

TECHNOLOGY, TEACHING AND VISION

STEPHEN N. WILLIAMS

The literature of the scholarly community abounds with essays, research findings, theses, etc. concerning the role of technology in education. Conferences are held to support it; entire journals are published to explore it and share its possibilities. The media are everywhere and their impact, both cultural and otherwise, is becoming ever more obvious. Nowhere are the possibilities of the "everywhereness" of new media having a greater impact than in the schools.

It is becoming increasingly evident that the role of technology in education is expanding at a rapid pace. Further, we can expect that the rate of acceptance will quicken in the future as new and better techniques and systems are developed.

It is not difficult to see, also, that the rise of the computer, the teaching machine, et al. has occasioned a concomitant rise in the education community's fears of a refined technology. Nor is it difficult to gather that this fear is rather deeply rooted in the teaching profession as a whole. The function of this paper will be to place this fear in a more historical and sociological perspective and, perhaps, to set forth some insights that will enable a closer look at ways of viewing and using the new technology.

It is the author's contention that the anxiety of the teaching profession over the introduction of new media and symbol systems is not a new phenomenon. Rather, it is inherent in the very role in which the teacher finds himself in society. The function, of teaching, as viewed from society's perspective, is to pass on the cultural awarenesses and accumulated knowledge to the non-initiated neophyte. Therefore, by its very nature, the teaching field has performed in the past and is performing today a conservative function. This statement is not to be taken as in any way perforative, but is meant to point to the

fact that this very role in many ways necessitates a sceptical outlook toward the new and possibly transient artifacts and ideas which are ever entering the on-going culture.

This scepticism can tend to breed a fearful approach to newness since in conflicts basically with a teacher's perception of his role-function, that of being *personally* responsible for the students learning of this body of facts and awarenesses which the culture holds dear, and creates a role-maintaining response.

It is possible to trace this anxiety back further than has heretofore been done. Let me take the case of William Torrey Harris, Superintendent of Schools in St. Louis and later U.S. Commissioner of Education, as an example. The "conservator" nature of teaching is embodied in his fight against the new science and psychology in the 19th century.

Harris' conception of the schools' function, based mainly on the Hegelian world view, was that of leading the student onward to "God, Freedom, and Immortality" through a process of becoming self-active, that is rising above the total determinism of the environment. Harris' view of his and the schools' role was placed in severe jeopardy by Spencer's evolutionary and positivistic insights into the educative process. The ensuing battle, followed by Harris' last attempt at public disavowal of the Spencerian notions in his *Psychologic Foundations of Education*, was ultimately decided in favor of the empiricistic newness. But, the fear engendered by this fight lingered.

Harris' anxiety over the introduction of manual training into the schools is but another example of the fear of novelty brought about by a necessary new perspective on the function of the teacher and education as a whole. To be fair to Dr. Harris, lest he be thought of as the embodiment of rank conservatism in education, it was he who led the fight, in his *Theory of Education*, for the introduction into the classroom on a mass scale of a new technological innovation, the textbook. The dismay of the teachers at the time to this mechanization again points out that misgiving about cultural advances, especially those

of a threatening nature, is certainly not a new phenomenon of our own time.

Teaching, and the curricular problem, then, are, have been in the past, and will continue to be, of a dichotomous nature. They seek to conserve and pass on the best and yet must be receptive to the novel. How can this be accomplished? How can technology aid in fostering a balance of the dichotomous tangents? The first question will probably have to be asked anew with each succeeding generation. In the remainder of the paper, the latter will be illuminated by an examination of some of the lenses through which we view the possible uses of educational technology today.

Let me make some observations. We seem to be dealing with education in many respects from the perspective of the Bobbit and Charters' era of social efficiency which is not at all applicable in today's rapidly changing society. The scientific orientation, while applicable in many areas of education, has been accepted whole for all areas. Engineering principles based on a quality-control systemic relationship are now viewed not only as utile, but as the only utility. This leads to one very important problem. Once systems are established, and are working efficiently to turn out products (here students), they become extremely difficult to change in response to the second part of the dichotomy, that of novelty¹⁾.

This is not to say that the schools should not be, in the words of Eli Ginsberg, "efficient skill-producing institutions."²⁾ It is to say that they are not and can not be viewed as only such, for in the process the individual may become an extension of the machine, a follower of "technique," an output not a human.

-
- 1) I am indebted to Dr. Phil C. Lange, of Teachers College, Columbia University, for this extremely insightful concept.
 - 2) From a speech presented at Teachers College, Columbia University, during the recent Conference on Technology and Education in August, 1968.

One of our basic concerns must be our usually limited viewing of

technological advances, as well as the earlier mentioned fearful pose. We have severely limited our ways of looking at the possibilities of the "new" because of our basic models and frames of references. As was stated above, the "model" of the schools as skill-producing institutions, with technology assisting in the production of these skills, is a limiting, if not historically backward, model. Another which has tended to close off our view is the psychological model of the education process. We may distinguish two types of models historically which have reference to educational technology, and, for that matter, the field of education as a whole. One is the pictorial model which seeks to create a representation of how things actually are. The other is the disclosure model which, as its name suggests, seeks to create a metaphoric construct that will facilitate the development of new ways of looking at the phenomenon being observed. Here, the phenomenon is education, specifically educational technology. What was originally posited by William James and his followers as *a* way of looking at man with application to education (in short, a disclosure model), has now grown to a very great extent and has become accepted as *the* way of looking at man in the process of education. It has ceased to be a disclosure model in many of its aspects and serves to delimit but one area.

This has far-reaching effects on the use of technology in the field. For if only a psychological model, or metaphor, if you will, is used as a platform from which to regard recent and future technological advances, then we can only deal with what is extant in imaginative uses today or what will come into existence in the same area. These limitations of the "once disclosure-now pictorial" psychological model of the educative processes can be explicitly overcome with new disclosure models. Travers presented at the recent Conference on Technology and Education what must be considered rather important disclosure metaphor since it does open up whole new realms of significant discourse. His point is this: Were the learner (and I use the

word advisedly, knowing full well that this is but one way to view the individual) to be equated with a knowledge-retrieval system, an index rather than an assimilator of a body of facts and concepts, then little emphasis would be placed upon much of what is commonly done in the classroom today. New visions of the utility of technology in teaching are empowered if the "learner" is seen from this rubric. Many other models are, of course, needed.

What other disclosure models are possible to deviate this paucity of vision which can only fan the flames of fear of technology? It will be remembered that Dewey, Harris, and Rugg, men intimately associated with education and, in the case of Dewey and Harris, extremely caught up in psychological concerns, drew heavily on other fields for ways of conceiving and modes of reference to the education realm. Philosophical, sociological, and artistic words were tapped as aids in the conceptualization of the educative process. Need I stress the great import of these varied universes of discourse when our own visioning is being more and more confined to technique?

Can educational technologists and media specialists respond to the need for their participation in development of the necessary technology so that the fear of control is lessened? I must admit that I am not overly optimistic that the historically rooted fear of novelty that necessitates a reworking of the teacher's conception of his role can be overcome until the profession is involved in the technological development. Perhaps, one of the things it could offer is an expanded vision based on new and evolving disclosure models.

The role-oriented fear, the innate dichotomy of teaching itself, the lack of historical perspective, the ever-changing world where knowledge of "new-yet-out-dated" facts is not enough, these and many other issues provide the problems. Technology, while certainly not a panacea, can provide some of the answers. It can allow the teacher to establish a lasting, less threatened view of his role by leaving him free to teach, in Scheffler's sense of the word, and to establish a genuine interpersonal

“we-relationship” with the student. It can allow the student to order his own world in many unique ways if “technique is subsumed under the humanistic and individualistic.” The new media can open up many unexpected avenues of awareness and investigation. As our dear friend Mr. McLuhan has said, “We are entering the new age of education that is programmed for discovery rather than instruction.” New media, considered as some of the many natural resources of education rather than as feared interlopers, can help provide man with awarenesses of his own humanness.

Bibliography

- Berger, Peter L. and Thomas Luckman. *The Social Construction of Reality*: Anchor Books, New York, 1966.
- Cremin, Lawrence A. *The Transformation of the School*: Vintage Books, New York, 1961.
- Harris, William Torrey. *Psychologic Foundations of Education*: D. Appleton, Co., New York, 1898.
- The Theory of Education*: C.W. Bardeen, Publisher, New York, 1893.
- Leidecker, Kurt. *Yankee Teacher*: The Philosophical Library, New York, 1946.
- McLuhan, Marshall. *Understanding Media*: Signet Books, New York, 1964. <
- Ramsey, Ian T. *Models and Mystery*: Oxford University Press, New York, 1964. <
- Schutz, Alfred. *Collected Papers, Vol. II: Studies in Social Theory*: Martinus Nijhoff, The Hague, 1964. <