought about the collateral learnings of solitude and individual initiative for success.² Printing which produced books forced a conflict with the customs, mores, social classes, and medieval institutions. Printing of books began as a means for teaching better the old routines and traditions. In the course of time, its hidden realities aided in producing a wholly different society.

Recent Consequences

Today we live with the spirit of technological innovation. Authorities of various kinds are promoting innovation for the sake of innovation, and technology for economic reasons. At the same time, we are not being prepared for the hidden realities of these changes. As a result, we are now experiencing frustrations because of the consequences flowing from such realities. These frustrations can be illustrated by three consequential developments related to educational technology.

The first development is the feeling of dehumanization on the part of students from the technology of standardized testing. The growing attitude of students is that they are fast becoming a mere statistic, an abstract thing, identified according to ability and vocational direction by means of a machine. Students resent this computer analysis of themselves, and consider testing as an enemy to be outmaneuvered, cheated, and beaten. The ensuing problem is that they carry this same attitude into the field of life and approach human relations by the same means.

A second development is the growing attitude that instruction and teaching

² See: David Riesman. "The Oral and Written Traditions." *Explorations in Communication*. Edmund Carpenter and Marshall McLuhan, editors. Boston: Beacon Press, 1960.

must be entertainment. This attitude stems from the technological advances of television, teaching machines, language laboratories, etc. The students have acquired the educational spirit of these machines in conformity with the rationalizations of easier learning by their promoters.

Students have come to reflect an audience attitude toward all aspects of learning, including the teacher's instruction. Hence, a teacher can be tuned in or turned off as a television set if the material and presentation are not exciting. Reflected also in this audience attitude is the fact that the teacher is fair game for the second-guessing television quarterbacks.

A third development is the growing absence of teacher control in certain modern schools. This consequence appears to be one of the hidden realities of the technology of flexible classrooms promoted for team teaching. In the flexible classroom arrangement, there is no one teacher for a class functioning as the authority figure for discipline and security.

In place of the self-contained classroom teacher comes the team which shares responsibility, but in which no single teacher is answerable for discipline and order. The result has been an absence of these conditions because the building facilities require no set schedules, no certainty of place, no identification with a single teacher. Noise and control of students become the paramount problems for teachers. Confusion and loneliness are detrimental factors in children who find themselves in any number of flexible groups.

Meeting the Hidden Realities

As the previously noted frustrations testify, technological change brings various kinds of unforeseen consequences which the devotees of change are not able to anticipate. This does not mean that technological additions are bad in themselves, only that society is not often prepared for the hidden realities that accompany them. Many of the problems can be alleviated, however, by means of adjusting programs, altering emphases, and transforming situations if the hidden realities are recognized.

Thus far, however, no one has considered the role of "cultural anticipation" fundamental to technological projects in education. Representatives of one discipline, however, must take this responsibility, and there is such a special group today which can perform this important task. This group consists of the philosophers of education who are scattered throughout our universities and schools of education. They are, in general, qualified for the task of identifying those long-range, hidden realities that experiential designs and research seem to be incapable of discovering.

Anticipation of the hidden realities of technological change is an important need in our society today. I believe that this need must be filled by today's philosophers of education. For those in education, I would say, listen to that particular kind of philosopher of education who concentrates on "cultural anticipation." His wisdom will be of great value in this age of technological innovation. ❁

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