Technical capabilities of film as a medium of instruction are compared with slide tape and television, and conceptualization of media is presented with particular concern for film. Various potentials of film in education are enumerated; ways to improve retention of information are discussed, and the impact of a developing film technology upon education is considered. (SK)
CONSIDERATIONS IN DEVELOPING FILM OBJECTIVES

Robert Perry and Peter Szondy

ABSTRACT

This paper discusses development of film objectives in terms appropriate to film. The technical capabilities of film are compared with slide-tape and television and conceptualization of media is presented with particular concern for film as a life-like experience. In addition, various potentials of film in education are enumerated, ways to improve retention of information are discussed, and the impact of a developing film technology upon education is considered.
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SWRL motion pictures have been used in conjunction with other media, for teacher training and public information. SWRL's films have been one of the prime sources of information about the Laboratory and its programs. This paper explores aspects of the film medium in order to advance the development of attainable objectives for film projects and thereby increase the effectiveness of SWRL films.

Film is one of the most versatile of media. It is capable of both auditory and visual stimuli, coordinating these to present information through multiple sensory channels. Film can deal not only with color, shape, speech, music, and sound effects, but with movement, perspective, detail, process, and time; in short, with virtually all possible combinations of sight and sound experienced in real life.

Other media can approximate some of these effects. The slide-tape can present auditory stimuli, but the visuals are static. Certain concepts can be presented this way, but the range of effectiveness is limited sharply. For example, anything involving movement, process, or time can only be indicated or implied, rather than demonstrated.

 Videotape shares many of the capabilities of film. It has the advantage of being instantaneous, while film requires processing time. Editing videotape can be done during shooting or, as with film, in the post-production period. Editing during shooting can be imprecise and usually means more preparation and more required shooting time. Editing videotape in post-production is now a reality, but the required hardware is still very expensive compared to that needed for film.
A major advantage of film is production flexibility. A film camera can go virtually anywhere. A video camera is limited by the umbilical cord to the video tape recorder. Cordless portable video cameras are usually cumbersome and always very expensive.

The potential viewer-effectiveness of TV is also limited by the inferior size and clarity of the image. While a motion picture image consists of millions of silver-halide particles, projected onto a large screen, the TV image is made up of 400 to 500 electronic scan lines. This inferior image presents a legibility problem in some TV presentations designed for classroom use (McVey, 1970).

Another advantage of film over videotape is that virtually all schools presently have 16mm projectors, but video playback systems represent an expensive initial investment in hardware which most school systems could not presently commit to on any major scale.

Film, then, is a medium unique in its amalgamation of capabilities. From the beginning, the potential of film as an educational tool was highly regarded. Thomas Edison, one of the pioneer film makers and inventor of the kinetoscope, the first motion picture, envisioned film primarily as an educational device. He predicted:

I believe that in the next ten years, visual education - the imparting of exact information through the motion picture camera - will be a matter of course in all our schools. The printed lesson will be largely supplemental, not paramount... Books are clumsy methods of instruction at best, and often even the words of explanation in them have to be explained. They are not sufficiently human and their application is not sufficiently practical. (Quoted by Edgar Dale, 1969.)

But however much has been written about film as an educational...
medium, educational researchers have found it difficult to identify and demonstrate empirically the unique values of film. The assumption of the proponents of film in education has been that multiple channels of information are more effective than single channels. Some researchers have taken exception to this. Travers (1964) found no advantage to more than one channel of information, nor could he find any previous experiment without serious methodological flaws. In 1966, a series of experiments by Travers and others concluded there is little or no advantage to completely redundant materials in two channels. It is of interest to note that the stimuli used in these experiments were nonsense syllables.

The assumptions of these experiments were questioned by Severin (1967), who pointed out that Travers' conclusion was specific only to redundant information. Conway (1967) re-examined Travers' studies as well as some earlier media experiments and concluded that:

...an enormous disparity has existed between experimental settings and relevant situations, that serious methodological flaws have been manifest, and that an underlying conceptual framework has been generally lacking in media research.

Conway's observation of the uncertainties that have plagued media researchers leads him to say, in effect, that previous attempts to understand media in their "relevant situations" have failed because they were guided by a conceptual framework inappropriate to the subject. The implication is that if media researchers are to emerge with useful findings, they must develop a new way of thinking about media, and consequently, a new way to judge their media effectiveness.
One of the first steps which can and should be taken toward such a conceptualization is to close the gap between experimental settings and relevant situations. The attitude persists that an audiovisual presentation is essentially a substitute for a lecture or a book, but is simply more vivid and appeals more to the senses. Accordingly, there have been studies indicating that film is no better than a lecture or a book in conveying information. Yet in these studies, film was evaluated only for the same objectives as the book and lecture, when in fact, there is ample research to show that film has the potential of fulfilling many other objectives which the lecture and the book cannot.

A film can present more than a bombardment of isolated stimuli, and more yet than a stenographic reproduction of reality. It can selectively combine auditory and visual stimuli in a way that allows the viewer to transcend time and space. Action can be emphasized, isolated, compressed, expanded, or fantasized to present a heightened reality—heightened in the sense that it encompasses only that which is relevant to the themes being developed. The frame of the camera is a selective eye which looks not indiscriminately at whatever passes before it, but intentionally, with a particular focus, to communicate meaning through the images it reproduces.

Film, in this way, can lead the viewer to abstract from reality to understanding—an understanding which is the more uniquely his own, because he has experienced this heightened reality himself. Naturally, the film maker is behind it, communicating a point of view; but if
it is so desired and properly executed, the experience of the viewer is one of direct vision, with little or no awareness of the film maker's presence.

But such understanding unfortunately does not occur with every film audience or with every film. Because the medium can be as broad as life in its scope, film objectives must be aimed selectively at an audience that can identify with the action. For in this lies a primary strength of film: if viewer-identification is achieved, the way is opened for significant attitudinal affect.

A recent example of using film to attain such an objective is Arthur Gould's picture, "School" (1970). The film depicts the first day at kindergarten, presented from a child's point of view. Aimed at an audience of children, it introduces them to kindergarten and takes them through an exciting and pleasant kindergarten day. The film is couched in adient emotional terms to invite the pre-school viewer's identification with the children in the film. In Inglewood School District in fall 1970, the film was shown to several kindergarten classes in their first session. Some teachers showed it as the first order of the day, before even calling the roll. Other teachers showed the film only after roll call and other preparatory activity. And still other teachers did not show the film at all.

A comparison of teachers' reports on their classes indicated that pupils who had seen the film first adapted much more quickly to the kindergarten environment and felt more readily at ease in communicating with the teachers and other students than those who had not seen the
film or who had seen it only after they were introduced to the new environment in terms of roll call and class routine. The indication, then, even though not adequately confirmed empirically, is that viewing the film noticeably aided in conveying to the children an understanding of their new role as kindergarten students and helped invest an unfamiliar atmosphere with associations of pleasant experience.

The use of film for attitudinal affect has been taken one step further by Rosemary Gardner and Carolyn Ingram in their Yettem School Visual Literacy Project: English as a Secondary Language (1970). Among the assumptions of the experiment were that children can conceptualize beyond their ability to verbalize, and further, that they can reflect these conceptualizations through visual composition. Mexican-American children, using still photographs and motion pictures made by themselves, created a picture of their own world. The children's words in describing their pictures were recorded, typed, and the next day, were given to the children to glue into their books. The teachers took the syntactical and vocabulary errors from the stories and structured oral language drills. The children's world began to appear on paper.

They began to ask for words they didn't know. A natural transition to reading was made... The children's motivation could be seen from their increased interaction, both with each other and with the teachers. They asked each other for words in English, shared their photographs, read to each other, and attempted to write down their visual experiences, whereas before they could not express themselves, and would not try.

One of the underlying determinants of the success of Gould's film, "School," as well as of the Yettem School Project, was that, through the readily provided viewer-identification, the students' behavior mode to-
ward these films was kept positive and actively receptive. But with a film designed to convey information, the students generally do not identify themselves as readily as with those films which they have either made themselves or which feature children in a situation similar to their own. Therefore, it is more difficult with specifically instructional films to develop and maintain a positive, actively receptive behavior mode among the students.

This difficulty is undoubtedly not improved by the tremendous volume of commercial TV and theatrical films that most students have constant access to. In commercial TV, a little-discussed but much-practiced credo is that the viewer must not be overly stimulated by the programming; rather he must be lulled into a state of passive receptivity, so that the commercial will seem the more exciting. Some people actually fall asleep while viewing TV, and even those who remain awake have been taught to feel that media presentations are associated with entertaining relaxation and passivity.

In any case, whatever use the educator wishes to make of media, he must be aware of this problem and of the requirement to make the students actively receptive. In the above-mentioned cases, the problem was met by easy viewer-identification. With a specifically instructional film, wherein viewer-identification may not be inherently strong, other means must be used.

As the fruits of the developing film technology become more accessible to educators, the growing possibility presents itself that Edison's prophecy may belatedly come true. As discussed above, realistic objectives can be selected in the area of emotional and attitudinal
effect, for the purpose of motivation and understanding. In this broad area the educator must remember that film is effective to the extent that the viewer can relate it to his own life experience.

Another general area of objectives relates to the use of film as an element of an instructional module. Film is uniquely suited to the communication of relationships, processes, and skills, especially those involving movement. In this usage the general technology of instructional development as practiced at SWRL can be applied to the film as a unique instructional medium.

As additional technical facilities become available to the Laboratory the scope of their use will be only as wide as the imaginations of those using them. If the educator wants more effective films, he must be prepared to select more effectively attainable objectives. The objectives of film should not be determined according to objectives fulfilled by other media, but they should be selected according to the capabilities and potentials which are proper to film.
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Filmography


The Instructional Concepts Program (1969), Robert Perry and Peter Szondy. Produced and distributed by Southwest Regional Laboratory.

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