ABSTRACT

This paper synthesizes research in videotape utilization within several disciplines--teacher education, counselor education, psychological therapy, business training, and speech education--with three objectives: to bring mass communication educators up-to-date in the non-broadcast uses and techniques of videotape; to provide guidelines for videotape utilization; and to encourage educators in mass communications to convey these guidelines through workshops or seminars to utilizers of videotape systems in other disciplines. In this paper the scope of videotape utilization considered is narrowed to that which provides a structured stimulus for specific viewer responses--development of skill, change of behavior, or greater self-knowledge--rather than videotape as a means of exposition. A selected bibliography covers the following subject areas: business training and development, counseling, micro-teaching, practical consideration for utilization, psychiatric therapy, simulation, specialized uses, speech education, and teacher education. (LL)
Videotape: A Synthesis of Research in the Use of Audio-Visual Replay for Instructional Development

A Selected Bibliography of Videotape Utilization

Paper Presented at the SCA Convention, New York City, November 10, 1973

Charles Clift, Ohio University
A moebius strip is a one-sided surface made by taking a long rectangle of paper, giving it a half twist and joining its ends. Any two points on the strip can be connected by starting at one point and tracing a line to the other without crossing over a boundary or lifting the pencil. The outside is the inside. The inside is the outside. Here the power of video is used to take in your outside. When you see yourself on tape, you see the image you are presenting to the world. When you see yourself watching yourself on tape, you are seeing your real self, your "inside."

Paul Ryan, editor of Radical Software

Until the late sixties, videotape was generally confined to broadcast areas, but the development of portable, low-priced videotaping equipment systems in the last few years has enabled such equipment to be included in the budgets of most institutions and some individuals. Consequently, control over the utilization of such equipment has shifted away from the broadcast areas to the extent that it has become impossible for faculty members in mass communications to be aware of the diverse techniques which are being developed in videotape utilization. The situation is further complicated by the publication of research in videotape utilization in journals which have limited readership beyond a specific discipline.

This paper synthesizes research in videotape utilization within several disciplines--teacher education, counselor education, psychological therapy, business training and speech education--with three objectives: first, to bring mass communications educators up-to-date in the non-broadcast uses and techniques of videotape; second, to provide guidelines for videotape utilization; and third, to encourage educators in mass communications to convey these guidelines through workshops or seminars.
to utilizers of videotape systems in other disciplines. In this paper the scope of videotape utilization considered is narrowed to that which provides a structured stimulus for specific viewer responses--development of skill, change of behavior, or greater self-knowledge--rather than videotape as a means of exposition.

Closed-circuit television systems were used almost exclusively as a medium of exposition until the middle sixties, and this use represents the major function of the more than 20,000 systems in use today. Most of the research during the fifties and early sixties compared television exposition to traditional methods. With the development of inexpensive, versatile videotape systems, some researchers began to investigate the uses of videotape in handling individual differences in the affective, as well as the cognitive areas. This research was concerned with eliciting a specified behavior from an individual through videotape viewing rather than measuring averages of cognitive change. These researchers had to overcome the passive nature of commercial television viewing which had been continually reinforced over years of home viewing. Three methods designed to produce an active response will be examined in the balance of the paper: modeling, simulation, and self-confrontation. The former two will be treated briefly while the concentration of the paper will be on methods of self-confrontation and guidelines which can be deduced from such methods.

MODELING

Modeling through videotape utilizes a standard model of appropriate behavior which is taped and the viewer is encouraged to exhibit
similar behaviors. Such modeling is termed "perceptual modeling" to distinguish it from "symbolic modeling" which refers to reading how an action is performed and attempting to imitate that action. In teacher training, perceptual models have been found to be more effective than symbolic models, and within perceptual modeling, presenting a brief example of a specific teaching behavior taken out of context of a lesson was found to be more effective for instructing teachers in a teaching skill than presenting the behaviors in a lesson context. This latter finding provided the basis for Micro-teaching developed at Stanford University by Dwight Allen and practiced, though sometimes under different labels, in many teacher training programs.

David Young continued Allen's research at Stanford and later at the University of Maryland. Young, who relied heavily on the research in imitative learning of Bandura, Walters and Berkowitz, concluded that modeling is more effective if attention is focused on a teaching skill at the same time it occurs on tape (contingent focus) rather than providing a written guide to skills which will appear on the tape (non-contingent focus). Furthermore, according to Young, positive behavior through modeling transfers to teaching ability better than negative behaviors.

SIMULATION

Simulation involves modeled behavior which is a stimulus for immediate viewer response; the model is of a specific situation to which the viewer must respond, rather than of a finished product to which the viewer can aspire as in modeling. In counselor education,
client responses are simulated via videotape to train counselors in using "counselor tacting leads" (CTTLs). As in modeling, videotape provides a standardized stimulus across all viewers. In one study, the counselor reacted to the taped client's response; if the counselor's CTTL was considered effective by the supervisor, a taped response of the client was shown, but if the lead was inappropriate, no client response was presented.

Simulation has also been used to aid the client in the counseling situation. "Vicarious counseling" involves the client experiencing the full interview treatment process of another individual whose constellation of problems includes features with which the individual will identify. Tapes of interviews of individuals representing a variety of common problems are collected, transcribed and taped using actors. The advantages of vicarious counseling have included reducing the number of applicants, reducing the length of treatment for those who still need counseling-psychotherapeutic treatment, and those who needed subsequent treatment were found to be more problem-solving oriented than the traditional client.

A similar use of simulation in psychological therapy consists of fifteen set responses which are taped and presented sequentially to a patient no matter what the patient says. Standardized Videotaped Interviews (SVTI) have shown that not only are schizophrenic patients able to carry on a dialogue with the taped responses, but also they tended to share more personal information during SVTI than in more traditional person-to-person encounters.
SELF-CONFRONTATION

Self-confrontation differs from modeling and simulation in that each taped sequence represents an individual encounter; the viewer becomes personally involved with the playback.

An individual's awareness of his own behavior in a situation is usually distorted by self-interest and personal involvement. In the self-confrontation condition, a record of one's performance contradicts erroneous perceptions and may be painful.12

Burton Danet conducted research in self-confrontation with psychiatric in-patients; he compared a group receiving videotape feedback with a control group which received no playback. The playback was conducted during the beginning of the following session (one week later) and there was no comment made during the playback. The results showed that the experimental group (E-group) demonstrated more anxiety, more cohesion on task dimensions, and more negative self-evaluation than the control group (C-group). The C-group, on the other hand, demonstrated more cohesion on emotional and affective dimensions, more positive self-evaluation, and more improvement. The C-group became more democratic as the sessions continued; the E-group was dominated by several members.

Danet concluded that in this study videotape self-confrontation was a disruptive influence affecting the mode of interaction and amount and type of cohesion; however, he felt that generalization of these results was confounded by too many questions: For which individuals and under what conditions is exposure to one's self image in this manner
a beneficial experience? What is the optimal period of times and, right number of times to provide this experience? When and under what conditions will self-viewing produce negative or harmful results? These questions are considered under the following headings:

1/ The Self-Viewer: Who should experience self-confrontation; 2/ The Recording Experience: What are the elements of a non-threatening taping experience; 3/ Production Techniques and Playback Time: What should be included on the tape and when should it be replayed; and 4/ The Playback Session: How should the playback be conducted.

THE SELF-VIEWER: Who should experience self-confrontation?

As an adjunct to several investigations, it was discovered that videotape self-confrontation can be detrimental to certain types. Milton Berger, in describing videotape usage in a private psychiatric practice, mentioned that he did not use self-confrontation with suicidal patients whose self-hate was physically bound. George Heen in work with teacher education in St. Cloud, Minnesota, found that about five percent of the teachers should not get involved in videotape self-confrontation without cautious planning; these were often the perfectionists who were the better teachers. In addition to psychological correlates, researchers have examined how viewers should be prepared for profitable self-confrontation.

Salomon and McDonald, reacting to the micro-teaching project at Stanford, examined "when individuals accept and when they reject negative, unsupportive information about themselves when faced with a reliable recording of their behavior." The authors noted that defensive
reactions are not likely to take place when the viewer knows what behaviors are expected and hence looks for deviations of this behavior, and, second, had adopted these expectations for the desirable behavior and is ready to modify his behavior to make it congruent with the expectations. Without such focusing, the authors hypothesized that self-perceptions and predispositions determine the receivers' reactions to self-viewing and cues he selects. The study found that without set standards, attitudinal change was dependent on satisfaction with one's performance; with less satisfaction there were more defensive responses and less attention to teacher related cues. 17

Pre-taping, in conclusion, involves determining for whom self-viewing will be beneficial and then agreeing on objectives with those to be taped. If the experience is both selective and positive, no one will be emotionally injured and most will benefit from self-confrontation. The next three sections present the elements of positive taping and playback sessions as determined through various studies. Dr. Burton Siegel, writing in the area of sales training, described the importance of control during these stages:

Video strips us of our defenses. It casts an impartial eye on us that doesn't lie or subtly distort what we see to fit our own image of ourself, as all humans tend to do when they lack the objective view videotape provides. Almost everyone experiencing it for the first few times will tend to be very anxious and extremely self critical. These are the ingredients of a psychological devastating shock, and we've seen some participants badly scarred emotionally in poorly run programs of this type. 18
THE RECORDING-EXPERIENCE: What are the elements of a non-threatening taping experience?

The manner in which a taping session is conducted can determine whether it is a non-threatening experience and realistic involvement. This is important in videotape observation whether subsequent self-confrontation occurs or not. An extensive study by Raymond Adams and Bruce Biddle used videotape as an observational tool to show classroom behavior including the physical movement of the teacher and student-teacher interaction. Biddle in a separate study noted that during recording sessions some students acted better than usual. "Videotapes are not the perfect means for gathering classroom interaction data—simply the best technique yet available."20

Several studies have compared using the camera in the open or concealing it, and using different settings—natural, studio, room. Concealing the camera may become an invasion of privacy unless the individual is first informed that he will be videotaped which may create more anxiety than having the camera in the open. Individual studies with psychiatric patients conducted by Frederick Stoller, Milton Berger and Harry Wilmer all suggested conducting the recording in the studio with cameras in the open. Familiarity with the television equipment allows the subjects to understand the videotaping process. Stoller had his patients run the cameras. Myles Breen suggested that sales trainees become involved as a team in a permissive attitude which allowed trainees to operate the cameras. When the trainee becomes familiar with the equipment,
according to Green, there will be no more effort to self-viewing than looking in the bathroom mirror. In establishing an attitude conducive to taping, it is sometimes necessary to conduct a number of sessions before taping. Berger, working with psychotherapy groups, felt that there needed to be, what he termed, a positive transference feeling within the group before taping. Thomas Stroh, in an excellent review of videotape utilization in business training, suggested a number of candid tapings of sales trainees to relax them. A study dealing with the distractive element of videotaping recorded children may be relevant to this area. The researchers found that over a six day period—one, thirty-minute recording session each day—there was a significant reduction in distractions, and furthermore there was a similar pattern of decreasing distraction within each individual taped session. The researchers concluded that with this group it was most profitable to begin taping fifteen to twenty minutes into the session. If similar patterns exist in other groups to be taped, the determination of such patterns could aid in producing tapes which are representative of the group.

Several studies emphasized the need for a number of self-confrontations to relax the individual and create a realistic situation. Stroh, in his survey of business uses of videotape, found that most utilizers conducted one, or, at most, two performance-viewing experiences and failed to follow up with objective evaluations of the results. Logue, Zenner, and Gohman found that videotape was
"anxiety producing and could contribute to a temporary regression of efficiency of behavior." Stroh found that a salesman group which used videotape playback decreased in listening and questioning effectiveness after the first viewing when compared to a control group which had not been taped, but the experimental group gained after the second and consecutive viewings. In evaluating the contribution of videotape recording to T-group processes, Milborn Hudson found: "The use of videotape recordings to facilitate group interaction and understanding seems to have only slightly impairing effects during the early stages. The long run gains appeared to more than offset the difficulties encountered early in the experiences."

The following conclusions can be drawn from the preceding research findings relating to the recording session: a/ acquainting the participants with the television equipment and the taping process will tend to produce a relaxed and natural session; b/ some measure of group behavior which will show the level of distractions or anxiety will enable the researcher to determine when the group is ready for taping over a number of sessions and within a single session; and c/ a number of recording session-playback combinations will tend to overcome the initial detrimental and inhibiting effect of the videotaping process.

**PRODUCTION TECHNIQUES AND PLAYBACK TIME:** What should be included on the tape and when should it be replayed?

The manner in which camera shots are combined or other information added to the tape can affect the playback experience, but is usually
not evident to those being taped. In addition, information can be added to the tape following the recording session. Drama critics had their criticisms voiced over videotapes of plays performed by Maryland high school drama groups. As it turned out, the comments proved to be emotionally weakening to those students who suffered criticism with initial viewing; and initial playback before adding the criticisms might have been advised. Iowa researchers took an active role during the recording session of group interactions in a speech class; the instructor could superimpose slides of negative and positive comments at the bottom of the screen, or he could fade out the audio and add his voice to the tape.

Additions to the tape can be more sophisticated than those presented above. Harry Gilmer presented a detailed and illustrated analysis of practical and theoretical aspects of camera angles, sequential programmed techniques and artistic qualities of production. Notes can be written by the counselor with an electronic pen and superimposed across the bottom of the screen, or lights behind the client can indicate inner monologue of the counselor which could be recouired during playback. Often, split screening a two-person interview will enable one to analyze nonverbal reactions as well as verbal comments of the client. The effect of superimposing one member of the group in close-up over the rest of the group enables the counselor to concentrate on the behavior of one member and be simultaneously attentive to the others in the group.
A method of sensitivity group teaching involved videotaping a group for ten minutes, using close-ups spaced by group shots. The discussion of the tape by the group was taped with the original tape inserted in the lower right hand corner. This final tape could be viewed with the effect of seeing oneself acting and reacting, and reacting to both. Three levels of self and group observation were involved: first, the original group; second, the group discussion as they watch the original group, and third, the reexperiences of both groups by viewing the final tape.  

Research concerning when to playback a recording session lacks rigor; most of the studies scheduled playbacks for convenience without regard to the possible differences in results between immediate or delayed playback. Those studies which explicitly considered playback unanimously supported immediate playback. The teach- view- reteach structure of micro-teaching is predicated on immediate playback. Eugene Czajkoski, working with group therapy, found that beginning a session with the tape of the previous week's session tended to stall the group in a kind of historical perspective; "the sense of immediacy was lost." Czajkoski also found that stopping a session in the middle for playback tended to diminish spontaneity and increase dependence upon the therapist. Stoller found that delayed playback diluted the therapeutic value of self-confrontation.  

Hilmer recommended a relatively short playback, ten to twenty minutes, because the amount of information was so vast and discussion often continued far longer than the playback itself.
researcher is confronted with a long tape, it may be necessary to edit out those portions which are most relevant to the group or individual behaviors the researcher is interested in. Editing would negate immediate playback; in this instance it would be the practitioner's decision to weigh the advantages of immediate playback over a well-edited tape.

In conclusion, the production techniques depend on the equipment which is available; the advantages of multiple images in working with groups may convince such a user to purchase a switcher and several cameras; and sessions should be planned to include time for immediate playback along the lines outlined in the next session.

**THE PLAYBACK SESSION:** How should the playback be conducted?

Churchill Roberts found that the playback session was important to individuals acting out a job interview situation, although the overall effect of criticism was reduced because the actual performance replayed on tape was neither as bad or as good as the negative or positive criticism suggested. A critical question concerns what to do during the playback session.

Richard Biberstine found in teacher education that viewing the tape does not bring about change automatically. In the same area, Young stressed the importance of contingent focus, and Salomon and McDonald noted that when no standards for behavior were presented, the viewer's reaction was dependent on how he viewed the performance. In two studies, however, an individual personal reaction, which Salomon and McDonald said should be avoided, was the behavioral
objective of self-confrontation. In the late fifties, Cornelison and Arsemian used photographic self-images without direction: "Since self-confrontation focuses perception upon an external image of self, this may bring psychotic individual into better contact with the realistic self." 41 Harry Wilmer has recently used videotape as a medium for a television monologue of adolescent patients; each patient prepared a fifteen-minute, do-your-own-thing tape shortly after he had been admitted with the options of erasing the tape, showing it to the therapist, or sharing it with other patients. 42

Most of the studies which provided no guidance during the playback were run by non-therapists and provided no rationale for an undirected playback. Stroh found little feedback during playback sessions with sales trainees; in the plethora of studies which compare videotape feedback with other media feedback, there was no direction during the playback. In support of direction during playback, Myles Breen in a study which used eight types of non-fluences as measures of anxiety found that there was less anxiety with videotape playback coupled with teacher comment than with the playback alone or a no-feedback condition. 43

Behavioral objectives for the videotape self-confrontation should be established before the taping experience, and during the replay it is usually necessary to direct the self-viewer's attention away from the "cosmetic effects" to those specified behaviors. A number of methods have been developed to focus the viewer's attention:
micro-teaching, focused feedback, interpersonal process recall, and sequenced peer teaching/videotape recording: playback.

**Micro-teaching**: Micro-teaching, as developed at Stanford, utilizes a framework of teaching areas including initiating behaviors, presenting material, consolidation of the lesson, monitoring and evaluation. These primary areas are broken down into skills. Within a micro-teaching unit a single skill is emphasized, employed by the student teacher, and during the immediate video replay attention is directed toward the use of the specific skill.44

**Focused Feedback**: Frederick Stoller described focused feedback as a means to avoid patients concentrating on their physical experiences rather than the meaningful elements of their interpersonal impact. During the immediate self-viewing, the therapist focuses on what he considers to be significant aspects of the interaction session. The concept of focused feedback grew out of Stoller's work with chronic schizophrenics. He found that patients who had lost all self-esteem could not resist watching themselves. When such viewing was focused, according to Stoller, the experience could be beneficial.45

Margot Robinson used the focused feedback technique to subject the effectiveness of videotape feedback to systematic measurement; she felt that most earlier work in this area had been anecdotal. Using tape playback as a mnemonic device supported by the focusing technique, she developed comparisons between groups which utilized videotape self-confrontation and those which received verbal feedback on the sessions. The results supported the use of videotape self-confrontation.46
Stroller also worked with group encounters using videotape to differentiate between anticipated and actual responses in group interaction. George Herbert Mead theorized that individuals rehearse an act and a response before each act. An act consists of a range of gestures, some of which (such as speech) can be monitored by the initiator, and some of which (such as facial expressions) cannot. Through video replay or group encounters, the discrepancy between verbal and non-verbal gestures was investigated by Stoller to explain this lack of correspondence between a person's inner state and what he verbally communicated to others. A small vocabulary has developed to describe the self-viewer as he becomes aware of his own actions and those of others. "Image impact" is a person's reaction to the initial viewing; "second-chance phenomenon" denotes a second chance through video replay to better communicate feelings; and "apra's vu phenomenon" occurs when one has a new view of another person during the replay, and a second chance to react.

**Interpersonal Process Recall (IPR):** As in focused feedback, IPR uses self-confrontation as a fluid session and focuses attention to specifics during the playback, in contrast to the highly structured micro-teaching. Developed by Norman Kagan in the early sixties, IPR used a split-screen of counselor and client; the maximum number of cues were included in the playback which was viewed by the client and counselor separately. The client was assisted by an interrogator who was a skilled counselor. The interrogator had the client recall feelings and interpret behavior during the replay. Either the client
or the counselor could stop the tape at any point and comment on the interaction. The counselor observed the client-interrogator interaction through a one-way mirror. The role of the interrogator was to have the client concentrate on the original counselor-client relationship; the client was pushed to express greater clarity in discussing and understanding specific behaviors.

In IPR, Kagan noted that there was a mutually beneficial effect for the client and the counselor: The counselor could observe the client's projections, fears and aspirations about him (the counselor), and more clearly understand the client's interpersonal behavior and aspects of his problem; the client, on the other hand, could begin to understand his own perceptions and reactions to people by observing the interaction.48

Recently Kagan has combined videotape simulation with IPR.49 Films were prepared with actors portraying four basic types of affect (these had been determined by a pilot study) with varying degrees of intensity. Clients who viewed these simulations in videotaped sessions became involved with the films, even in large groups, to the degree that they would verbally and physically respond. The following IPR session enabled the client to gain rapid insight into what was probably their typical reactive behavior to intense or threatening interpersonal situations: "Initial case study results have suggested that affective simulation with the IPR process accelerates the client's ability to perceive, differentiate and gain insight into his reactions to others."50
Sequenced Peer Teaching/Videotape Recording: Playback (SPT/VTR:P):

This is a method for improving the competency of experienced teachers which combines micro-teaching with IPR. A small group of college teachers from several departments met with an outside facilitator. Each of the teachers presented a sequence of teaching sessions which were videotaped, played back and critiqued by the group. The facilitator provided initial stimulus to discussion and criticism since he had no personal involvement; the results showed improved teaching through gains in sensitivity to aspects of instruction, and the establishment of colleague rapport across disciplines. This small study is most important as an indicator of intelligent and planned use of videotape. In contrast, most often videotape is provided for self-evaluation to a faculty member with the stipulation that the tape will only be viewed by him and then erased.

This final section has outlined a range of approaches to make the playback session a constructive experience.

Conclusion

Before one decides on videotape self-confrontation, it is important to determine if such feedback is necessary for the task involved. In fact a number of considerations tend to support the use of other media of feedback: first, other methods of feedback may be superior to videotape self-confrontation for changing certain behaviors in certain individuals; second, there are emotional dangers inherent in videotape self-confrontation with certain individuals; and third, extreme time and energy must be devoted to each stage of the process.
Having determined that the behavioral objectives and the individuals involved would best be served by videotape self-confrontation, the following conclusions are important to consider:

1) It is necessary to structure the experience and convince the participants that behavioral changes resulting from such structure are valuable.

2) During the session, it may be necessary to allow the participants to use the cameras, play with the video recorder, and become relaxed in the situation before the tape is representative of a realistic experience and not merely a series of interpersonal contacts performed for the camera.

3) External factors—when group meets, length of time group meets—should not determine the length and time of playback; unless prior review of the tape is necessary, the session should be planned to include replay immediately after the session.

4) During the playback, avoid free viewing; attention should be directed toward those individuals and behaviors felt important by the practitioner. In a non-therapy situation, an outside facilitator may improve the value of the playback session.
Footnotes


5. Ibid.


17. Ibid.


22. Milton Berger (see footnote 14 above). "Integrating Video."


34. Harry Wilmer (see Footnote 23 above).

35. Ibid.


37. Frederick Stoller (see Footnote 24 above).

38. Harry Wilmer (see Footnote 23 above), 215.


44. *Micro-Teaching: A Description*.

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50. Ibid., 313.

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