The question still remains: What instructional problems do we want technology to solve?

Mass Media
—Alternative to Schooling?

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"A DREAM is at night when my mind plays back the pictures my eyes have taken during the day." Believe it or not, this is the reply a five-year-old gave when asked "What is a dream?" Thus it is that all of us—adults as well as children—are looking anew at our ways of dreaming, learning, and teaching now that the electronic age in mass media is really with us.

Mass Media Output

The mass media perform for man the functions of seeing, listening, speaking, and writing and serve to shape public opinion and direct action through government. Books, telephones, telegrams, newspapers, and more recently radio and television are man's formalized information processing and distribution institutions. They rapidly or instantaneously distribute to widely scattered and varied audiences the mass products of popular culture.

Their volume alone in the United States is overwhelming. Throughout the nation 10,000 newspapers, 7,000 radio stations, 7,000 TV stations, 8,000 magazines, 1 million books a year, and 1,500 total hours of news broadcasts annually bombard the eyes and ears of Americans. They compress time into the present and analyze and interpret our age while we yet live in it. They have brought to us a new dimension of learning by transmitting to everyone who will listen or watch all that has just been discovered, invented, manufactured, marketed, or made obsolete.

Input for the Mass Media

Because their volume of output is so great, their appetite for content input is gluttonous. They consume anything and everything, good or bad, distributing it wholesale for all who will listen and view. For example, more people in a single night, it is estimated, have seen Hamlet on television than had seen it in live performances since it was written.
Classics dramatized on TV have led viewers to read or reread the original novels and plays. Documentaries have directed citizens' attention to problems, and sometimes have led to corrective action. They have made available to all the several areas of cultural activity formerly restricted to a few: opera, symphony, ballet. Artists, writers, and composers are in a flurry of activity to create and produce materials for these relatively young mass media.

Creativity, however, takes time, and there is no time to produce. Top-level programs in the arts, compelling drama, and inspired compositions cannot be brought about by a systems approach to organizing, planning, and devising.

**Educational Tasks for the Mass Media**

The efficiency of the mass media in bringing sight and sound to so many people at one time has led some planners to suggest that the mass media—radio and TV especially—become our generation's educational institutions, eventually replacing the teacher in the school.

During the transition, these tasks, generally, have been thought to be suitable for radio and TV: (a) sharing the best teaching over a vastly wider area than one teacher could ordinarily cover; (b) extending the opportunity to learn, beyond the school, to the home and the community; (c) supporting the teacher as yet not well enough trained; (d) substituting for teachers as yet untrained.

In order for mass media to be effective in performing these tasks, experience has proved that mere exposure to any medium is not enough. Nowhere are radio and television being used effectively alone to accomplish one of these assignments. When they are being used, they are a part of a combination of learning activities, resources, and experiences.

Radio broadcasts combined with group discussion in rural forums in India; a question and answer series on farm practices in Jordan; involvement of teachers in Samoa in planning the instructional television programs; follow-up teaching by the classroom teacher in the United States; the use of mothers to supervise their children's home study in New Zealand and Australia demonstrate that the mass media cannot be counted on to do an adequate educational job by themselves. Instead, the mass media must become a component of a teaching and learning system.

Those experienced in using the mass media for educational purposes regard these as helpful guidelines:

1. Have materials prepared by persons who understand the audience using the media.
2. Originate programs as near as possible to their audience.
3. Provide ways for the audience to feed back their reactions.
4. Organize and use local field staffs.
5. Select the medium in terms of instructional needs and purposes.
6. Use every precaution to avoid possible failures of communication.
Mass Media—Alternative to Schooling?

On the basis of experience with radio and television thus far, these media evidently cannot be considered an adequate alternative to schooling. They do not pour content into TV viewers and listeners; instead they stimulate and motivate learning activity on the part of their audience.

A student may be taught by all kinds of teachers, but only he can learn. Therefore, a program of learning activity needs to go on at the point of reception, whether it is in a classroom, an out-of-school learning group, or a community gathering. The mass media by themselves cannot be relied upon to do the teaching task.

Planned guidance for the learners, practice opportunities, and the opportunity for two-way communication, need to be built into the teaching system of which media are a part. With mass media, teaching becomes a team process with divided and combined responsibilities. All members of the team have a common set of learning objectives, work together willingly, plan carefully, and develop the special skills needed for their responsibilities.

Uniformity vs. Diversity

Recent trends in radio programming indicate, however, that mass media may be counted on in the near future as a vigorous force working for educational diversity. When radio stations, faced with the loss of their audiences to television, began experimenting with new formats, they discovered that they could recapture their former audiences piecemeal by appealing strongly to specific fractions of the population.

In fact, local radio affiliates have so effectively ignored network programming in preference for their own locally originated material that one national radio network is planning to split its piped aural menus into four separate sub-networks. Each of these will cater to stations with distinctly different formats. Already, one of the mass media is being individualized for specific sections of the population. This same diversity, it is predicted, will also become the pattern of network television in the future.

Advances in the use of technology for communication are expanding the capabilities of radio and television for individualizing and decentralizing instruction. This development is the one that has tremendous significance for education. "Educasting," an electronic method of communicating or transmitting what is termed Planned Path Instruction, provides students with either four separate channels of aural information or four separate channels of synchronized sound and sight information. A four push-button examining machine permits the student to select any one aural channel or any one combined aural-visual channel at a time during examination. During presentation of information the lecturer-instructor selects the channel.

Centrally produced and distributed radio and television programs preserved on audiotapes and videotapes can be made available for reuse at later times in decentralized locations within schools when teachers want them. In Dade County,
Florida, the instructional radio and television production staff is developing programs in terms of curriculum needs and distributing them through the FM, UHF, VHF, and 2,500 megahertz channels presently available for use in the county. Schools receive the materials and bank those which they wish to use at a later time in the form of videotapes and audiotapes. The material is then redistributed within the school via audiotape and videotape recorders at the time when the consumer teacher and students can most effectively and efficiently use them.

Technical developments in information processing and reproduction are also having significant effects on education and training. Western Union is establishing a nationwide information utility to gather, store, process, retrieve, and distribute all kinds of information through a series of interconnected computers.

The General Electric Company has designed an automatic library system called MEDLARS for the National Library of Medicine which can quickly locate any article in 16,000 medical journals and produce an offset film positive of it for the printer. Audio-dial-access and audio-visual-dial-access systems are being installed in universities and schools so that students can telephone for programs and information from individual study carrels.

This brief survey of developments in the mass media unfolds possibilities that stagger the imagination. Technology as it unfolds makes almost anything possible. The problem still remains: “What are the instructional problems that we want it to solve?”

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