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MEDIA UTILIZATION IN EDUCATION

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy in the Graduate School of The Ohio State University

By
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* * * * * *

The Ohio State University

1981

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To my parents and dedicated parents everywhere
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Chapter I

Introduction

One cannot overestimate the importance of the function which the teacher plays in the process of learning from film. The research has repeatedly shown that good teaching techniques can positively influence learning from films (Reed, 1950; Vernon, 1946; Hoban and Van Ormer, 1950; and Bruner, 1954).

We've all heard tales of teachers who show films on Friday afternoons merely to pass time. However, the value of the film is to provide experiences which the teacher is unable to provide.

Paradoxically, a good film can improve a teacher's lesson; a poor teacher's misuse of a good film may render it an inappropriate or ineffective teaching device; and a good teacher can improve the effect of a poor film. Thus, teacher preparation and creativity can greatly enhance film utilization and consequently, student learning.

Clearly, the user of the film is the person ultimately responsible for the creation of a psychological environment which is conducive to learning. The user creates this psychological environment both perceptually and conceptually.

Perceptually, he is responsible for manipulating the physical conditions of learning. This responsibility ranges from checking equipment and previewing the quality of the print to being responsible for lighting, acoustics, and seating arrangements in the room in which the film will be shown.
Research has shown that careful film selection, previewing, and detailed preparations of advanced organizers, introductory and summary remarks contribute to the success of the educational film, and thus to the success of the learning unit (Hoban and Van Ormer, 1950).

Moreover, there are many ways in which the creative teacher can manipulate the learning environment. These include: announcing quizzes prior to the film showing; announcing quiz results immediately; conducting student participation exercises, i.e., encouraging students to answer questions raised by the film narrator; class discussion of the film; stopping the projector for discussion, and thus making the film open ended; referring to the film in subsequent lectures, thus making connections between the film and other learning experiences; turning down the sound while the film is shown; and repeating showings of the entire film or segments of the film.

Wagner and Rose (1974) identify a need for media producers and media users to bridge the gap between research and practice, or more precisely the gap between new technology and media utilization.

It is also evident that artists, teachers, communicators, and students of the image must come to grips with the concept of "systems design" since all technologically based scientific and intellectual developments depend upon an orderly consideration of functions, resources, facilities, and sequence of events leading to the completion of specified and operationally defined achievements.

The well-developed system should also include, by definition, the thoughtful, artful, organic application and creative control of both human and technological components, and the means by which independent serendipitous, non-programmed, and purely humanistic input can be accommodated in its feedback.
Clearly, there is a need for "systems designs" which allow for interaction between the user and the media--thus extending the production process to include the film user.

The question remains, "How does one go about designing such media?"
The fact that film design components have a tremendous effect on film learning has been proven in many research studies (see Hoban and Van Ormer, 1950; Schmidt, 1971; Dickie and Levie, 1973; Travers, 1968; et al.).

Perhaps, media utilization can be enhanced by designing media which are flexible in nature. A review of the literature indicates that there is both a need for and a desire for media which are flexible in nature (Allen, 1973; Allen and Cooney, 1964; Freeman, 1924; Janowitz and Street, 1966; Anderson, 1968; et al.).

All films are in a sense modular: composed of frames, shots, sequences, scenes, and reels. However, traditional classroom utilization of films has been earmarked by linearity--the teacher will show the film from start to finish and only show it once. Unfortunately, this is true for university instructors, as well as public school teachers. McGregor (1971) comments on these characteristics of film utilization:

Historically the process of teaching with films has utilized the newer media only in very limited and conventional ways. Teaching about films has been accomplished in a one-way linear, deductive manner and film which is perhaps the most visual and nonlinear of the art forms is dealt with in a linear and verbal manner.

A flexible design format is already found in a number of modular, nonlinear forms: single-concept films, open-ended films, film
excerpts, 16mm modular films, video technology, and videodiscs (see The Review of the Research, Modular Design for further explanation).

The importance of the modular format lies in the fact that it extends the production process to include the user. It allows media users to rearrange messages or to delete information which is inappropriate to their needs.

These questions arise, "What happens when we design media in a modular nonlinear way? How will this design component affect utilization? Will classroom teachers take advantage of this unique design component?"

Background to the Problem

In 1966, Wagner designed a modular film series, A Galaxy of Motion Picture Documents on Communication Theory and the New Educational Media. In 1967 and 1971 research was conducted to determine how this design component affected film utilization.

Statement of the Problem

At this writing, it is 14 years since the film series, A Galaxy of Motion Picture Documents on Communication Theory and the New Educational Media, was first produced. By extending the study of this film series what may one learn about media utilization? Will extended study of film usage patterns shed light on the larger question of how media utilization can be improved by both media users and media producers?
Purpose of the Study

The purpose of this study is to explore in-depth the question, "What can be done to improve media utilization?" and to make recommendations to media producers and media users concerning how this process can be enhanced.

Importance of the Study

This is the first long-range (14 year) study exploring the utilization of a single film series and a specific production device, modularity.
Chapter II
Review of the Research

Media Utilization Research

Film Selection

Obviously, it takes a great deal of preparation to incorporate media into one's lesson unit. The task of using the "right" film at the "right" time at the "right" place and in the "right" way is indeed a large responsibility. In order to successfully select films the teacher must have an understanding of the criteria for evaluating instructional films. Needless to say, this task involves very careful previewing. The teacher must select films which are directed toward the characteristics and intellectual abilities of the class. A physics film directed toward college students is of little use to a fourth grade class, unless a very good teacher is using it.

Unfortunately, many public schools require teachers to select films and booking dates anywhere from months to a year in advance. Thus, when the teacher is forced to "guess" at the characteristics of the audience, the task of film selection takes on even greater importance.

How do we select films? Generally speaking, we select: a) films we have used before successfully, b) films we have easy access to, and c) films that are documented in the literature.

In order to select an appropriate film the teacher must have a clear knowledge of what makes a film good. Clearly, the teacher who has little or inadequate knowledge of film evaluation criteria will have
difficulty selecting the "right" film. Furthermore, repeated failures to select films which are congruent with/and helpful to a lesson unit may well discourage a teacher from incorporating films into lesson units.

Witt (1980) offers seven guidelines to film evaluation:
1. Is the film an integrated, organized set of ideas?
2. Does the film prepare the learner for upcoming information?
3. Does the film offer learners strong encoding/retrieval cues?
4. Does the film allow for rehearsal of the material?
5. Does the film have a strong visual component?
6. Is the film interesting? Does it hold your attention?
7. Does the film include prescreening materials?

One of the most comprehensive guides to film evaluation is Manual for Film Evaluation by Emily Jones (1956). This text provides valuable insights into the process of film selection and evaluation. It also includes evaluation forms used by such professional educational film organizations as The American Film Festival, The Council on International Nontheatrical Events Inc., and The Educational Film Library Association, Inc. (see Appendix A for sample evaluation forms).

After careful analysis of the literature pertaining to film selection, design, and evaluation the author devised a set of criteria for film evaluation which were tested in a graduate seminar in The Department of Photography and Cinema at The Ohio State University (see Appendix A). The seminar focused on the design of educational films.
Consideration of Learning Objectives

The effectiveness of an instructional film begins to develop long before the film arrives in the classroom. It is important that teachers select educational media which fit into the context of a learning unit and its instructional objectives. If a student cannot clearly identify the relationship between the film and the learning unit, chances are he will be less attentive to the film.

Tweikert, Urbach, and Buck (1972) define an instructional systems approach as "any set of educational materials or strategies which has been developed through the use of a systems approach." This is an approach to learning which emphasizes the formulation of instructional units through a process of: a) problem definition; b) delineation of specific and attainable learning objectives, which when attained constitute a problem solution; c) provisions for learner feedback and, if necessary; d) provisions for modifications of the objectives and revision of the solution.

Gerlach and Ely (1971) defined ten essential elements of a systems approach to learning:

1. Specifications of objectives.
2. Selection of content.
3. Assessment of entering behavior.
4. The strategy which will be employed.
5. Organization of students into groups.
6. Allocation of time.
8. Selection of appropriate learning resources.

10. Analysis of feedback by teacher and learner.

See also Mager (1975) for more information regarding the preparation of learning objectives.

Because they represent the core of the instructional unit, instructional objectives should be very carefully devised. Moreover, all other instructional decisions must be related to the objectives. Therefore, it is very important that instructional media be selected after the objectives are defined, as opposed to the selection of media and then adjustment of the objectives to fit the media. Brown (1973) points out that "the media or parts of it must make a recognizable contribution to the objectives or there is no need for it." Similarly, Hoban and Van Ormer (1950) state, "film should be produced and used as part of a package of instructional material, not as unique instruments of total instructional power and influences."

Consideration of Audience Objectives

It is very important that the teacher select a film which will match the characteristics of the film audience.

Age and educational level are only two of the many factors which affect learning from film. According to Hoban and Van Ormer (1950), "reactions to a motion picture vary with most or all of the following factors: film literacy, abstract intelligence, formal education, age, sex, previous experience with the subject and prejudice or predisposition toward the subject."

Hoban and Van Ormer also concluded:
It does not follow that all individuals who observe the film have the same experience. Motion picture is a common experience in that it is shared, but this experience always has a somewhat different meaning (sometimes the difference is considerable) for the individuals who see the film.

Dickie and Levie (1973) is summarizing the work of Briggs (1968) and Snow and Salomon (1968) found that the factors influencing learning from films are very complex:

Learner variables which have been known to interact with media variables include: differences in communication skills such as reading ability and visual literacy; cognitive factors such as IQ and learning rate; and personality factors such as ascendancy and responsibility.

Research by Allen (1975) indicated that individuals of different mental abilities will benefit differently from different types of film design. For instance, individuals of higher ability may benefit proportionately more from presentations of perceptually complex, fixed pace, information loaded multi-channel pictorial forms than will those of middle or low mental ability.

Factors governing film learning can also be rather idiosyncratic. According to Fleming and Levie (1973), a considerable portion of our learning experiences are governed by our perceptions of stimuli. They speak of the fact that the perceptions of one individual may vary markedly from that of another individual in the same situation.

---

Selective perception is in part dynamic, i.e., it depends on what the individual has learned about his environment, what he at any moment wants, or feels an interest in, and what his general perceptual tendencies are (Levie and Dickie, 1973).

Clearly, the task of choosing a suitable film is indeed a very difficult one which must take into account the specific characteristics of the film audience. Thus, "for film users, the principle of audience variability implies that there is no one method of using films which is appropriate to all audiences or to every person within an audience" (Hoban and Van Ormer, 1950).

It is the task of the teacher to select the film most appropriate to the abilities and background of the majority of the audience and skillfully manipulate the instructional processes so that other portions of the audience will optimally benefit from the film experience.

Classroom Utilization of Films

Evidence from research studies indicates that when films are used in different ways the result is different learning outcomes (Hoban and Van Ormer, 1950).

Repetition of a film showing, repetition of specific film sequences, viewing a series of related films, viewing two or more films on similar topics, the use of introductory and/or summary remarks, the use of advanced organizers, and student participation exercises are among the instruments which can increase the amount of learning from film. However, under certain circumstances and with certain learners certain utilization techniques produce greater learning increments.
Repetition of a Film Showing

P. J. Rulon (1933) queried students on their preferences of the number of times science experiments on film should be shown. Results indicated that students preferred each reel to be shown three times.

L. K. Eads and E. M. Stover (1936) found that a difference in learning resulted after two showings of a film.

The Yale (1947) study and a study by H. R. Brenner, J. S. Walter, and A. K. Kurtz (1949) indicated that the showing of two copies of the same film, spliced together and shown in succession was more effective than a single showing of the film, and approximately equally effective as versions containing audience participation devices.

McTavish (1949) designed a very systematic study of the effect of repetitive showings of a film. Results of pretests and posttests indicated that two showings each of four films resulted in greater learning than did one, three, or four showings of the films.

After reviewing the literature on film utilization, Hoban and Van Ormer (1950) identified five learning facilitators:

1. Orienting an audience on what it is going to see or summarizing what it has seen.
2. Announcing that a check or test on learning will be given after the film.
3. Repeating the important points (with variation) within the film. Showing the film more than once.
4. Conducting audience-participation (or practice) exercises during or after a film showing.
5. Informing the learner of how much he has learned. Giving results or correct answers as soon as possible or during the film, if practice is conducted during the film.

Teacher's Remarks About the Film

Undeniably, the teacher's method of film presentation is very important. However, what the teacher says about the film is of equal significance. According to Hoban and Van Ormer (1950), "the experimental evidence [indicates] that the influence of any motion picture depends to a very great extent on the reinforcing experiences that occur before, after, or during a film showing."

After reviewing the literature on advanced organizers, Arwady (1978) concluded that the effectiveness of advanced organizers is questionable. However, he stated, "a precondition to the effective implementation of advanced organizers is the learner's decision to make an investment in the new material." Thus, the learner must see the relationship of the new material to previous learning experiences.

Similarly, Fleming and Levie (1978) believe that learning is highly related to the consequences for the learner. Thus, if the learning experience is interesting, learning is more effective. And on the other side of the coin, if the student is aware that he will be responsible for the material within the film he is apt to pay careful attention to it.

Allen (1959) identified four techniques which contribute to the success of educational media: 1) teacher introductions and preparation of the class for the learning materials, 2) the use of student participation techniques, 3) engagement in class discussion or review of
communication material presented, and 4) exposure of students to the communication a second time.

C. I. Hovland, I. A. Lumsdaine, E. D. Sheffield (1949) investigated the use of introductory remarks and review exercises with a population of military trainees. They concluded that both methods produced small learning increments. E. C. Wilson and L. C. Larson (1949) studied several alternate methods of presenting a series of films for teaching current history at the college level. One group was shown the film without the aid of introduction, follow-up remarks, or reference to the films in other lectures. The second group was given introductory and summary remarks with each film and the films were referred to in other lectures. Results of information tests indicated no learning differences; however, the group which had integrated instruction found the material to be easier than did the other group. Furthermore, students of high ability achieved better learning results in the integrated instruction group.

From this experiment the researchers concluded: 1) rigid routines of film instruction can be profitably followed only under very limited circumstances, 2) the value of film instructional routines varies with the characteristics of the audience, and 3) film instructional routines may influence learning other than measured by purely informational tests.

The Commonwealth Office of Education in Australia (1950) experimented with six types of film presentation: 1) film plus introduction; 2) introduction, film showing, ten-minute discussion after the film; 3) introduction, two successive showings of the film; 4) introduction, film showing, discussion during one class period, followed by a second
showing of the film on the next day; 5) introduction, film showing during one day, followed the next day by discussion and a second showing of the film; and 6) introduction, film showing, discussion during one day followed the next day by a film showing and a discussion of the same set of questions used the previous day. The experiment showed that method four was superior for immediate learning and method six was superior in tests of delayed learning. The researchers identified four variables which facilitate learning retention: 1) introduction prior to the film; 2) discussion, participation, or practice when dealing with concepts and facts of film content; 3) repetition of the film showing; and 4) distribution of the activity over a period of two days.

Wittich and Fowles (1946) tested three methods of film presentation: 1) no preparation of the class; 2) presenting introductory reading material on the film and an introductory test; 3) method two, plus twenty-four hours later a discussion of the film and a second use of the test. Results of the experiment showed method three to be superior.

Arwady (1978) field tested the value of four types of oral introductions: 1) substantive overview, 2) anxiety inducing overviews, 3) advanced organizers, 4) attention getting overviews, and 5) no introduction. After analyzing the results Arwady recommended some type of oral introduction with a film. He found that the substantive overview was successful for all learners and the advanced organizer was the most successful for high ability learners.

There are several levels on which a teacher can discuss a film. Generally speaking, teachers tend to discuss films on the surface level;
this usually encompasses discussing the action and artistic characteristics of the film. However, by manipulating the level of the classroom discussion the teacher can expand the film learning process.

For example, what does a teacher do when he has planned to show Nanook of the North to his class and finds out that the entire class has seen the film. Rather than conduct a discussion of the surface characteristics of the film to which the students will have already been exposed, he can discuss the film on the second level of content, the ideological level. As an example, he can raise the following issues of discussion: Is the film an accurate portrayal of Eskimo life? Would the film have been different if it had been made by the Eskimos?

Other topics for "issue-related" discussions include: discussions of who the filmmaker was, and why he made the film; does the film accurately portray the people and events which it attempts to portray? Why/Why not?

Creative Film Utilization

A review of the literature indicates profound absences of creative and innovative approaches to film utilization. Perhaps, one of the most innovative current approaches to film utilization is that of Lacey (1977). Lacey's approach is humanistic in nature and derives its rationale from the theories of Jean Piaget, Jerome Bruner, and Carl Rogers. The basic premises of this approach is as follows:

Film education should reflect as much as possible a collaborative design of a mechanism by which the student and teacher can accommodate whatever approaches they find most effective at the time.
Objectives should encourage exploration of ideas, analysis, intellectual synthesis, expression and interpretation of ideas, self-examination, the study or discussion of actual classroom behavior, and creative expression through student filmmaking without necessarily prescribing priorities to any one of these activities.

Thus, Lacey's approach concentrates "upon the growing sense of self." He emphasizes that film should be a stimulus to enable the student to examine his self-identity.

Lacey recommends the image-skim method as a technique to help the student define his self-identity. After showing the film the teacher asks the student to share images and sounds which spring to mind. Through the process of association students begin to "reconstruct" the film and learn how others in the class perceive it. What emerges is a "relationship among images, sounds, and implied ideas."

According to Lacey:

The image-skim is the basis of a collaborative approach to systematically integrating feelings and intuition with intellectual concerns.

Indeed, the Lacey skim-method is a welcome change from traditional academic and "artistic" courses which often segregate feelings and intellectual concerns. Lacey recommends several other exercises which also bridge the gap between more traditional intellectual concerns and feelings including:

1. The here and now wheel can be used to identify feelings about particular parts of a film. A student draws several spokes on a wheel and in each spoke he writes a feeling which he has at the moment. Students are then asked to share their "wheels" and feelings about the film.

2. Before-and-after exercises involve student dramatization, role-playing, discussion, and writing. Prior to the film showing students are asked to participate in
dramatization exercises which are repeated after the film showing. A variation of this exercise is for the instructor to write a word on the blackboard and ask students to record their associations with the word. This task is followed by a discussion of the students' word associations.

3. The fishbowl approach divides students into two groups. One group sits in a circle and discusses the film while the other group sits in an outer circle and observes. Next, roles are either reversed or the observational group comments on what happened in the inner circle.

Media Design Research

Designing Films for Specific Audiences

When designing an educational film, the filmmaker wrestles with many variables, such as color vs. black and white, live photography vs. animation, dialogue vs. narration, use of special optical effects, sound effects, music, dramatic vs. expository structure, etc. However, there are many important questions which must be addressed prior to deciding design variables.

After determining the purpose of the film the filmmaker must define his objectives. As Kemp (1978) points out, the characteristics of the audience cannot be separated from the statement of the objectives. Not only must the filmmaker decide whether to direct his film toward a specific or general audience, he must also determine the age and educational level of his audience (Schmidt, 1971; Hoban and Van Ormer, 1950; Kemp, 1978).

According to Hoban and Van Omer (1950):

Film influence also depends on the psychological make-up of the audience. . . .

Films have the greatest influence when their content reinforces and extends previous knowledge, attitudes,
and motivations of the audience. They have the least influence when previous knowledge is inadequate, and when their content is antagonistic or contrary to the existing attitudes and motivations of the audience.

Generally speaking, films which appeal to a wide-audience receive the most usage. In 1978, the ten most used films of The Ohio State University's Teaching Aids Laboratory were: Future Shock, Reinforcement Therapy, Why Man Creates, The Resolution of Mossie Wax, Cognitive Development, Out of the Mouths of Babes, A Woman's Place, The Eye of the Storm, Frank Film, and Modern Times. In 1978, each of these films was booked at least 50 times; Future Shock was booked for 124 showings by 27 Ohio State departments. Furthermore, although the average life expectancy of an educational film is 5 years, Reinforcement Therapy (1969), Why Man Creates (1969), and The Eye of the Storm (1971) are still widely used.

Paradoxically, the broadest films are often the ones which receive the most teacher criticism. According to Anderson (1968) throughout the literature runs the criticism that films are too long because producers tried to include something for everyone. Due to high production costs, it is very important to producers that a film appeal to as large an audience as possible.

If the same film could be used by elementary schools as well as by high schools, by geography, as well as civics classes, it would be a more attractive buy. Consequently, a teacher seldom got exactly what he wanted but he might get a little of what he required on film (Anderson, 1968).

A Report to Educators on Teaching Film Survey (1948) indicated elementary and secondary teachers' criticism of instructional film centered on the lack of appropriateness of the films for a given grade
level and the inclusion of extraneous and irrelevant material. The researchers concluded:

The central fact is simply that there are very few motion pictures that have been designed specifically to fit the curriculum and that in virtually every subject (even in science subjects) frequent use of motion pictures is possible only by showing films that have very little relation to the subject.

Thus, to a considerable extent motion pictures are not today being used primarily to teach the subject matter of the curriculum. . . . The narrower the scope of a subject of a film, other things being equal, the easier it is to make an effective teaching film and the greatest likelihood of success.

Gruenberg (1917) called for short units of flexible film material:

Films for educational use . . . would have to be available in short units. . . . The school or teacher should be free to combine scenes in accordance with the immediate needs and not in accordance with the film editor's notion of what constitutes saleable reels. The short units would ensure this flexibility. At the same time, the production of such short units would involve no additional risks for the producer for the use efficiency would be enhanced. Each short film could be made available for several purposes, in addition to being organized into standard reels dealing with more comprehensive subjects.

The development of more flexible media would shift some of the responsibility of creative utilization from the teacher to the producer. It would be the responsibility of the producer to design materials which allowed for greater flexibility in use. However, the teacher would share some of the responsibility of film editing. Because of the flexible nature of the materials the teacher would be able to arrange film sequences and remove extraneous materials. The teacher would have more control over the information which the students receive, as well as more opportunity for creativity.
However, the ultimate question is whether teachers want this additional responsibility. Although the research is filled with teacher complaints of films which are too long, and which contain extraneous or inappropriate materials, the question remains: Will teachers take both the time and responsibility to ensure proper information dissemination?

**Designing Modular Media**

**A Definition**

Russell (1974) defines a module as:

An instructional package dealing with a single conceptual unit of a subject matter. It is an attempt to individualize learning by enabling the student to master one unit of content before moving to another.

Modules are used in both microteaching and computer assisted instruction.²

According to Wagner (1966) all films are in a sense modular:

In the traditional cinematic sense, of course, all motion pictures are "modular"—being composed of frames, shots, and sequences.

Presently, there exists a number of media which employ a modular design format:

²For more information on the use of modules in microteaching see Microteaching by George A. Brown and Investigation of Microteaching edited by Donald McIntyre, Gordon MacLeod, and Roy Griffiths. For more information on the use of modules in computer assisted instruction see Teaching Machines and Programmed Learning: A Source Book by A. A. Lumsdaine and Robert Glaser, and Readings in Programmed Instruction, John DeCecco editor.
1. **Single-concept films**: short films designed to transmit specific information in a straightforward manner. Often, these films are designed as part of a series.

2. **Film excerpts**: segments of films which are excerpted from the whole. Often excerpts are grouped together and referred to as **compilation films**.

3. **Open-ended films**: sometimes referred to as "trigger films," these short films are designed as vehicles to augment specific classroom discussions. Thus, they are designed as films with "unresolved" endings.

4. **16mm modular films**: films specifically designed to be "unpackaged" by the film user. These films are divided into segments—film modules.

5. **Video technology**: the new video technology allows one to transfer prerecorded motion pictures, video programs, or self-made programs to videotape or cassette. The user is able to transfer the program in its entirety or transfer only segments of the program.

6. **The videodisc**: the MCA/Philips videodisc has the capacity to store 54,000 single frame images per disc. The disc has random access capabilities, as well as capabilities for slow motion and freeze frames. With this system media users are able to view a program frame by frame in a manner which is similar to leafing through the pages of a book.

7. **Interactive cable television**: these systems allow consumers a broader range of programming by broadcasting programs from other television stations in other cities. Because of the nature of the
system, programming is not confined to the traditional one half hour/one hour formats.

The modular format is a design element which has important implications for media utilization:

1. It extends the production process; users become editors or programmers, thus, taking an active role in the structuring of information.

2. The flexible format allows the teacher more potential for creativity. Repeatedly, the literature has shown a need for very flexible instructional materials (Allen, 1974; Allen and Cooney, 1964; Freeman, 1924; Janowitz and Street, 1966).

3. Because obsolete and/or inappropriate modules can be removed, the format reduces obsolescence.

4. Because inappropriate modules can be removed, the format has the potential to expand the scope of the audience to which a specific film can appeal.

5. Repeatedly the literature has shown that a major teacher complaint is that films appeal to too broad an audience and thus are inappropriate to a specific audience (Anderson, 1968; A Report to Educators on Teaching Films Survey, 1948).

6. Furthermore, the research indicates that different learners will learn differently from different types of film presentations (Hoban and Van Ormer, 1950; Dickie and Levie, 1973; Briggs, 1968; Snow and Salomon, 1968; Allen, 1973; Allen and Cooney, 1964).

7. The research indicates that the sequencing of information is very closely linked to learning outcomes and that different learners
learn differently from different learning sequences (Worth, 1968; Bruner, 1966; Allen and Cooney, 1964; Gagne, 1964; Mager, 1964; and DeCecco, 1968).

8. The sequencing or arrangement of filmic material is supported by film theory (see Reisz, 1958; Pudovkin, 1976; Benoit-Levy, 1946; and Eisenstein, 1942).

The Theoretical Rationale for Film Modules

Many film theoreticians feel that the essence of film art lies in film editing—the arrangement of the filmic material into an ordered whole (Reisz, 1958; Pudovkin, 1976; Eisenstein, 1942; Benoit-Levy, 1946; and Kuleshov, 1974).

Pudovkin (1976) spoke of film editing as:

The basic creative force, by power of which the soulless photographs (the separate shots) are engineered into cinematic form.

Furthermore, Pudovkin felt that it was editing which gave film its meaning:

Only if the object be placed together among a number of separate shots, only if it be presented as part of a synthesis of different separate visual images, is it endowed with filmic life.

Similarly, Kuleshov (1974) felt that true art began not with the shooting of the film but with the editing process.

Kuleshov maintained that film art does not begin when the artists act and the various scenes are shot—this is only the preparation of the material. Film art begins from the moment when the director begins to combine and join together various pieces of film (Reisz, 1958).
Worth (1965) distinguished the **cademe**, the shot as it came from the camera, from the **edeme**, the shot used in an editing sequence:

The **cademe**, or camera shot, is a continuous strip of film ranging in length from one frame to any number of frames, depending on the technological limits of film and camera size. The **cademe** defined operationally is the unit resulting from the moment of pushing the start button of a motion picture camera until the moment of pushing the stop button.

The **edeme**, or editing shot, however, is formed from taking the **cademe** apart and removing those segments one does not wish to use. The filmstrip that is left becomes the **edeme**, which can be joined with **videmes** at will.

Worth defines the image, or in Eisenstein's words, the shot, as the basic unit or **videme** of film language. Worth defines the **videme** as a photographic image event that can be seen by viewers and accepted as representing the world.

Many film theoreticians agree that it is the specific editing sequence, or arrangement of frames, shots, sequences, and scenes of **cademes** which give meaning to the filmic materials.

Pudovkin (1976) speaks of editing as a process of constructing together blocks of raw cinematic material:

It is generally known that the finished film consists of a whole series of more or less short pieces following one another in definite sequence. This kind of construction of a picture, the resoulling of the material into its elements and subsequent building from them of a filmic whole, is called "constructive editing."

Similarly, Kuleshov (1974) believed that the filmic material consists of pieces of film and that the film was created by joining together these pieces in a specific and creative order, which he referred to as the "composition method."
Gregory (1961) noted the structural similarities between language and film editing:

Gregory (1961) argued that language, grammar, and film editing technique could be subserved under common psychological principles.

According to Gregory, meaning is signalled in such distributive languages as English and Chinese by changes in the words themselves, as is true in inflectional grammars such as Russian.

Gregory argued that the major signalling systems of film are distributive and depend on the sequencing of scenes. Each scene as photographed was viewed as creating a set of meanings (thesaurus) from which the editor could choose meaning (words) to include in the edited sequence (Pryluck, 1968).

The Importance of Sequencing of Information

The concept of modularity is also based on the theory that specific sequences of information presentation will affect learning outcomes. Therefore, it is important to review the literature related to the sequencing of information.

Learning theory and theories of visual perception both place emphasis on the meaning which results from the structuring or sequencing of information, and visual and auditory stimuli.

In regard to the nature of visual art Arnheim (1971) states:

Sequence is a strategy employed by man to give meaning to the relationship of sets of information, and is different from series and pattern. Sequence is a deliberately employed series used for the purpose of giving meaning rather than order to more than one image event and having the property of conveying meaning through the sequence itself, as well as through the elements in the sequence.

An experiment by Allen and Cooney (1966) of linear vs. nonlinear information presentations indicated that for factual treatments for
sixth graders the linear format is best for both immediate learning and retention. However, if subject matter is a mixture of factual and conceptual treatment, then the nonlinear format is best for immediate learning. The eighth graders learned equally well with both formats. The experiment led Allen and Cooney to recommend that further research be conducted regarding the structuring of message components and the needs of individual learners.

Research also indicates that learning and media theorists believe that the sequencing of information should proceed from the concrete to the more abstract.

Allen (1973) states that "learning may be enhanced by organizing instruction sequentially to permit established subordinate skills before teaching those of higher order."

Wittich and Schuller (1967) indicate that "effective learning begins with first hand or more concrete experience and proceeds toward more abstract experience."

Fleming and Levie (1978) speak of the effect of organization or message design on the observers' perception of visual stimuli.

The better organized or patterned a message is perceived to be, the more information the observer can receive (and process) at one time. . . .

Perceptions of relationships will be facilitated where objects and events are encountered as comprising or contributing to a common idea, pattern, rhythm structure, or organization.

Learning is also meaningful to the extent that the situation is organized and the learner is aware of the organization.
Learning theorist Jerome Bruner (1966) also emphasizes the importance of the structuring of educational materials. It is his belief that any subject can be taught to any child at any stage of development by teaching children to grasp the structure of the subject, and thus, understand something as a specific incident of a more general case. Bruner states:

Grasping the structure of a subject is understanding it in a way that permits many other things to be related to it meaningfully. To learn structure, in short, is to learn how things are related.

Unless detail is placed in a structured pattern, it is rapidly forgotten.

Worth (1968) distinguished between the sequencing of information and the mere patterning of information. Accordingly, the former places emphasis on the relationship of the elements as well as on the elements themselves.

In an article entitled "The Acquisition of Knowledge," learning theorist Robert Gagné (1966) delineated his theory of instructional sequencing: "a program of instruction should be sequenced on a hierarchy." Within this system, Gagné would make allowance for individual differences by allowing each individual to start his program at the point in the hierarchy most appropriate to his background and learning characteristics.

DeCecco abstracts the essence of Gagné's approach:

(Gagné) defines knowledge in a very special way—the ability to perform "a class of specific tasks." The proper sequencing of these tasks is one of Gagné's major concerns. Previous research has led him to assume that there are task characteristics that require particular sequences of sub-tasks learning. The knowledge hierarchy is primarily a hierarchy of learner capabilities. These capabilities
must be available to the student in order for him to perform successfully the subtask and thereby move up the knowledge hierarchy.

Within this approach, sequencing techniques progress as follows:
1) from concrete objects or experiences to more abstract ideas;
2) from simple or elementary to more complex manipulations, principles, or understandings; 3) from isolated facts to integrated principles or relationships; 4) from specific to general-inductive; 5) from general to specific deductive; 6) from known to unknown; and 7) when teaching a process, from beginning to end, in temporal or chronological ordering.

Mager (1964) also holds the belief that individual differences must be accounted for by the sequencing of information. However, his approach places emphasis on the generation of individual learning sequences by the learner, as opposed to those of the instructor.

Types of Modular Media

Single-Concept Films

Anderson (1968) defines the single-concept film in the following manner:

The term single-concept film usually refers to a short instructional film. This can be misleading because a single-concept film theoretically could be any length. It is a matter of what you call single and what you call a concept. Most frequently, however, single concept films are brief. They run from ten seconds to five minutes. They can be sound or silent. They are often mounted in 8mm cartridges for easy projection.

As Anderson points out, most frequently single-concept films are identified with components of the more advanced projection technology: 8mm, cartridge loading or looped films. However, single concept films
need not be 8mm and it must also be remembered that 8mm films are not limited to the single-concept format.

Single-concept film series are used in a variety of ways:

Although most series present information, others are used in testing and problem solving activities. They are designed for specific use in large classrooms, in small groups, and in individual tutorial situations. They are employed in formal instruction and as reference material. They support the work of live teachers and are also incorporated into mixed media presentations, structured into television courses, or made part of programmed instruction devices (Anderson, 1968).

What single-concept films have in common with modular films is their principle of organizing content. Both are based on the Cartesian method of reducing the subject to its smallest units, and thus proceeding from the minute to the complex. Each film is an independent unit, a brick with which one builds a larger structure.

According to Edgar Dale (1969) the 8mm cartridge projector has been a key factor of its development. Although single-concept films are most often associated with products of the technological revolution, the single-concept film is by no means a new invention. Research by Anderson (1968) indicates that there were a number of early attempts to use single-concept films in education, including:

The De Vry Corporation in 1925 (announced) a negative library of nearly 200,000 feet of geography and animal topics, from which we shall make prints to order of any desired length or in any desired combination.

In 1897, Paul Schuster, a physician who practiced in Berlin, had motion pictures made of the symptoms of Parkinson’s disease, ataxia, and other disorders. . . . They were three to five seconds in length and served as illustrations for Schuster’s lectures.

Ten years later another physician, Theodore Weisenberg, used short films of thirty to sixty seconds to present neuropsychiatric symptoms to his students.
Jean Comandon was one of the first educational film producers to tailor films to classroom needs. Around 1919, he made fifty-four films, one to five minutes long, on the common disorders of the nervous system.

During the 1910's Palmer of the Palmer handwriting system produced a series of four-minute demonstration films of his techniques.

During the early 1920's Bray Production Co. introduced its short Pictograph series. The catalog listed a thousand titles of two to nine minute films on science related subjects (Anderson, 1968).

According to Anderson (1968) single-concept film series are available for every major elementary and secondary school subject, including: films for use in art, life science, driver training, hygiene, music, geography, sports, physics, mathematics, and French. Other series are available for the purposes of teaching vocational education. These include films on subjects such as: embroidery, meat cutting, baby care, automobile maintenance, baking, first aid, and carpentry. Still other single-concept films specialized in information for education in professions such as dentistry, agricultural extension, ophthalmology, etc.

Design and use of the single-concept film is by no means restricted to the field of education.

Industry has also developed its own single-concept films both for employee training and as aids in sales campaigns. In the former category, for instance, at least two airlines installed cartridge projectors in their crew lounges so that pilots could rapidly review short films of operational procedures while they waited to go on duty (Anderson, 1968).

Single-concept films are also used as visual test materials:

... another recent series shows short silent close-ups of persons speaking. Teachers in schools for the deaf first demonstrate words and phrases with these films as illustrations. At the end of a study unit they again show them to test students' lipreading ability. (Anderson, 1968).

According to research by Anderson (1968), historically the single-concept film has been thought of either as a vehicle whose primary function is to convey information or as a means of presenting concepts involving motion.

Throughout the history of motion pictures in education, those who favored the development of the short film saw the medium primarily as a means to convey information about objects or to present concepts involving motion. Those who looked for development within the traditional-format educational film more frequently believed motion pictures were capable of achieving a greater variety of goals such as influencing attitudes or offering an aesthetic experience. A sampling of their contents would reveal that most contemporary single-concept films are designed to do little more than convey straight information about simple materials.

Film Excerpts and Compilation Films

As Wagner (1978) points out, "There was a time when the excerpt from a feature film was considered unthinkable as a legitimate experience for a film viewer who should have seen the entire film." However, within the realm of education and film study there exists a legitimate need for film excerpts. In the Sharples/Grogg survey 77 percent of the respondents indicated the desire to have access to significant scenes from films: Citizen Kane, Battleship Potempkin, Psycho, Birth of a Nation, The Last Laugh, and October were the most preferred films to be
excerpts. Similarly, in the AFI/UFA Survey of Needs, 42 percent of the respondents indicated a desire for excerpts from film/television productions (Wagner, 1978).

After spending considerable time selecting materials for a film study course, Issari (1972) concluded that "most catalog descriptions of films were inadequate and often misleading." Based on this experience he recommended production of film "Kineklips"-- one to three minute film excerpts, which could be made available to film libraries and film centers in either 16mm or Super 8 cartridge.

Advantages of the film "Kineklip" are as follows:

1. It is economical to produce: it can be made from materials generated from, but not used by, the full length production.

2. It is inexpensive to reproduce: copies can be inexpensively reproduced, and it would be much cheaper to distribute for previewing and promotional activity than the full length film.

3. It is easy and inexpensive to distribute.

4. A minimum of storage space is required and the "Kineklip" can be available for preview at any time.

5. It is simple and quick to preview.

6. A "kineklip" saves wear on the original film.

7. The "Kineklip" is the actual sample of the film the user will see (Issari, 1972).

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3 The Sharples/Grogg survey was an informal, unpublished survey of University Film Association members.

Undoubtedly, the videodisc will make the film excerpt much more accessible to the film user—as the problem of storage and retrieval of these materials will be easily augmented. Presently, a number of film excerpts do exist. Most often these materials are in compilation form, which of course can be disassembled and reassembled by the film user. Wagner (1978) provides several examples of compilation films useful in film study:

1. **America at the Movies**: a Bicentennial production of the AFI, which includes 92 clips from 83 features conveying the spirit of America as depicted in the movies.

2. **The American Film**: hosted by Charlton Heston and produced for the White House Conference on the Arts; containing excellent excerpts from *North by Northwest*, *Friendly Persuasion*, *High Noon*, *Shane*, and *On The Waterfront*.

3. **"Highlights from Hollywood Features"**: available in Super 8 magnetic from organizations such as Eastin-Phelan, distributor of Blackhawk films, including excerpts of 8 to 20 minutes from *The Wizard of Oz*, *On the Waterfront*, *Mr. Smith Goes to Washington*, *M*A*S*H*, *Airport*, *The Birds*, *Frenzy*, *Psycho*, *Butch Cassidy and the Sundance Kid*, *Patton*, and others.

As Wagner (1978) points out excerpts illustrating concepts in sound, editing, and other film techniques need not be restricted to feature films. Instructional films, as well as promotional materials, and television commercials have the potential to be valuable excerpts and learning devices for students of filmmaking. Of course, film excerpts illustrating single concepts of information can be valuable
to students of any discipline. Although this approach to instructional
design may seem novel, it is by no means a new design concept.

The DeVry Corporation announced in 1925: . . . a negative
library of nearly 200,000 feet of geography and animal
topics, from which we shall make prints to order of any
desired length and in any desired combination, so that
even a 50-foot reel (forty to fifty seconds) can be

Although the selection of any filmic material is of paramount
importance, one cannot overstress the importance of the selection pro­
cess when creating film excerpts from full length productions. The
designer of compilation films will have to pay careful attention to
both selection and overall design. In a sense, his role can be likened
to that of the book editor, paying careful attention not only to in­
dividual elements, but also considering how well the individual elements
work together to form the whole.

Open-ended Films

Often referred to as "trigger" films, these short films are
designed specifically as vehicles to facilitate discussions. Thus,
they are designed in a manner which leaves the film ending unresolved.
Most frequently, they present a problem and then end, leaving students
to wrestle with the answer. As the name implies, these films are
designed to "trigger" classroom discussion. Miller (1966) presents
an example of a shooting script for a driver education "trigger" film:

. . . so he's driving alone, driving along and he likes
driving and he's a good driver and handles a car like he
was born to handle a car not hunched up like a man who's
learned late in life and he keeps a safe distance
behind the car in front of him when this blonde in this
convertible and with this pony tail bouncing along
behind her passes him, shoots by him, giving him some
exhaust and he thinks whee . . . whee . . . and lets her go but next thing she's slowed down and he sees her in her mirror and she sees him and they both grin and he takes off to pass her . . . with a honk of a horn and a shot of exhaust and a grin he takes off to pass her . . . and it's fun fun and full of good feeling because they both know how to handle cars and they're both young with young bodies . . .

The "trigger" film originated at The University of Michigan Television Center when Alfred Slote, Assistant Director of Television, was asked by the University of Michigan Highway Safety Research Institute to develop filmic material as a component of a research project to change adolescent driving behavior.

"Trigger" films have been developed for a wide-range of subjects, including: drug education, the problem of aging, and mental retardation.

The uniqueness of these films lies in the fact that they are user-oriented in design. It is the film user (the class) who creates the final module of the film. Because it is open-ended in design, there are no right or wrong answers. In this respect it differs from user created open-ended films--films in which the teacher turns off the projector and asks the class to supply the ending. Far too often, after the class discussion the teacher will make the error of turning back on the projector and showing the class the filmmaker's ending.

What are the advantages of these films? First of all, they provide material which is conducive to classroom discussion.

Second, they give students the opportunity to be creative--by speculating on how the film "would" or "should" have ended. This can be done verbally or the teacher can ask the students to write a short paragraph describing the film ending.
The Video Recording System

When connected to the antenna terminals of a television monitor, the video recorder provides a prerecorded video program which can be monitored from a home television set. Presently, video programs are available in three forms: cassette, tape, and disc. A broad range of video programs are available for institutional and home use. In addition, consumers possessing the proper equipment can record television shows, transfer motion pictures to video, or tape their own shows. Thus, it is possible to build a home library of video recordings of favorite motion pictures, television programs, concerts, sports events, etc. Moreover, some machines can be preprogrammed to record television programs while the consumer is away from home.

Not only does the video system expand the range of programs available to the consumer, it also expands the production process—allowing the user to become both a programmer and a program editor. When recording programs via the video system the operator has the option of recording the entire program or recording only segments of the program. Furthermore, the system allows the operator to combine segments from different programs onto one videotape.

Within the field of education the video system, especially the videodisc, has tremendous potential. For example, medical students can study in detail prerecorded operations frame-by-frame or specific sections can be isolated from the whole.

This system facilitates the atomization of content by allowing one the opportunity to extract portions of information from a larger context. Whereas previously film teachers wanting to demonstrate a specific point
were forced either to show the entire film, or thread-up the projector to the specific place, one can transfer specific film segments onto video. A teacher could easily show segments from many films without having the troublesome task of threading-up and rethreading the projector. Moreover, instructors/academic departments could develop their own libraries of film excerpts and compilation films.

The Videodisc

The videodisc is perhaps the most innovative aspect of the video instructional system.

Low-cost distribution enhances the prospects of any new system, but it is the phonograph-record-like disc shape that enables the optical videodisc to be a uniquely powerful educational tool. Motion pictures and videotape (even those in cassettes) are reel-to-reel. They are fine for viewing a presentation from one end to the other in its entirety without interruption. But they do not readily lend themselves to the stopping, branching, and skipping that are desirable for sophisticated, interactive educational and training programs, or for convenient self-instruction (Leveridge, 1979).

The uniqueness of the videodisc system lies in the fact that they are not limited to ordinary linear playback which start at the beginning and play through the end. They possess the possibility of electronic address of program segments, random access capability, and automated switching from motion to freeze frame. Thus, the consumer is no longer limited to watching preselected programs from start to finish, but can stop, start, reverse, and freeze information at a specific frame. This makes it possible for the operator to isolate bits of information. It

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5When transferring any programs or motion pictures to videotape it is important to check the copyright laws governing that material.
also provides a system similar to pagination by which the operator can quote from specific segments, or frames, of a program.

In its simplest form the system consists of a television receiver, a videodisc player, and a remote-control key pad, from which the system is operated. Leveridge (1979) describes the key pad and the operation of the system:

The numerals (on the key pad) are used to insert a five-digit address for any one of the 54,000 frames on the disc. The key marked # puts these addresses into memory. The one marked "C" is used to switch from one audio track to another. Searches are controlled by the two keys at the top right, << for fast forward, and >> for fast reverse. During the search, the TV screen goes blank, but as soon as you release the button on the key pad, you can see the frame upon which the reading head has stopped. With the fast reverse key, you can traverse the entire disc in about five seconds.

The X2 button plays the image at twice the normal speed. The button marked > puts the player into reverse and the one marked < puts it into forward; play in either mode can be normal or in slow-motion at a speed you designate by using the "R" button and a number from 1 to 9. Slow-motion can be from half normal speed down to 1/512 normal, stepped in multiples of one-half. In any speed other than normal forward, there is no audio.

The "A" button provides freeze-frame. You can then step forward one frame at a time with the + key, or backward one frame at a time with the -key. To call up a frame address that has been stored in the memory, you use the key marked with an asterisk (*).

Leveridge (1979) has identified the following advantages to the videodisc system:

1. The videodisc system is designed to present pictures in both still and motion modes.

2. The player can be loaded as easily as an ordinary phonograph.

3. The optical disc is "read" by a laser beam. Since there is no contact between the pick-up mechanism
and the surface of the disc, there is no wear that will degrade either the information carrier (disc) or the reading device (pick-up head).

4. The discs will be inexpensive to reproduce in large quantities.

5. Discs provide two parallel sound tracks. These can be used to record commentary for two different educational levels of audience or in two different languages.

6. When commanded videodisc players stop precisely on a single frame.

7. The pictures on a disc can be moved backward; or forward; or frame by frame, as a series of stills.

8. The viewer has access to any portion of the material recorded on the disc through use of the frame identification numbers which can be displayed on pushbutton command, or can be kept invisible.

9. The videodisc has the capacity to intermix still and motion pictures.

10. The player can be used with a standard TV receiver, thus saving the cost of purchasing special monitors.

11. Remote control is standard equipment.

12. The videodisc player can be programmed to access, start a sequence, and stop where it ends—all automatically.

13. The information on discs can be updated easily by deleting frames or sequences through the simple expedient of skipping them during playback.

14. Because they contain micro-processors, videodisc players lend themselves easily to hook-ups with other data processors, e.g., the Quandrasync or Plato computer system for more complete automation of student interaction.

15. Because of their extremely high density of information storage and because of their flexibility in modes of information retrieval, videodiscs will have application for reference and archival use.

For information regarding the laserdisc see Appendix B.
Interactive Cable Television

By broadcasting programs from other television stations in other cities, cable television networks allow consumers to select from a wide-range of television programs. Consumers have a larger selection of movies, public broadcasting shows, sports events, and general television shows to choose from. Thus, they are no longer restricted to watching only local stations.

As an example, Warner Cable, in Columbus, Ohio offers programming from Channel 17, Atlanta; Channel 19, Cincinnati; and Channel 20, Athens. When one of these stations is carrying a program owned by a Columbus commercial station, programming from another imported station is substituted.

An even greater amount of program selection is offered by Warner QUBE of Columbus, Ohio. QUBE is an interactive television network offering selections from over thirty programming stations. Examples include:

1. A channel devoted exclusively to sports.
2. Over 350 free movies per month.
3. Continuous consumer information, news, time, stock, and weather reports.
4. Live coverage of Congress.
5. Community channels.
7. Specials from Las Vegas, Manhattan, etc.
8. Opera, ballet, and other cultural programs.

Shows available for a small fee include:
1. First-run movies.
2. Special musical and other entertainment programs.
3. College preparation and general knowledge expansion courses.

Because of the nature of the system, programming is not confined to the traditional one-half hour/one hour formats. Instead, a more flexible format is utilized, with shows ranging from five minutes, to forty-five minutes, to several hours. Individual programs are run several times per day and per week. In addition, there is not the confinement of starting shows only on the half hour or hour mark.

What are the educational ramifications of interactive cable television?

1. Viewers are able to "talk back" to their televisions, that is, respond to what they are watching at the precise moment that they are watching it. Subscribers respond to issues and questions raised by the commentator by pushing the response buttons on their home console. This console is hooked-up to a master computer at the television station. Instantaneously the computer receives and tabulates home viewers' responses.

2. The process of education is extended from the traditional classroom setting into the privacy of the home. Consequently, many persons who are unable to attend classes at the campus are able to partake of educational opportunities. This is especially beneficial to the elderly, housewives with small children, and persons confined to their homes due to illness.

3. Because programs are offered several times per week persons with irregular schedules are able to participate.
For more information regarding the potentials of interactive television see, *Interactive Television Prospects for Two-Way Services on Cable*, by Walter S. Baer (1971).
Chapter III

A Galaxy of Motion Picture Documents on Communication Theory and the New Educational Media:

A Case Study

Description of the Film Series

In 1966 Wagner designed and produced a series of eight educational motion pictures entitled A Galaxy of Motion Picture Documents on Communication Theory and the New Educational Media. The purpose of the series was to augment the instruction of specific units of communication theory, educational technology, and the new educational media.


Each of the major films is comprised of a series of film segments designed to be used as a component of a specific series arranged by the film producer, as a component of a specific series arranged by the film user, or as an independent unit (Figure 1, represents the sequential design of the films).
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<td>Media and Children</td>
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<td>Perception A Deprivation</td>
<td>Procs</td>
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<td>Perception A Education</td>
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<td>Media A the Curriculum</td>
<td>Procs</td>
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<td>The Teacher of Tomorrow</td>
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<td>The School of Tomorrow</td>
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<tr>
<td>The Instructional Resource Center</td>
<td>Procs</td>
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**Figure 1. Design of Film Program by Segments**
Producer Objectives for the Film Series

The primary objective was to expose teachers to the new media. The films would represent the "best of current practice and experiments in the use of technology in education" (Barber, 1971). This would include an understanding of the research and theory of the communications revolution.

Thus, the films would include some of the theories of key people in the field, as well as representatives of educational institutions, the military, industry, and other non-academic environments.

The purpose of the series was not to explain the operation of the new equipment, but rather to explain the principles of current practice and to raise questions regarding the role of media technology in society.

The Intended Audience of the Series

The structure and content of the series was designed specifically for an audience of users, comprised of college instructors of teacher education, communications theory, educational media, curriculum, film, radio, television, programmed instruction, and audiovisual specialists.

A secondary group of users was predicted to be instructors of college level courses in sociology, journalism, psychology, public opinion, business and personnel management, school administration, and other undefined areas in which communication knowledge would be valuable. The producer predicted that the series possessed the capacity to facilitate instructors of industry and government who were conducting workshops and training courses in communications and information dissemination, public relations personnel, military trainees, and personnel
involved in intercommunity and/or intercultural programs, such as The Peace Corps, or Head Start.

The intended viewing audience was to be comprised primarily of students of teacher education at the college level; inservice public school teachers; college students in sociology, psychology, public opinion, speech, radio, television, film, communication theory; media producers, directors and writers; educational administrators; trainees in military and industry programs; participants in media institutes; librarians; and media specialists receiving additional training.

The Edge Numbers

The films were designed in such a way that they could be reorganized both vertically (by rearranging the modules within a film) and horizontally (by rearranging modules from several different films in the series). The four major films (the modular films) were considered to be "planetary" films, composed of film "asteroids" (modules). The four secondary films were designated as "satellites." Altogether there are a total of thirty-one "asteroids," four "planetary" films, and four "satellite" films; comprising a total of 39 filmic experiences and 1,521 potential combinations of arrangement.

However, it was suspected that teachers might not restructure the material because of two major barriers:

1. **The psychological barrier**: a universal rule of film libraries and rental agencies is DO NOT CUT THE FILM. It was feared that past experiences would present a block, persuading the teachers to keep the film intact. There is also the question of whether the teachers would have the time, motivation, and creativity to restructure the films.
2. The mechanical barrier: unless the process of cutting and splicing is relatively easy the average user will shy away from it.

Solutions to the mechanical barrier include transferring the modules to 8mm, Super 8, or videotape. Another solution (designed by the producer) was to identify the modules with codes, thus, making it possible for the user to remove and replace the modules with a minimum of effort.

Codes for each "asteroid" were printed at one-foot intervals along the margin between the film edge and the outside margin of the sprocket hole with the abbreviated title of each planetary film clearly visible (Barber, 1971).

The code is comprised of an abbreviation of the title, i.e., "Info Exp" and the number of the position of the module in the film. This eliminates the need for the user to use a footage counter. Moreover, the manual accompanying the films provides simple directions for film splicing. Also, one foot (forty frames of 16mm film) can be removed without losing essential information or synchronization, and the beginning and end of each "asteroid" is designed with picture and audio information cushions to minimize damage resulting from incorrect splicing.

The Manual

The manual accompanying the films contains a description of the design of the films, the intended audiences, the rationale of the project, an in-depth description of each film and segment, an explanation of the edge-coding system, and illustrations and suggestions for editing and resplicing of the films.
The purpose of the manual was to acquaint the user with the films and to help him overcome the psychological and mechanical barriers which might prevent him from making full utilization of the films.

**Previous Research Studies**

In 1967, Robert Wagner (producer of the series) and Janice Nelson of The Ohio State University, Department of Photography and Cinema, designed a research instrument including the following questions concerning utilization of the film series: 1) do the films fulfill the specific learning objectives of individual users? 2) is the modular format an effective vehicle for the reduction of obsolescence of specific content material? and 3) does the modular format facilitate the use of the films in the classroom situation?

In 1971, a second appraisal was conducted by George D. Barber. This survey instrument was designed to do the following:

1. Assess the current validity of the films, the audiences to whom they are being shown, the methods of presentation, the existing usefulness of individual films in the series, the usefulness of the manual accompanying the films, the patterns into which segments had been reassembled, and users' suggestions for the improvement of future productions of this type.

2. Compare the 1967 and 1971 surveys to determine the effects of time, obsolescence, and trends in users' evaluations of the films, and the implications of these trends for producers and users of educational films.
Results of these studies, as pertinent to this study will be discussed in Chapter V Data Analysis. For further information regarding the results of either the 1967 or 1971 study, see Analysis of Usefulness and Usage Patterns of A Galaxy of Motion Picture Documents on Communication Theory and the New Educational Media, by George D. Barber (M.A. thesis, The Ohio State University, 1971).
Data were compiled through the following sources:

1. A comprehensive review of the literature of film design and utilization techniques.


3. The 1980 study of the film series *A Galaxy of Motion Picture Documents on Communication Theory and the New Educational Media*. Data for this study were collected through a set of nine focused-interviews conducted by telephone. An interview guide served as the basis of these interviews. The guide focused on four components of film utilization: 1) personal demographics; 2) course/film integration; 3) modular format; and 4) the individual process of film selection, utilization, and evaluation.

The methodology for the 1980 study of the film series *A Galaxy of Motion Picture Documents on Communication Theory and the New Educational Media* consisted of four components:

A. A definition of the purpose of extending this study.

B. Delineating specific questions to be answered by the study.

C. The development of an interview instrument.

D. The development of the sampling procedure.
The Purpose of Extending the Study of the Film Series A Galaxy of Motion Picture Documents on Communication Theory and the New Educational Media

There are three reasons why it is worthwhile to extend the study of this film series:

1. Because the film series employs a modular design format, this study will afford an opportunity to hypothesize upon the merit of the modular design format as a device to enhance film utilization.

2. The previous research studies of the film series facilitate long-range analysis of data.

3. The content of the films is very significant. At the time when the films were produced they represented the thinking of key people in the fields of communications and education, including: Marshall McLuhan, Edgar Dale, Sidney Pressey, George Gerbner, Charles Hoban, James Finn, Wilbur Schramm, B. F. Skinner, Hadley Cantril, Kenneth Norberg, I. Keith Tyler, and other leading scholars in the field of communication study and research.

Objectives of the Study

The 1980 study of the film series, A Galaxy of Motion Picture Documents on Communication Theory and the New Educational Media, sought specific responses to the following questions:

1. **The Modular Format:**
   a. Do film users utilize a modular film series in the way in which the producer intended it to be used?
b. Does the modular format increase the lifespan of a film/series by providing for user modification of the material? Do film users take advantage of this possibility?

c. What are the characteristics of individuals who will take advantage of a modular format?

d. Are common sequences of film rearrangement utilized by instructors? Can one generate any theoretical rationale for the common patterns which emerge?

e. Are any film(s) or film segments being used for historical purposes? Are subjects aware of the historical significance of the materials?

f. Does a modular film format broaden the range of learning objectives which a film/series can fulfill? How do the learning objectives differ from user to user?

g. Does the data gathered by studies extending over a period of 14 years indicate that the effects of time, obsolescence, technological advances, and new information dissemination have altered instructors' perceptions of: 1) the merit of the film series, including student response and 2) the usefulness of individual films.

2. Film Utilization:

a. For what purposes are films being used in the university classroom?

b. Are systematic approaches of film selection, utilization, and evaluation being implemented? What is the nature of these approaches? On what foundations are they based? What are the influences (theoretical or experimental) which govern these approaches?
What might film designers and film users learn from this information?

c. What are the characteristics of the persons who use films creatively?

d. What are the characteristics of the persons who enact well-conceived plans of film selection, utilization, and evaluation?

e. How do the characteristics of the persons who use films creatively and the characteristics of the persons who enact well-conceived plans of film selection, utilization, and evaluation differ from the characteristics of the persons who put the least amount of time and energy into film utilization?

f. In terms of education is it common practice for films to be transferred to video or Super 8 cartridges or tapes?

g. Do subjects prefer short, flexible films? If so, do they prefer 16mm films, video cassettes or tapes, or Super 8 cartridges or tapes?

h. To what extent is there interaction and discussion among faculty members regarding individual films and the process of film utilization?

i. What types of films are needed in the fields of educational media and communications?

j. In a given lecture period do instructors use films and other media? If so, which media are used?
Development of the Interview Instrument

Type of Instrument

Mail Survey vs. Focused-Interviews

The previous studies concerning this film series took the form of mail surveys (see Appendix E). One of the initial decisions of this study was whether to continue using the mail survey instrument or to do a series of focused interviews.

There are many problems attached to mail surveys:

1. The researcher for the 1971 study sent out 94 surveys and received 44 responses (9 of these had to be disqualified).

2. In view of the fact that the master list was 10 years old it was feared that the number of returns would be significantly less, largely because of change of address.

3. Mail surveys do not allow for personal interaction between the researcher and the subject. Because of the nature of the instrument there is no opportunity for the researcher to ask the subject to expand on evasive answers or to clarify ambiguous statements.

4. Short mail surveys receive greater response than do longer forms. However, with brevity one sacrifices depth.

Consequently, the researcher felt that a mail survey would not appropriately satisfy the objectives of this study. Therefore, it was decided that the survey instrument would take the form of a series of focused interviews.

Merton, Fiske and Kendall (1956) indentify the following characteristics of the focused-interview:
1. The persons interviewed are known to have been involved in a particular situation: they have seen a film, heard a radio program, etc.

2. The hypothetically significant elements, patterns, processes, and total structure of this situation have been previously analyzed by the social scientist. Through this content or situational analysis, he has arrived at a set of hypotheses concerning the consequences of determinate aspects of the situation for those involved in it.

3. He (the researcher) develops an interview guide, setting forth the major areas of inquiry and the hypotheses which provide criteria of relevance for the data to be obtained in the interview.

4. Fourth and finally, the interview is focused on the subjective experiences of persons exposed to the preanalyzed situation in an effort to ascertain their definitions of the situation.

Telephone Interview vs. in-Person Interviews

After determining the type of interviews, the researcher was faced with the decision of whether the interviews should be conducted in-person or via the telephone.

An examination of the master list (of film purchasers) revealed that the purchasers resided in locations scattered across the nation. Unfortunately, it was not economically feasible for the researcher to travel nationwide to conduct personal interviews. Consequently, it was decided that the focused-interviews would be conducted via the telephone.
An in-depth study of persons affiliated with a specific audiovisual center was one alternative approach. However, The Ohio State University was the only institution in Ohio which had a copy of the films and because the producer of the films is on the faculty of The Ohio State University, it was feared that a study conducted there might involve bias. The other alternative was to sample persons affiliated with an audiovisual center located in a nearby state. Unfortunately, most audiovisual centers do not keep extensive records of the use of individual films (see The Development of the Sample for further explanation). Thus, this alternative was not feasible.

Development of the Interview Guide

The next step was to determine the scope of questions to be asked during the telephone interviews. As mentioned previously, Merton, Fiske, and Kendall recommend that the researcher develop an interview guide. The interview guide consists of a series of predetermined questions which serve as the basis of the interview. Merton, Fiske, and Kendall (1956) recommend four criteria which are essential to the effectiveness of an interview guide:

1. **Range:** enables the interviewees to maximize the reported range of evocative elements and patterns in the stimulus situation, as well as the range of responses.

2. **Specificity:** elicits specific reports of aspects of the stimulus situation to which interviewees have responded.

3. **Depth:** helps interviewees describe affective, cognitive, and evaluative meanings of the situation and the degree of their involvement in it.
4. Personal Context: ascertains attributes and prior experiences of interviewees which endow the situation with these distinctive meanings.

This information served as a basis for the development of the interview guide. The researcher sought to incorporate these four criteria into the interview guide.

1. **Range:** the questions within the interview guide focused on four areas of film utilization: 1) course/film series integration, 2) the modular format, 3) general use of films in the classroom, and 4) personal demographics.

2. **Specificity:** questions regarding course/film series integration and general use of films in the classroom were designed to elicit very specific responses.

3. **Depth:** a number of probes were incorporated into the interview guide. Examples include the following: (probes are underlined).

   Thinking back to when you showed the film/series which learning objectives did you hope for it to fulfill?

   Do you feel that it fulfilled those objectives? Why? Why not?

   How do you select a particular film at a particular time? What is your source of information?

   What course do you use __________________________ in?

   What is the course title? What kinds of topics do you take up in this course?

4. **Personal Context:** all questions were very carefully worded to facilitate personal responses. Examples include:

   What is your impression of student response to the films? vs. How do students respond to the films?
How would you rate the series as a learning facilitator?

vs. Is the series a good learning facilitator?

To maintain spontaneity and depth during the interview Merton, Fiske, and Kendall (1956) recommend the use of three types of questions: unstructured questions, semistructured questions, and structured questions.

1. **Unstructured questions** are stimulus and response free. Examples include: "What impressed you most about this film?" and "What stood out especially in this conference?"

2. **Semistructured questions** are either Type A (response structured, stimulus free) or Type B (response free, stimulus structured). The following is an example of Type A questions, "What did you learn from this pamphlet that you hadn't known before?" An example of a Type B question is, "How did you feel about the episode of Joe's discharge from the army as a psychoneurotic?"

3. **Structured questions** are stimulus and response structured. Exemplary questions include: "Judging from the film do you think that the German fighting equipment was better, as good as, or poorer than that the equipment used by the Americans?" or "As you listened to Chamberlain's speech did you feel that it was propagandistic or informative?"

In an effort to ensure spontaneity and depth within the focused-interviews the researcher developed unstructured, semistructured, and structured questions. Examples include the following:

1. **Unstructured questions:**
   - What is your impression of the modular format?
   - What kinds of films are needed in this field?
   - How would you improve this film series?
   - What was your general impression of the film series?
2. **Semistructured questions (Type A):**
Which learning objectives did you hope for it to fulfill?
How do you select a particular film at a particular time?
How do you evaluate films?

**Semistructured questions (Type B)**
How would you rate the films as a learning facilitator?
What is your evaluation of the technical quality?
Do you feel that any segments have historical significance?

3. **Structured questions:**
How often have you used this film series?
Have you ever transferred the films to other media? Do you ever use films with other media? How long have you taught this course?

See Appendix C for information regarding revisions to the interview guide and preliminary interview guides.

**The Pilot Study**

**Purpose of the Pilot Study**

The purpose of the pilot study was: 1) to field test and debug the interview guide, 2) to give the interviewer an opportunity to practice the interview procedure and to gain confidence, and 3) to predict the range of responses to specific questions and to incorporate these responses into the interview guide (the purpose of this was to develop a grid on which the interviewer could check the appropriate responses).
Procedures of the Pilot Study

A list of persons who had used one of the major films was obtained from the Teaching Aids Laboratory of The Ohio State University. Subjects were contacted by phone and asked to participate in the pilot study.

The pilot study consisted of five interviews. It was conducted during the last two weeks of May 1980. Although the actual study was conducted via the telephone, the pilot study consisted of a series of in-person interviews. Because the pilot study included feedback from the subjects concerning the interview procedure it was felt that in-person interviewers would be more beneficial. At the start of the interview subjects were given a short description of the films which they could choose to read before starting the interview or refer to during the interview (see Appendix D). Pilot study interviews ranged from 30 minutes to 1 hour. At the conclusion of the interview subjects were asked to provide feedback regarding the interview procedure.

Final Interview Guide

A. A Galaxy of Motion Picture Documents on Communications Theory and the New Educational Media.

1. Which films do you use most often?
   a. The Teacher and Technology
   b. The Information Explosion
   c. The Process of Communication

1 Teaching Aids Laboratory is a campus audiovisual center, not a rental library. Consequently, laws governing rental libraries do not apply.
d. Perception and Communication

e. Music Research

f. Communication Conference

g. The Communication Revolution

h. Sidney Pressey and the Teaching Machine

2. Have you ever seen any others? Yes  No  
   Film Number: 1.   2.   3.   4.   5.   6.   7.   8.   

3. What course do you use __________________________ in?
   What is the course title?
   What kinds of topics do you take up in______________________?

4. What is the principal audience of the course? Academic level:
   Freshmen   Sophomores   Juniors   Seniors   
   Graduate students   Other ____________________________

5. How often have you used this film/series?

6. Thinking back to when you showed the film/series which learning objectives did you hope for it to fulfill? Do you feel that it did? Why? Why not?

7. Again thinking back to when you've showed __________________________ what was your general impression of it? 
   Very good   Good   Fair   Poor   Outdated   

8. How would you rate it as a learning facilitator? 
   Very good   Good   Fair   Poor   

9. What is your evaluation of the technical quality? 
   Very good   Good   Fair   Poor   
10. What was your impression of the audience response which the film provoked?
   Very good____ Good____ Fair____ Poor____

   Did they ask many questions?  Yes____ No____

11. Do you feel that any film segments have historical significance?  Yes____ No____ Which?

12. What is your impression of the film(s) as film?
   Very good____ Good____ Fair____ Poor____

13. Have you ever discussed these films with other faculty members?  Yes____ No____
   Have they expressed any interest in using the film?  Yes____ No____

14. What areas of educational communications and media are left out of these films?

15. What kinds of films are needed in this field?

16. How would you improve this series?

B. The Modular Format:

1. Have you ever used the film manual?  Yes____ No____

2. Are you aware of the modular format?  Yes____ No____

3. What is your impression of the modular format?

4. Have you ever rearranged the films?  Yes____ No____
   How:  By splicing them together?_____
   By threading up the projector?_____
   By transferring to video?____ Super 8____ Short 16mm reels?____
5. What was the rearrangement sequence used? Did you use this more than once? Yes____ No____

Have you used other sequences? Yes____ No____ Which?

6. Have you ever transferred the film to other media? Video____ Super 8 cartridges____ Super 8 reels____ Short 16mm reels____

C. General Use of Films in the Classroom:
1. What is your purpose for using films in the classroom?

2. How do you select a particular film at a particular time? What is your source of information?
   Catalogs____ Friends____ Audiovisual specialist____

3. Do you preview it? Yes____ No____

4. On the day in which you use the film in class, what in particular do you do? Introduce____ Discuss____
   Summarize____ Give handouts____ Test____

5. Do you ever use films with other media? Yes____ No____
   Other films____ Video____ Slides____ Photographs____

6. How do you evaluate films? What do you do?

7. How do you evaluate student response?

D. Demographics:
1. What is your academic training in audiovisual communications?
   Courses____ B.A.____ M.A.____ Ph.D.____

2. Have you ever made a film? Yes____ No____

3. Do you have any interest in photography? Yes____ No____
   Amateur photographer____ Professional photographer____
4. How long have you taught this course?

5. How many films do you show a year?

6. What is the nature of your academic department?
   Undergraduate oriented   Graduate
   Liberal arts   Research oriented   Practicum oriented

   Is there anything else you'd like to say about these films or your use of films within the classroom?

Development of the Sampling Procedure

In 1967 and 1971 studies sampled individuals, organizations, institutions, rental libraries, government agencies, religious organizations, community groups, etc., which had purchased from the Department of Photography and Cinema of The Ohio State University either the entire film series or the four modular films.

The 1967 study sampled a select group of film purchasers. Part I of the survey was sent to 65 persons and received a response of 35. Part II was sent to 22 persons and received a response of 14.

The 1971 study attempted to sample 94 film purchasers. However, 42 responses were received and 9 had to be disqualified. The total sample was 33 which was slightly greater than 1/3 of the film purchasers.

Originally the 1980 sample was to include all purchasers listed on the master list and those who had purchased from the National Audiovisual Center in Washington, D.C. (another distributor of the films) either the entire film series or the four major films.
• **Revision One**

In March of 1980 a letter was sent to the National Audiovisual Center requesting a listing of the names and addresses of film purchasers who had purchased either the entire series or the four major films. In May of 1980 the National Audiovisual Center replied that due to the 1974 Privacy Act a listing of film purchasers could not be released. Thus, persons who had purchased the films from the National Audiovisual Center could not be included in the sample.

**Revision Two**

One of the major objectives of this study was to determine how films in general, and this series in particular, were integrated into the university classroom. Therefore, a major criterion for the sample was that only persons affiliated with higher education would be sampled. This excluded persons affiliated with public schools, government agencies, religious organizations, community groups, etc. The sample would include rental libraries, audiovisual centers of universities, academic departments which had purchased the series, and individual purchasers who were affiliated with universities.

**Revision Three**

Rental libraries were excluded from the study for three reasons:

1. Rental library rules forbid the cutting of films. Consequently, persons borrowing the films from a rental library would not have been allowed to utilize the modular format.

2. An examination of the series rental records from the Department of Photography and Cinema of The Ohio State University revealed
that with few exceptions the name on the rental order was either only the name of the college, the name of the purchasing agent or business manager, or the name of the director of the audiovisual center. Thus, it would be very difficult to obtain the names of the individuals who had used the films.

3. The 1974 Privacy Act forbids rental libraries from releasing the names of film users. The practice of this law was confirmed by the directors of two university rental libraries.

Revision Four

Audiovisual centers of universities were the next group of film users to be eliminated from the sample. Initial investigations revealed:

1. Many audiovisual centers do not record the names of persons using specific films. Thus, it would not be possible to obtain a list of the persons who had used the films series.

2. The audiovisual centers which do record the names of the users of individual films keep these records for only one year, unless they have an on-line system. Consequently, it would be difficult to determine the people who had used the films extensively.

The final sample was to consist only of individuals and individual academic departments on the master list. Since 1971, two series sales had been made by The Department of Photography and Cinema of The Ohio State University. These names were added to the master list.

When academic departments were contacted the researcher asked for the names of the persons who were currently using the films. When individuals were contacted they were asked questions regarding their use
of the films and they were asked to provide information concerning other film users.

Revision Five

A scanning of the master list revealed that the majority of the individuals and academic departments to be sampled were affiliated with the fields of education, educational media, instructional technology, or communications fields. These fields were the primary audiences of film users for which the series was designed. Thus, it was decided that affiliation with one of these fields would be a prerequisite for the sample.

The question of who was to be sampled still was not completely answered. Should one sample only persons who currently used the films, persons who used the films extensively, persons who used the films once and stopped using them, or persons who used the films extensively then stopped using them. Because in-depth information regarding the process of film utilization was the main focus of the study it was decided to sample only persons who used the films extensively. A third criteria were that the person had to have used the films within the past three years.

The Sample Criteria

Criteria for selection of the sample were:

1. Persons affiliated with institutions of higher education.

2. Persons who (at the time of using the films) were affiliated with academic departments emphasizing education, communications, or instructional technology.
3. Persons who had used the films extensively.
4. Persons who had used the films within the past three years.
5. Persons who had access to either the entire series or the four major films.

Obtaining the Sample
During the second week of May 1980 subjects were contacted. The interviewer first explained the nature of the study, the reason that the subject had been contacted, and then asked subjects if: 1) they were familiar with the films, 2) they had used the films extensively, and 3) they had used the films within the last three years. Subjects who responded affirmatively to these three questions were asked to participate in the study. Subjects were also asked to identify any other faculty members who used the films.

The final sample consisted of nine persons. Of the nine persons included in the sample only two were not currently using the films. One had revamped the content of his course and the films were no longer appropriate to his course objectives. The second instructor had changed positions and was no longer teaching. However, both had used the films extensively within the past three years.

Profiles of the Subjects
The following profiles consist of descriptions of the academic status of each of the nine subjects.

1. **Subject A:**
   
   **Academic Institution:** a medium sized, Midwestern state university.
**Subject A:**

**Academic Department:** curriculum and instruction. Graduate and undergraduate oriented, and research and practicum oriented.

**Graduate Degree:** Ed.D. in instructional technology.

**Media Interest:** has made a film and is a semiprofessional photographer.

2. **Subject B:**

**Academic Institution:** a medium sized, private Eastern university.

**Academic Departments:** curriculum and instruction. Graduate oriented and practicum oriented.

**Graduate Degree:** Ph.D. in a field related to audiovisual communications.

**Media Interest:** has advised student productions (but has never made a film) and is an amateur photographer.

**Other:** administrator of a university media center.

3. **Subject C:**

**Academic Institution:** a medium sized, Midwestern state university.

**Academic Department:** library and educational media. Graduate and undergraduate oriented, and practicum oriented.

**Graduate Degree:** Ph.D. candidate in a field related to audiovisual education.

**Media Interest:** has made a film and is an amateur photographer.

**Other:** administrator of a university media center.

4. **Subject D:**

**Academic Institution:** a small, Western state university.
Academic Department: department of education. Graduate and undergraduate oriented, and practicum oriented.

Graduate Degree: Ph.D. in education.

Media Interest: has made a film and is an amateur photographer.

Other: a former employer of a major educational media production company.

5. Subject E:

Academic Institution: a medium sized, Western state university.

Academic Department: educational administration. Graduate oriented department, and research and practicum oriented.

Graduate Degree: Ph.D. in educational administration.

Media Interest: has never made a film but is an amateur photographer and has done slide-tape presentations.

Other: has written extensively on the subject of educational communications.

6. Subject F:

Academic Institution: a medium sized, private Eastern university.

Academic Department: instructional design, development, and evaluation. Graduate oriented, and research and practicum oriented.

Graduate Degree: Ph.D. in a field related to audiovisual education.

Media Interest: has never made a film but is an amateur photographer.

Other: has written extensively on the subject of film selection, evaluation, and utilization.
7. Subject G:

**Academic Institution:** a medium sized, Midwestern state university.

**Academic Department:** elementary and special education.

Graduate oriented and practicum oriented.

**Graduate Degree:** Ph.D. in education.

**Media Interest:** has never made a film but is a professional photographer.

8. Subject H:

**Academic Institution:** a medium sized, Midwestern state university.

**Academic Department:** instructional systems technology.

Graduate oriented, and research and practicum oriented.

**Graduate Degree:** Ph.D. in a field related to audiovisual instruction.

**Media Interest:** has made a film and is a professional photographer.

9. Subject I:

**Academic Institution:** a medium sized, Midwestern state university.

**Academic Department:** department of communication, speech and theater. Undergraduate oriented and liberal arts oriented.

**Graduate Degree:** Ph.D. in English.

**Media Interest:** has never made a film but is an amateur photographer.
The Interview Procedure

During the fourth week of May 1980 the subjects who agreed to participate in the study were contacted in order to set up an appointment time for the focused-interview. Because of the high cost of long-distance dialing, subjects were asked if they could be contacted after 5 p.m. when long-distance rates are more economical.

At this time a consent to participate form, a letter confirming the interview date, and a short description of the film series was sent to each subject (see Appendix D for the description of the film series).

The interviews took place during the second week of June 1980.
As mentioned previously, the objective for extending the study of the film series, *A Galaxy of Motion Picture Documents on Communication Theory and the New Educational Media*, was to obtain answers to specific questions (see pages 52-54 for questions). Therefore, the data analysis will take the form of a series of questions and answers.

The Modular Format

Do film users utilize a modular film series in the way in which the producer intended it to be used? What are the factors which deter such use and what are the motivating factors?

Subjects A, F, and G utilize the film series in the way in which the producer intended it to be used, by splicing together film segments. Subjects A, C, D, and I utilize a modification of this approach, threading-up the projector to the desired segments. Subjects B, E, and H do not rearrange film segments. Thus, the majority of subjects (6/9) do some form of segment rearrangement.

Subjects identified the following as factors which deter splicing of the film segments:

1. Consideration of copyright laws.¹

2. The unwritten law of utilization not to cut films.

¹Although these films are in the public domain subjects did express a fear of copyright laws.
3. Fear of ruining the films by poor splicing techniques.
4. The messings of the splicing process.
5. A preference for showing whole films as opposed to segments.
6. The feeling that this film series does not lend itself to the modular format.
7. The feeling that the concept was ahead of the technology; the approach would best lend itself to video.
8. The problem of storage and retrieval of small segments and the belief that the segment format does not lend itself to easy storage in a film library.

Factors motivating the use of the segment format (either by splicing or threading-up the projector) include:
1. The ability to create your own presentations.
2. The ability to adapt the materials to presentations for diverse professional audiences.
3. The ability to omit parts which are inappropriate to the lesson unit.
4. The ability to omit segments which ramble.
5. The ability to omit segments which are obsolete and conversely, to use obsolete segments for historical purposes.
6. A positive attitude toward the segment format.

Thus, the results of this question indicate that there is a desire for and a use of segmented films. However, results also indicate that for a variety of reasons subjects are hesitant to splice films; instead, they tend to rely on the method of threading-up the projector. In view of this information it is recommended that the video system, especially
the videodisc because of its capabilities for random access of information, would be a more appropriate format for segmented media.

Does the modular format increase the lifespan of a film/series by providing for user modification of the material? Do film users take advantage of this possibility?

Frequently, when film researchers and/or film producers gauge the lifespan of a film they do so by evaluating sales records and rental agency records. If sales and rental figures are down they often conclude that the film is not being used. However, when gauging film usage it is also important to take into account whether film purchasers are still using the film.

Generally speaking, the lifespan of the average educational film is five years. Of course, there are exceptions which most often are well-made films. The purpose of this study was not to tally the number of film purchasers who are still using the film(s), although unquestionably there would be a degree of merit in that method. Instead the study sought to analyze the factors which would motivate instructors to continue to use a fourteen-year old film series. Although the original premise was that the modular format would be utilized to remove obsolete segments, results of the study indicated that the modular format was utilized both to remove obsolete material from presentations and to isolate obsolete material for historical presentations.
What are the characteristics of individuals who will take advantage of a modular format?²

Characteristics common to subjects who have spliced together film segments include:

1. They use the film(s) for courses in audiovisual education.
2. They use the film(s) more than once but less than five times per year.
3. They use the film(s) for audiences comprised primarily of graduate students in the field of education.
4. They have used the film(s) for over ten years.
5. They responded positively to the questions, "Do you have any interest in photography? Amateur or professional?"
6. They have taught the course in which they use the film(s) for over 14 years.
7. They tend to show a small number of films annually (ranging from 15 to 50).
8. All teach either in education departments, or departments related to education, or instructional technology.

Characteristics common to subjects who have threaded-up the projector to specific segments include:³

²This is not to hypothesize that other persons possessing these characteristics utilize or would utilize the modular format; nor is it to hypothesize that other persons lacking these characteristics do not utilize the modular format. It is only to identify and discuss the characteristics common to persons who utilize the modular format.

³One subject both threaded-up the projector to appropriate segments and spliced together film segments.
1. They use the film(s) in education, audiovisual instruction, or communications related courses.

2. They show the film(s) between one and five times per year.

3. All have used the film(s) for over five years. Four have used the film(s) for over ten years.

4. With one exception, all use the film(s) primarily for audiences in fields related to education and educational technology.

5. Four of these subjects have made a film.

6. All responded positively to the questions, "Do you have any interest in photography? Amateur or professional?" Four subjects are amateur photographers and two subjects are professional photographers.

7. With the exception of one subject who had been teaching the course for eight years, all subjects had been teaching the course in which they used the film(s) for over ten years.

8. Five of the subjects teach in departments emphasizing both graduate and undergraduate education. One subject teaches in a department primarily emphasizing graduate education.

9. Four of the subjects teach in departments emphasizing practicum, two teach in departments emphasizing research and practicum, and one teaches in a department emphasizing liberal arts.

10. They show a small number of films per year (15-50).

What implications can be drawn from the characteristics common to instructors who utilize the modular format?

1. They show a small number of films per year (15-50).

2. All identified themselves as practicing photographers. Thus, they are aware of the importance of visual communications.
3. All have used the film(s) for considerably long periods of time. This would imply that when instructors find films, or other curriculum materials, to be effective they tend to stick with them even though the materials may become partially dated.

4. It must be remembered that this study dealt exclusively with subjects possessing professional training and professional experiences in education, audiovisual instruction, or communications. Consequently, their use of the materials might be considerably different than that of persons lacking this type of background.

**Does the modular format broaden the scope of the audience of a film series?**

Because the subjects of this study teach primarily in departments related to education, educational technology, and/or communications one cannot predict the full range of audiences of the film series. However, results of the study indicate that the films reach an array of audiences within the fields of education, educational technology, and communications. Many subjects also reported that their courses were not restricted to students who were department majors, courses drew students from a variety of nonrelated fields, e.g., health professions.

Audiences of the film series include the following:

1. Teachers (pre- and in-service).
2. Educational technology majors and students in other related fields.
3. Media and library science majors.
4. Education majors.
5. Nursing students taking course work in education.
6. Future media specialists.
7. Audiences of presentations at meetings of educational technology professionals, physicians engaged in family practice, nurses, and other health organizations; meetings of teacher associations; and professional education associations.

One of the strengths of the film series is that the producer did not label it as being a series designed "exclusively" for use in the fields of education and communications. Instead, the film manual stressed the variety of potential audiences of the series. Perhaps too many film producers limit the scope of their potential audiences by narrowly labeling films. Unfortunately, many film users shy away from using films which are not labeled specifically for their audiences. Indeed, it is a rare but creative teacher who will show a fourth grade art class a film designed specifically for eighth grade science majors. Film producers are advised to label films broadly and include secondary as well as primary audiences within the film descriptions.

Are there common sequences of film rearrangement utilized by subjects? Can one generate any theoretical rationale for the common patterns which emerge?

Because of a failure by subjects to identify rearrangement sequences no common patterns could be identified. This failure is attributed to two factors, failure of subjects to remember rearrangement sequences, and constant use of the rearrangement format (for use with different audiences) which made it impossible to cite specific sequences.
Are films(s) or film segments being used for historical purposes?
Are subjects aware of the historical significance of the material?

All of the subjects recognized the historical importance of the film series. However, it must be remembered that these instructors were teaching during the period when the material was new. Instructors new to the field might not recognize this importance.

The following is a list of film(s) and film segments which instructors feel have historical significance:

1. Segments featuring McLuhan (deceased), Tyler, Dale, and Gerbner.
2. Communication Conference (because two of the participants are deceased; Hoban and Finn).
3. The Teacher and Technology.
4. The Communication Revolution.
5. The segment titled Computerized School.
6. Segments on programmed instruction.
7. The segment Theories of Perception (because of participants Cantril (deceased) and Norberg).
8. The segment with Finn (deceased).
9. Segments presenting early examples of technology.
10. Segments with Dale, Schramm, Kennedy, and Albert Sabin.
11. Three subjects felt that the entire series has historical significance.

These films and film segments are used for two historical purposes:

1. To expose students to early developments in the field of educational technology.
2. To expose students to the views of persons who are pioneers in the field of educational communications.

Subjects are aware of both the historical significance of this film series and the need for other historical materials documenting developments within the field. When asked "What type of films are needed within this field of educational communications?" subjects repeatedly identified a need for films which document historical developments within the field.

In an era when everyone is concerned with inflation and the growing costs of curricular materials the question of obsolescence of materials must be addressed by educators, administrators, producers of curricular materials, researchers, and teachers. There must emerge a framework through which ordinary classroom teachers can identify and transform outdated materials into historical documents.  

Does a modular format broaden the range of learning objectives which a film/series can fulfill? How do the learning objectives differ from user to user?

The films are used in a variety of different courses and fulfill an array of different learning objectives, including:

1. Library and Educational Media Theory: a course dealing with all types of nonprint media. The course focuses on both theory and production of educational media.

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4At Iowa State University an effort is being made to collect and preserve factual films.
Objective: the films are used as introductory material and to expose students to persons knowledgeable in the field.

2. Educational Philosophy: a course relating the traditional philosophies to contemporary issues regarding the role and function of a teacher.

Objective: the films are used to expose students from rural environments to the information explosion and current events in education.

3. Utilization of Media: a course introducing theoretical and philosophical rationale for media use. The course focuses on the use of motion pictures, photography, television, transparencies, programmed instruction, and instructional systems.

   Objective: to introduce theoretical and philosophical rationale for media use, to discuss instructional systems, and to discuss perception and communication as a basis for media use.

4. Educational Technology/Audiovisual Instruction: the course focuses on the ways in which modern technology has changed American life and the new developments within the field of education.

   Objective: to compare different technological changes in specific facets of industry and teaching and to describe new technological developments.

5. Mass Communication and the Popular Arts: a course describing and exploring the different communication media and alternative forms of mass communication, including Broadway, politics, posters, museums, and libraries.
Objective: to explain the process of communication and to present communication discussions, i.e., those featuring Tyler and Dale, and McLuhan and Seldes.


    Objective: to give students the opportunity to analyze examples of the correlation of media to institutional needs and to expose students to early examples of technology.

7. Selection and Utilization of Media in Education: a theoretical foundations course exploring the information explosion, cultural and social implications of educational media, and the function of media within the process of education.

    Objective: to promote student awareness of the need for improvement of the communication process and to indicate to students the application of media to a wide range of activities.

8. Educational Technology: this is a basic audiovisual course presenting an overview of the field of educational technology. Topics include: the history, theory, and new developments of educational technology; a definition of the systems approach to media use; and the application of media to wide-scale enterprises, such as international management.

    Objective: to present individual examples of educational technology used in a variety of contexts and to describe the communications model.

9. Selection and Utilization of Media: a general course covering systems approaches, communication objectives, learning resource centers,
Objective: to promote a better understanding of the process of communication and to explain how different media communicate.

Indeed, the films are used to fulfill an array of diverse learning objectives. However, to credit this success only to the modular format would indeed be short sighted. Credit must also be given to the producer for his very careful selection of content.

Does the data gathered by studies extending over a period of fourteen years indicate that the effects of time, obsolescence, technological advances, and new information dissemination have altered instructors' perceptions of: 1) the merit of the film series, including student response and 2) the usefulness of individual films? 

Table 1 examines data collected by the 1967 and 1971 studies regarding instructors' perceptions of the merit of the film series, including:
1) Technical Quality of Photography, 2) Technical Quality of Sound, 3) Authenticity of Content, and 4) Student Response (see page 86).

Barber (1971) provided the following analysis of the data:

A comparison of the results of the two studies in the rating of general factors is made difficult due to the inclusion of the "very good" category in the later study. This change in the questionnaire was made to provide a wider continuum for respondent's evaluations; hopefully providing a clearer, truer assessment of the quality of the films as perceived by the users.

Because the sampling procedure of the 1980 study is different than that of the previous studies (see Development of the Sample for data regarding the sampling procedures of the three studies) it is difficult to make definitive statements regarding the comparison of the data of the three studies.
<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Quality of Photography</td>
<td>30.3</td>
</tr>
<tr>
<td>Technical Quality of Sound</td>
<td>18.2</td>
</tr>
<tr>
<td>Authenticity of Content</td>
<td>57.5</td>
</tr>
<tr>
<td>Student Response</td>
<td>12.1</td>
</tr>
</tbody>
</table>
Regardless of this change, nearly all respondents felt that the films generally rated "adequate," "good," or above. The even division of "good" for Technical Quality of Photography in the 1967 study is reflected in the approximately equal rating among "very good," "good," and "adequate" in the 1971 study. A greater percentage of respondents report the Technical Quality of Sound to be "good" in 1971 than in 1967; and the addition of the "very good" category in the later study gives a clearer picture of respondent's opinions on the Authenticity of Content—the "very good" and "good" percentages in 1971 (94%) are similar to the 1967 rating of "good" alone (85.7%). A greater percentage of respondents rated the films in regard to Student Response in 1971 than in 1967; but in both studies the majority of ratings were "good," followed by "adequate."

The 1980 study also examined instructors' perceptions of the merit of the film series. However, in this study the rating categories were changed. The categories of Technical Quality of Sound and Technical Quality of Photography were consolidated under the heading of Technical Quality. The category of Authenticity of Content was deleted. Three new categories were added: a category rating the film(s) as film; a category focusing upon the instructors' impressions of the film(s); and a category evaluating the film(s) as learning facilitators. In addition, to these changes the rating of adequate was changed to fair.

Table 2 presents information regarding instructors' perceptions of the merit of the film series in 1980.

In the 1980 study instructors' ratings of the merit of the film series were high. 88.8% rated their general impression of the film series to be "very good" or "good." 77.7% of the respondents rated the Technical Quality, the Film(s) as Film, and Films as Learning Facilitators to be "very good" or "good." One hundred percent of the respondents rated Student Response to be "good." Moreover, all of the subjects of the 1980 study responded to all five questions.
Table 2
Instructors' Perceptions of the Merit of the Film Series as Determined by the 1980 Study

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very Good</td>
</tr>
<tr>
<td>General Impression</td>
<td>33.3</td>
</tr>
<tr>
<td>Technical Quality</td>
<td>22.2</td>
</tr>
<tr>
<td>Film(s) as Film</td>
<td>11.1</td>
</tr>
<tr>
<td>The Film(s) as Learning Facilitators</td>
<td>11.1</td>
</tr>
<tr>
<td>Student Response</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Ratings in the 1980 study were somewhat higher than those in the previous studies. In the 1967 study 44.3% rated Technical Quality of Photography to be "good" and Technical Quality of Sound was rated "good" by 38.6% of the respondents. In the 1971 study 63.6% rated the Technical Quality of Photography to be "very good" or "good" and 67.5% of the respondents rated the Technical Quality of Sound to be "very good" or "good." However, in the 1980 study 77.7% of the respondents rated the Technical Quality to be "very good" or "good."

In the 1967 study 57.1% of the respondents rated Student Response to be "good" and in the 1971 study 62.7% of the respondents rated Student Response to be "very good" or "good." However, in the 1980
study 100 percent of the respondents rated Student Response to be "good." Although more of the respondents in the 1971 study (12.1%) felt that Student Response was "very good," in the 1980 study a greater number of respondents felt that student response was "good."

In all three studies the distribution of ratings tended to fall in the categories of very good, good, fair/adequate and very few of the respondents rated the films as poor.

On the surface it does appear that the effects of time, obsolescence, technological advances, and new information dissemination have been very minimal. However, there are other factors which must be considered: 1) many of the subjects are using portions of the film(s) as historical documents, 2) because of obsolescence many of the subjects are using the film(s) less than they previously did, and 3) many of the subjects use different film(s) than they previously did because of obsolescence of the material (it must be remembered that film techniques have advanced within the past 14 years).

Tables 3 and 4 provides information concerning instructors' evaluations of the usefulness of film(s) in the series. Table 3 examines instructors' evaluations of the "most valuable," "most useful" and "most used" film(s). Data for this table were obtained from the data collected by the 1967, 1971, and 1980 studies (see pages 90-93 for data interpretation).

The 1967 study queried subjects regarding their evaluations of the "most valuable" and "least valuable" film(s). Similarly, the 1971 study queried subjects regarding their evaluations of the "most useful" and "least useful" film(s). However, the 1980 study examined only
Table 3
Usefulness of Films in the Series

<table>
<thead>
<tr>
<th>Film Title</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Most Valuable 1967</td>
</tr>
<tr>
<td>The Teacher and Technology</td>
<td>58.9</td>
</tr>
<tr>
<td>The Information Explosion</td>
<td>16.1</td>
</tr>
<tr>
<td>Perception and Communication</td>
<td>5.4</td>
</tr>
<tr>
<td>The Process of Communication</td>
<td>5.4</td>
</tr>
<tr>
<td>The Communication Revolution</td>
<td>0.0</td>
</tr>
<tr>
<td>Communication Conference</td>
<td>0.0</td>
</tr>
<tr>
<td>Music Research</td>
<td>0.0</td>
</tr>
<tr>
<td>Teaching Machines and Sidney Pressey</td>
<td>0.0</td>
</tr>
<tr>
<td>No Response</td>
<td>14.3</td>
</tr>
</tbody>
</table>

Instructors' evaluations of the "most used" films, it did not attempt to evaluate the "least used" films. Table 4 consists of instructors' evaluations of the "least valuable" and "least useful" film(s) of the series.

Barber (1971) analyzed the data from the 1967 and 1971 studies:
### Table 4

**Instructors' Evaluations of the "Least Valuable" and "Least Useful Film(s)***

<table>
<thead>
<tr>
<th>Film Title</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Least Valuable 1967</td>
</tr>
<tr>
<td>The Teacher and Technology</td>
<td>0.0</td>
</tr>
<tr>
<td>Perception and Communication</td>
<td>0.0</td>
</tr>
<tr>
<td>The Process of Communication</td>
<td>0.0</td>
</tr>
<tr>
<td>The Information Explosion</td>
<td>0.0</td>
</tr>
<tr>
<td>Communication Conference</td>
<td>21.4</td>
</tr>
<tr>
<td>The Communication Revolution</td>
<td>0.0</td>
</tr>
<tr>
<td>Music Research</td>
<td>21.4</td>
</tr>
<tr>
<td>Teaching Machines and Sidney Pressey</td>
<td>28.6</td>
</tr>
<tr>
<td>No Response</td>
<td>28.6</td>
</tr>
</tbody>
</table>

In the 1967 study *The Teacher and Technology* was rated "most valuable," while *Teaching Machines and Sidney Pressey* was rated "least valuable." The rest of the films fell on the continuum between these two. None of the major films was rated "least valuable" and none of the secondary films was rated "most valuable." *Communication Revolution* received no response at all as to usefulness.

In the 1971 study *The Teacher and Technology* was still rated the "most useful" film in the series. *Music Research* was rated the "least useful" by a majority of users.
Teacher and Technology lost ground as the "most useful" film (58.9% in 1967; and 25.8% in 1967). Teaching Machines and Sidney Pressey gained in apparent usefulness (28.6% as "least valuable" in 1967; 6.1% as "least useful" in 1971). Music Research declined dramatically in respondents' reports (21.4% as "least valuable" in 1967; 60.6% as "least useful" in 1971). In the 1967 survey, none of the four major films was rated "least valuable" and none of the secondary films was declared "most valuable." This finding does not hold in the later study. For example, Communication Revolution received a rating of 0.0% as both "most" and "least valuable" in 1967, in 1971 this film was claimed to be the "most useful" by 6.1% of the respondents and "least useful" by 3.0% of respondents.

An analysis of the data from the three studies reveals the following information regarding usefulness of individual films:

1. Perception and Communication rose from third "most valuable" in 1967 and third "most useful" in 1971 to the "most used" film in 1980.

2. The Communication Revolution rose from fifth "most valuable" in 1967 and fifth "most useful" in 1971 to second "most used" in 1980.

3. The Teacher and Technology fell from "most valuable" in 1967 and "most useful" in 1971 to third "most used" in 1980.

4. The Information Explosion fell from second "most valuable" in 1967 to fourth "most used" in 1971, but in 1980 was one of the three "most used" films.

5. The Process of Communication rose from fourth "most valuable" in 1967 to second "most useful" in 1971 and in 1980 fell to one of the three "most used" films.
6. **Communication Conference** fell from sixth "most valuable" in 1967 to seventh "most useful" in 1971 and rose in 1980 to regain sixth place.

7. **Teaching Machines and Sidney Pressey** rose from "least valuable" in 1967 to sixth "most useful" in 1967, but fell to seventh "most used" in 1980.

8. **Music Research** fell from seventh "most valuable" in 1967 to the least "most useful" film in 1971 and remained the "least used" film in 1980.

The effects of time, obsolescence, technological advances, and new information dissemination are most evident when comparing the changes of usefulness of the films over a period of 14 years. Clearly, the results of this comparison offer concrete evidence of the need for films and other curricular materials which are flexible in nature and can easily be adapted to withstand the harsh challenges of time.

**Film Utilization**

For what purposes are films being used in the university classroom? Subjects identified the following purposes for utilization of films in the classroom:

1. To present information models and to inform.

2. To provide insights not otherwise possible, to offer examples of situations requiring student analysis, and to illustrate important concepts and theories.

3. To build background, to introduce a subject, as a culmination activity, to illustrate how others feel about a medium, to teach a skill (if it's something that I cannot teach as effectively).
4. To get students to think.

5. To provide background information, as illustrative materials, to supplement ideas, to present information, to change attitudes or behavior, and to teach skills.

6. To bring to class experiences which otherwise cannot be brought in.

7. To show a specific type of reality, to provide an experience similar to taking a field trip.

8. To provoke discussion and to demonstrate things I cannot demonstrate.

9. As a basis for discussion, to bring to class guests whom I cannot provide, and to present different points of view.

Thus, instructors use films in the classroom primarily for the purpose of providing information experiences, and guests which are otherwise inaccessible. This implies that film is used primarily as an artifact. If the teacher can produce the original experience he will do so, if not he will rely in a film to provide that experience.

Are systematic approaches of film selection, utilization, and evaluation being implemented? What is the nature of these approaches? On what foundations are they based? What are the influences (theoretical or experimental) which govern these approaches? What might film designers and film users learn from this information?

Subjects identified the following as sources of information for film selection:
1. State film catalogs, literature.
2. Memory, annotations on films, reviews in journals.
3. Heresay, conferences, NICEM indexes, other faculty, previewing films.
4. General knowledge of what is available; I have favorites.
5. I select films in lieu of my objectives; consult catalogs and periodical reviews; I follow what is produced order, and preview it.
6. Friends, professional reading in journals, suggestions from the film librarian.
7. Suggestions from friends; I preview films.
8. The school film collection, the media center in the library, my own collection; I keep up to date on films, order and preview them.

Professional sources such as journals, literature, and conferences appear to be the main source of information for film selection. Only one of the subjects did not list one of these sources as a source of information. Four of the subjects (44.4%) cited other instructors as sources of information, and all of the subjects responded affirmatively when asked if they preview films. Thus, it does appear that subjects put considerable time and thought into the process of film selection.

Subjects identified five most common film utilization procedures: introducing the film, conducting discussions after the film showing, giving handouts related to the film; testing students on the film, and including film related questions on a test. Table 5 discusses the percentage of respondents using a specific film utilization technique.
### Table 5

**Film Utilization Techniques**

<table>
<thead>
<tr>
<th>Technique</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Introduce the film</td>
<td>100.0</td>
</tr>
<tr>
<td>Conduct discussions after the film showing</td>
<td>100.0</td>
</tr>
<tr>
<td>Give handouts</td>
<td>44.4</td>
</tr>
<tr>
<td>Test on a film</td>
<td>22.2</td>
</tr>
<tr>
<td>Include film related questions on a test</td>
<td>33.3</td>
</tr>
</tbody>
</table>

All of the subjects regularly introduce and discuss films. 66.6% of the respondents regularly or on occasion distribute film related handouts. 55.5% of the respondents either test students on a film or include film related questions on examinations.

Other film utilization techniques tend to be more idiosyncratic, varying from one instructor to another. The following is a list of film utilization techniques which individual subjects use regularly:

1. Telling students to record important points and problems.
2. Adapting films to fit the situation, threading-up the projector to specific parts.
3. Showing films twice.
4. Showing films without the soundtrack.
5. Showing partial films.
6. Giving students a copy of the test before the film showing, so that they know what to look for.
7. Doing advanced reading, previewing the film, and drawing up a topic agenda.
8. Giving students evaluation forms and having them evaluate the film.
9. Discouraging students from taking notes, as it distracts them from the film.
10. Relating the film to the lesson unit (this begins several sessions prior to the film showing).
11. Deliberately showing some films without introductions (i.e., Future Shock).

Results of the study indicate a lack of creative and innovative media utilization techniques. Moreover, many of the film utilization techniques which experimental researchers have found to be effective learning facilitators are not ones which respondents identified as current practice. These include:

1. Repetition of a film showing. Only one subject identified this as a practice technique.
2. The use of advanced organizers. Although all of the subjects did state that they regularly introduce films, no one specifically mentioned the use of advanced organizers.
3. The use of student participation exercises.
4. Reference to the film in other lectures. Although one subject did state that student response was evaluated by references to the film in other lectures, it was not made clear that it was his policy to refer to films in other lectures.

5. None of the creative film utilization techniques suggested by Lacey (1977) are being implemented. Moreover, results of the study indicated that there is a lack of use of creative and original film utilization techniques. None of the subjects are currently using any film utilization techniques which are either original or creative.

Table 6 examines the method by which subjects evaluate films for classroom use.

Table 6

<table>
<thead>
<tr>
<th>Method</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Criteria for evaluation</td>
<td>33.3</td>
</tr>
<tr>
<td>Judging the appropriateness of the film to the purpose of the lesson</td>
<td>55.5</td>
</tr>
</tbody>
</table>

Only 33.3% of the subjects utilize formal criteria when evaluating films for classroom use. 55.5% of the respondents base film evaluations on the appropriateness of the film to the purpose or objectives of the lesson. It must be remembered that the majority of the subjects
are either Ph.D.'s in audiovisual instruction or persons who teach film evaluation. Thus, these subjects would not have as great a need for formal evaluation criteria, as formal training and years of experience would facilitate this procedure. An example is the subject who replied that his criteria was well documented in the literature.

Table 7 discusses methods by which student response to films is determined.

Table 7
Methods for Determining Student Response to Films

<table>
<thead>
<tr>
<th>Method</th>
<th>Percentage of respondents using the method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class discussion</td>
<td>55.5</td>
</tr>
<tr>
<td>Student evaluations of the film</td>
<td>11.1</td>
</tr>
<tr>
<td>Student interest, overt response, or non-verbal cues</td>
<td>33.3</td>
</tr>
<tr>
<td>Long-term response (student discussion of film several periods later, exam results)</td>
<td>22.2</td>
</tr>
<tr>
<td>No specific method</td>
<td>11.1</td>
</tr>
</tbody>
</table>

Student response is judged primarily on the basis of short-term response, i.e., class discussions, student interest, overt responses,
and nonverbal cues. Only 22.2% of the respondents consider long-term response when evaluating student response to films. It is very unfortunate that the majority of the respondents (77.7%) evaluate student response only on a short-term basis; thus, ignoring the total effects of the film on the student and the learning process.

Summary: Results of the study indicate a lack of creative and innovative media utilization techniques. Moreover, as mentioned previously many, of the experimental research techniques which have been determined to be effective learning facilitators are not used by subjects. Results of the study also indicate that systems approaches to film utilization are not being implemented (although it must be noted that many of the subjects did cite components of the systems approach, i.e., evaluating films in accordance with the lesson objectives, as a part of their film utilization process).

Thus, there is a recognizable need for creativity in film utilization. It is recommended that film producers develop materials which encourage creative film utilization.

What are the characteristics of the persons who use films creatively?

For the purposes of this study creativity was defined in the following manner: 1) utilization of an original film utilization technique (the Lacey image-skim method would be an example) which was developed by the individual, or 2) utilization of any original film utilization technique (again the Lacey image-skim method would be an example). Unfortunately, none of the subjects cited use of any
original film utilization techniques. Thus, this question had to be disqualified.

What are the characteristics of the persons who enact well-conceived plans of film selection, utilization, and evaluation?

For the purpose of this study a well-conceived plan of film selection, utilization, and evaluation was defined as one embodying the characteristics of a systems approach to film utilization. Although it is conceivable that a number of subjects do enact systems approaches to film utilization, none of their responses indicated this. Thus, this question had to be disqualified.

How do the characteristics of the persons who use films most creatively and the characteristics of the persons who enact well-conceived plans of film selection, utilization, and evaluation differ from the characteristics of the persons who put the least amount of time and energy into film utilization? Because questions #2 and #3 were disqualified it was necessary to disqualify this question also.

In terms of education is it common practice for films to be transferred to video or Super 8 cartridges or tapes? Are films being transferred to short 16mm reels?

Table 8 shows the percentage of respondents who have transferred films to video, Super 8, short 16mm reels, or other media.

Although 22.2% of the respondents have transferred films to videotape, results of the study show no evidence of respondents
Table 8
Respondents Who Have Transferred Films to Other Media

<table>
<thead>
<tr>
<th>Media</th>
<th>Percentage of respondents who have transferred films</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>22.2</td>
</tr>
<tr>
<td>Super 8 reels or cartridges</td>
<td>0.0</td>
</tr>
<tr>
<td>Short 16mm reels</td>
<td>0.0</td>
</tr>
<tr>
<td>Other</td>
<td>0.0</td>
</tr>
</tbody>
</table>

regularly transferring films to other media. Furthermore, none of the respondents had ever transferred the film series, *A Galaxy of Motion Picture Documents on Communication Theory and the New Educational Media*, to video, Super 8 reels or cartridges or short 16mm reels. These results are attributed to three factors: 1) transfers from 16mm to Super 8 are very expensive, 2) many departments lack the necessary equipment to transfer films to video, and 3) because of copyright laws subjects may be reluctant to admit having transferred films to video.

Do subjects prefer short, flexible films? If so, do they prefer 16mm, video or Super 8 formats?

Subjects were queried regarding their preference of short, flexible films instead of traditional length films and their preferences of format. Table 9 presents their responses to these questions.
Table 9
Subject Preferences for Film Formats

<table>
<thead>
<tr>
<th>Format</th>
<th>Percentage of subject responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short, flexible films</td>
<td>100%</td>
</tr>
<tr>
<td>16mm (short format)</td>
<td>44.4</td>
</tr>
<tr>
<td>Video (short format)</td>
<td>44.4</td>
</tr>
<tr>
<td>Super 8 (short format)</td>
<td>11.1</td>
</tr>
</tbody>
</table>

All of the respondents prefer short, flexible films. 44.4% percent of the respondents prefer 16mm films, 44.4% prefer video presentations, and 11.1% prefer Super 8. Some of the respondents noted that they did not prefer video formats because of poor screen quality, lack of equipment, and the difficulty of equipment portability. Others preferred video programs because of the ease of its use and random access capabilities.

To what extent is there interaction and discussion among faculty members regarding individual films and the process of film utilization?

When asked if they discussed the film series, A Galaxy of Motion Picture Documents on Communication Theory and the New Educational Media, with other faculty members all of the respondents replied affirmatively. Also, when asked to cite sources of information for film selection
44.4% of the respondents cited friends as a source of information. Thus, there does appear to be considerable interaction and discussion among faculty members regarding film selection. Unfortunately, none of the other survey questions generated data regarding faculty interaction and discussion of film utilization.

What types of films are needed in this field of educational media and communications?

Data for this question were gathered from four survey questions: 1) What type of films are needed in this field of educational media and communications? 2) What areas are left out of the film series, A Galaxy of Motion Picture Documents on Communication Theory and the New Educational Media? 3) How would you improve the film series, A Galaxy of Motion Picture Documents on Communication Theory and the New Educational Media? 4) Is there anything else you would like to say about this film series or your use of films in the classroom?

The following represents a list of areas in which subjects felt films were needed:

1. Films dissecting the communications process.
2. Films about visual communications.
3. Films dealing with administrative problems, i.e., censorship, copyright issues, and the selecting of personnel and their training.
4. Films dealing with the state of the field.
5. Films focusing on current research areas.
6. Two-way television teaching films.
7. Films focusing on the history of educational communications.
8. Films focusing on mass communications.


10. Future projections, i.e., satellite and laser technology.

11. Update the current series to include topics such as videodiscs, instructional technology, packaging of materials, and other technology.

12. Examples of how technology is used (computers, videodiscs, cable television).

13. Update the current series every five years.

14. Listening skills.

15. Jobs in communications professions.

16. Professional role models.

17. More theories such as McLuhan's.

18. A need for more films similar to Communication Conference.

19. Films focusing on how individual characteristics affect perception.


21. Films documenting developments within the field of educational communications.

Subjects all agreed that there is a need for an updated version of this film series. Several subjects felt that video would be a more appropriate format because of its random access capabilities.

Results of this study clearly indicate that there is a vast need for films focusing on the subject of educational media and technology.
These findings identify a lack of film resources focusing on research developments and technological advances within the field of educational media and technology.

In a given lecture period do instructors use films with other media? If so, which media are used?

Table 10 discusses the types of media used with films and the percentage of respondents using a specific media with films.

<table>
<thead>
<tr>
<th>Media</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other films</td>
<td>100.0</td>
</tr>
<tr>
<td>Filmstrips</td>
<td>22.2</td>
</tr>
<tr>
<td>Video</td>
<td>33.3</td>
</tr>
<tr>
<td>Slides</td>
<td>77.7</td>
</tr>
<tr>
<td>Photographs</td>
<td>22.2</td>
</tr>
<tr>
<td>Slide-tape presentations</td>
<td>22.2</td>
</tr>
<tr>
<td>Tapes</td>
<td>11.1</td>
</tr>
<tr>
<td>Records</td>
<td>22.2</td>
</tr>
<tr>
<td>Transparencies</td>
<td>44.4</td>
</tr>
<tr>
<td>Overhead projector</td>
<td>33.3</td>
</tr>
</tbody>
</table>
Thus, all of the subjects use films with other media. All of the subjects use films with other films and 33.3% use films with video programs. Films, slides, and transparencies are the most commonly used supplemental media. Results suggest that the more traditional classroom aids, slides, transparencies, and overhead projectors have not been replaced by the newer media.
Chapter VI
Summary, Implications, Recommendations
and Conclusion

Summary

The purpose of this study was to determine if extended study of the modular film series, *A Galaxy of Motion Picture Documents on Communication Theory and the New Educational Media*, would shed light on the larger question of how media utilization can be improved. The study sought to answer the following questions:

1. What happens when we design media in a modular, nonlinear manner?

2. How will this design component affect utilization?

3. Will classroom teachers take advantage of this unique design component?

Data for the study were obtained from the following sources:

1. A comprehensive review of the literature of film design and utilization techniques.


3. The 1980 study of the film series, *A Galaxy of Motion Picture Documents on Communication Theory and the New Educational Media*. Data for this study were collected through a series of nine focused-interviews conducted via the telephone. An interview guide
served as the basis of these interviews. The guide focused on four components of film utilization: 1) personal demographics; 2) course/film series integration; 3) evaluations of the modular format; and 4) the individual process of film selection, utilization, and evaluation.

Implications

Media Utilization

All films are in a sense modular: composed of frames, shots, sequences, scenes, and reels. However, traditional classroom utilization of films is earmarked by linearity. Results of this study indicate that instructors tend to use media in a linear manner (see pages 96-97). This is substantiated by research by McGregor (1974). Although, use of media in a nonlinear manner allows for far more creativity than does linear utilization it is difficult to use films in a nonlinear manner.

Why is it difficult to use films in a nonlinear manner? There are many psychological and mechanical barriers which deter such use. The design of most projectors makes it very difficult to isolate specific segments of a film. Because the average projector is not equipped with a fast forward mechanism the teacher is forced to run the film until she comes to the appropriate segment. Furthermore, the design of the projector makes it difficult to load and unload the projector at mid-reel. Unlike books which have chapters, indexes, and page numbers films do not provide a method of pagination. Thus, it is very difficult to isolate specific segments.
Most people think of films as works of art which should be viewed as a whole. As an example, although the film series, *A Galaxy of Motion Picture Documents on Communication Theory and the New Educational Media*, was designed to be used in a nonlinear manner many people still used it in a linear manner.

Should films be purely aesthetic experiences or learning experiences? Although books are packaged in a linear format book learning is certainly not characterized by linearity. It is a rare scholar who reads an entire book without once rereading passages. Furthermore, aesthetic criticism itself is characterized by nonlinearity. Yet, the film scholar is forced to study his material in a linear manner.

How can films be used in a nonlinear manner? One answer is to transfer the film to videotape or videodisc. One can transfer the entire film to videotape or choose to transfer only specific segments. Moreover, one can transfer segments from several different films onto one tape. By isolating important segments from several films the instructor is able to create his own compilation film. An instructor of a beginning film theory course could transfer examples from several theatrical films onto one tape, thus creating a film specifically designed for his introductory film theory course.

Instructors with access to video editing equipment have even greater potential for creativity. One advantage of video editing is that sound can easily be kept in synchronization. Whereas, with film editing it is often difficult for a novice to keep the soundtrack in synchronization. Even without editing equipment the videotape format
offers several advantages, including a footage counter and a fast forward mechanism. These characteristics make it easy for the instructor to locate specific sequences of a film.

Of course, while consideration must be given to copyright laws a substantial number of films are in the public domain and transfer of these films to videotape is perfectly legal. Moreover, it is usually fairly easy to obtain a license for the transfer of other films. It is important that instructors be aware of the films that are in the public domain. As an example, many of the subjects for this study were not aware that the film series, *A Galaxy of Motion Picture Documents on Communication Theory and the New Educational Media*, is in the public domain.

It is also recommended that film users transfer the film series, *A Galaxy of Motion Picture Documents on Communication Theory and the New Educational Media*, to videotape. In view of the technical and psychological blocks associated with the splicing of these films, it is felt that transfer of these films to videotape would enhance the utilization of the films. Instructors could choose to transfer entire films or segments of the films to videotape. Furthermore, instructors could easily rearrange the horizontal and vertical order of the films by transfer of segments to videotape.

Other implications:

1. Media utilization can also be enhanced by making instructors aware of the historical potential of presumed "obsolete" materials. This might entail the audiovisual specialist conducting workshops for the purpose of educating in-service teachers regarding the ways to
identify materials with historical implications and the ways in which to use materials historically. When selecting films teachers should be open-minded and not discount a film because some of it is obsolete.

2. It is also important that teachers exercise creativity when selecting films. Teachers should not limit their choices only to films designed specifically for their field, instead they should select films from a wide domain. An example, is the art teacher who shows her students a film on the sea designed primarily for physics classes. Although this film is not designed specifically for an audience of art students, it may be very effective in stimulating student creativity.

**Media Design**

In many respects the film series, *A Galaxy of Motion Picture Documents on Communication Theory and the New Educational Media*, was ahead of its time. Although the idea of rearranging film modules to create your own presentations was innovative the available technology was very troublesome. Results of the 1967, 1971, and 1980 studies of the film series indicated that due to the psychological and mechanical barriers associated with film splicing many subjects were reluctant to rearrange the film modules. Only recently, have instructors had access to video editing decks. Also, the videodisc is now becoming a practical device which will make modularity feasible.

One of the most important implications of this study is that design itself does not affect utilization. Although the film series,
A Galaxy of Motion Picture Documents on Communication Theory and the New Educational Media, was designed to be used in a modular manner the films were not always used that way. However, it is recommended that if producers want to encourage nonlinear utilization they should design modules for the videodisc.

Today, the videodisc system with capabilities of random access and branching of information would be a much more appropriate format for modular design. The characteristics of fast forward, slow motion, freeze frames, as well as those of branching and random access of information would be an effective, yet fairly simple method of creating "user-made" media. The user would be spared the time and technicalities associated with the process of creating local presentations by film splicing. Furthermore, the videodisc has the capacity to store 54,000 images/frames on one side of the disc. Thus, the opportunities for branching would be very significant.

Other implications:

1. There is a vast need for films within the field of educational media and communications. Persons responding to this study specifically expressed interest in films which documented developments within the field, as well as those featuring the philosophies of key thinkers. It is very important that producers be aware of this gap in media resources. It is recommended that producers regularly survey film audiences (perhaps, film teachers/film professors) to identify the types of films needed within the field.

2. Subjects of this study indicated a desire for video equipment which lends itself to easy portability. Indeed, lack of portability
of equipment may easily deter an instructor from incorporating video presentations into his lesson plan.

3. It is important that film manuals and film catalogs stress the variety of potential audiences of a film. Perhaps too many film producers limit the scope of their potential audiences by narrowly labeling films. Unfortunately, many film users shy away from using films which are not labeled specifically for their audiences. Indeed, it is a rare but creative teacher who will show a fourth grade art class a film designed specifically for eighth grade science majors. However, one of the strengths of the film series, *A Galaxy of Motion Documents on Communication Theory and the New Educational Media*, is that the producer did not label it as being a series designed "exclusively" for use in the fields of education and communications. Instead, the film manual stressed a variety of potential audiences for the series. Thus, film producers are advised to label films broadly and include secondary as well as primary audiences within the film descriptions.

**Recommendations for Further Research**

1. Research focusing upon the modular design of curricular materials, including:
   a. Subject material or content which is most conducive to this design.
   b. The most effective lengths of modules.
   c. The design of videodiscs and the type of subject materials which is most conducive to branching.
2. Research concerning the question of presumed "obsolescence" of materials. How can the teacher, producer, and the audiovisual specialist "recycle" presumed "obsolete" material? Including:

   a. The feasibility of producers developing manuals or film catalogs explaining which of their films have historical importance and how classroom teachers might make optimal use of these materials.

   b. The feasibility of school audiovisual specialists conducting workshops to educate in-service teachers concerning the historical importance of presumed "obsolete" materials.

   c. How to make films which avoid or delay obsolescence?

   d. What factors make a film "obsolete?"

3. A thorough investigation of the types of films needed in the field of educational communications. This might encompass a survey of university professors teaching in departments related to educational communications. This would include the development of a methodology by which one could determine the types of films needed in the field of educational communication. The methodology should be specific enough to effectively gauge this, yet broad enough that it could be applied to other fields, as well.

4. Research concerning the effect of specific phenomenological behaviors upon film learning, including:

   a. Student note taking vs. not taking notes. Are some types of films and/or curricular subjects more conducive to note taking than others? If so, which?
b. Orienting students to look for specific points in a film vs. no orientation. Are some types of films and/or curricular subjects more conducive to orientation of learners? If so, which?

5. Investigations of classroom use of films, including:
   a. Studies of teacher introductions of films? How do introductions vary from user to user and from film to film? What are the determining factors?
   b. Studies of the content of film related handouts. How do film related handouts differ from film to film and user to user? What are the controlling factors? What are the characteristics of the most effective handouts?
   c. Studies of creative use of media in the classroom, including an identification of creative methods of media utilization. What are the characteristics of instructors who use media in the most creative and innovative manners? How can creative media utilization be encouraged?
   d. Studies of classroom discussions of films. On what level are films most often discussed? Artistic level? Ideological level? Sociological level? Theoretical level? What types of films are most conducive to which levels of discussions?
   e. Studies of the manner in which instructors evaluate student response of films.
   f. Studies of how instructors select and evaluate films. How does this process vary from user to user and from film to film? What are the most effective methods of film selection and evaluation?
What are the characteristics of the instructors who implement the most effective methods of film selection and evaluation?

6. Studies concerning the effectiveness of the Lacey image-skim method, including research determining the types of films, situations, and learners for which this method is most effective. What are the strengths and limitations of this method?

7. Research focusing upon the average lifespan of educational films, as well as the factors contributing to obsolescence of films. This would include the development of a methodology for determining the lifespan of a film, as well as defining the stages in a film's life cycle.

8. Long-range studies concerning how a specific film is used over a long period of time.

9. Research concerning the application of the interview guide used in this study to other similar studies. What are the strengths and limitations of this guide in reference to other studies?

10. Further research focusing upon "user-made" films? What is the nature of these media? What are the factors that contribute to the effectiveness of "user-made" films? Videotapes? Slides? Audiotapes?

Conclusion

What happens when we design media in a modular, nonlinear manner? How will this design component affect utilization? Will classroom teachers take advantage of this unique design component? Unfortunately, designing media in a nonlinear manner is not entirely the answer to
the question of how media utilization can be improved. Results of this study indicate that design itself doesn't affect utilization. Although some of the subjects did use the films in the way in which the producer intended them to be used, many of the subjects did not. This is partially attributed to the characteristics of the available technology. To many people film splicing is a troublesome task. Thus, if producers want users to use films in a nonlinear manner they have to make it very easy and convenient for them to do so. Therefore, it is recommended that producers design modules for the videodisc.

Design itself doesn't affect creativity either. Results of this study indicate that although design can enhance creativity ultimately it is the characteristics of the user which determine creative use of media. Thus, producers have to do more to encourage user creativity and users have to be more aware of the creative possibilities of media use.
APPENDIX A

FILM EVALUATION CRITERIA.
Educational Film Evaluation

Title_________________________________________ Date Produced________
Producer______________________________________ Distributor________
Length________________________________________ Sound/Sound Effects________
Color/Black & White__________________________ Optical Effects________
Animation/Live Photography_____________________  
Evaluator_________________________ Date__________________
Content________________________________________
________________________________________

Audiences:
General/Specific (explain)____________________________

Age_______________ Educational Level_____________________
Other____________________________________________

Ratings: 1 - excellent, 2 - very good, 3 - good, 4 - fair, 5 - poor

Content:
Accuracy of information 1 2 3 4 5
Unbiased content 1 2 3 4 5
Is information up-to-date 1 2 3 4 5
Is content in good taste 1 2 3 4 5
How valuable is the film in its field 1 2 3 4 5
Does it evoke audience response (positive) 1 2 3 4 5
Clarity of information 1 2 3 4 5
Is it open-ended Yes___ No___
Overall rating 1 2 3 4 5

1 This form was devised by the author in a graduate seminar at The Ohio State University.
**Visuals:**

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creativity</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Technical quality</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Usage of close-ups. to pinpoint and clarify</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Pictorial composition</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>If used, effectiveness of optical effects</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Animation (if used)</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Is the film primarily visual</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Overall rating</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

**Sound:**

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creativity</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Technical quality (audibility), voice fidelity, music and sound effects well-modulated and recorded</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Effectiveness of music and sound effects</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Overall rating</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

**Editing:**

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pacing and rhythm</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Logical progression</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Extent to which the visuals and auditory work together</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Overall rating</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

**Script:**

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective use of cinematic time and space</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Are narration and dialogue well-written</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Character development</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
Level of articulation  1 2 3 4 5
Creativity  1 2 3 4 5
Are events connected by cause and effect  1 2 3 4 5
Degree of conflict and resolution  1 2 3 4 5
Overall rating  1 2 3 4 5

Structure:
Is it modular Yes____ No____ Single concept Yes____ No____
Part of a series Yes____ No____

Effective use of:
  Repetition  1 2 3 4 5
  Introduction  1 2 3 4 5
  Summary  1 2 3 4 5
  Examples  1 2 3 4 5
Is the amount of information adequate  1 2 3 4 5

Overall rating of the film:  1 2 3 4 5

Additional comments:
1967 American Film Festival Evaluation Form

Rating Sheet--Prescreening Jurors

<table>
<thead>
<tr>
<th>Film Title</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Juror's Name</td>
<td>Specialty</td>
</tr>
<tr>
<td></td>
<td>(AV, subject, or utilization)</td>
</tr>
</tbody>
</table>

PART I. Objective Rating. Rate only those items under the heading in which you are qualified, i.e., Audio-Visual Specialist, Subject Area Specialist, or Utilization Specialist. If you are qualified under more than one heading, check with your Chairman as to which one you are to rate for this film.

Scale for Part I. Use whole numbers only--no fractions or decimals.

<table>
<thead>
<tr>
<th>Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Very Poor</td>
</tr>
<tr>
<td>1</td>
<td>Poor</td>
</tr>
<tr>
<td>2</td>
<td>Fair</td>
</tr>
<tr>
<td>3</td>
<td>Good</td>
</tr>
<tr>
<td>4</td>
<td>Very Good</td>
</tr>
<tr>
<td>5</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

Rate only one section (A, B, or C) in Part I.

A. Audio-Visual Specialist

1. Photography--quality of camera work, choice and handling of visuals

2. Sound--quality of recording, effective use of sound track (If silent film or filmstrip, mark with X)

3. Organization and development of content

4. Narration, dialogue, and/or captions--quality of writing and delivery (If none, mark with X)

5. Degree to which film achieves its stated purpose

B. Subject Area Specialist

1. Accuracy of information (Note any inaccuracies on back of sheet)

2. Effective presentation of subject

3. Value of the film in its subject area

---

4. Freedom from undue bias, prejudice or misleading emphasis ( )

5. Degree to which film achieves its stated purpose ( )

C. Utilization Specialist

1. Appropriateness of vocabulary for specified audience ( )

2. Effectiveness of treatment for specified audience ( )

3. Probable interest value to specified audience ( )

4. Usefulness in its field, or in more than one area, or with other than specified audience ( )

5. Degree to which film achieves its stated purpose ( )

PART II. Subjective Rating. To be answered by all jurors. Opinion of the films as a whole.

Scale for Part II. Use whole numbers only—no fractions or decimals.

<table>
<thead>
<tr>
<th>Value</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Valueless</td>
</tr>
<tr>
<td>1 - 5</td>
<td>Poor</td>
</tr>
<tr>
<td>6 - 10</td>
<td>Fair</td>
</tr>
<tr>
<td>11 - 15</td>
<td>Good</td>
</tr>
<tr>
<td>16 - 20</td>
<td>Very Good</td>
</tr>
<tr>
<td>21 - 25</td>
<td>Exceptional</td>
</tr>
</tbody>
</table>

PART III. Use back of sheet, if necessary.

A. Please indicate, in a few words, your reaction to the film, for example: "Good idea, but poorly carried out"; "fine camerawork"; "outstanding simplicity."

B. Do you think this film belongs in a different category?________
   Which________?________

C. Do you feel this film is of Festival calibre?________
Educational Film Library Association Evaluation Form

Film Title: Running Time____________
Subject-Matter Field: Date Produced____________
Producer: 
Purhcase Sources:
So.____ Sf.____ B & W____ Color____ Sale Price____ Rental____ Free____
Evaluation Institution: Date of Evaluation____________
Names and Titles of Evaluators: 

Synopsis: (About 75-100 words, as detailed as possible. Do not use producer's summary.)

I. List the possible audiences, and the purposes for which the film could be used. Rate probable value for each purpose.

<table>
<thead>
<tr>
<th>Audience</th>
<th>Purpose</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

II. Recommended age level: Primary_____, intermediate_____,
    jr. high_____, sr. high_____, college_____, adult_____.

III. Structure: (organization, editing, continuity) 1 2 3 4 5
    Picture quality: (clarity, framing, color, etc.) 1 2 3 4 5
    Sound quality: (Audibility, voice fidelity, music, effects) 1 2 3 4 5

IV. Comment and General Impression: (Note here any special points as to authenticity, creativity or attitude; also a brief statement of how the film affects you. Use back of sheet if necessary.)

V. Your estimate of the value of the film: Poor____ Fair____
Average_____ Good___ Very Good____ Excellent____
Council on Nontheatrical Events, Inc. Evaluation Form

Film Rating Sheet

Title

Sponsor

Producer

(Fill in only one rating for each criterion)

1. General Reaction -- If you were a member of a foreign audience at an international festival, would you enjoy

- Very Favorable (30 pts.)
- Favorable (20 pts.)
- Uncertain (10 pts.)
- No (0 pts.)

2. Creativeness -- How imaginative and creative is this film?

- Outstanding (30 pts.)
- Good (20 pts.)
- Average (10 pts.)
- Poor (0 pts.)

3. Unusual Appeal -- Is there some quality of human interest or fascination that makes this film especially appealing?

- High (20 pts.)
- Average (15 pts.)
- Some (5 pts.)
- No (0 pts.)

4. Technical Quality -- (Keep in mind photography, the handling of people, editing, sound, etc.)

- Excellent (20 pts.)
- Good (15 pts.)
- Average (5 pts.)
- Poor (0 pts.)

Total

*************

A. Accuracy -- Is this motion picture truthful and authentic, insofar as you can judge?

- Yes
- Uncertain
- No

B. Good Taste -- Does this film show regard for the legitimate concerns of groups affected by its subject matter? Is it fair to every profession, nationality, race and creed?

- Yes
- Uncertain
- No

---

C. Proper Representation -- if you were representing the United States abroad, would you be pleased to submit this film to general festival audiences?  

Yes___  

Uncertain  

No___  

(If "No" to A, B, or C, please support your answer by commenting on the back of this sheet.)

Name______________________________

Regional Committee______________________________

Date______________________________
APPENDIX B

SPECIFICATIONS OF THE LASER OPTICAL METHODS
SPECIFICATIONS OF THE LASER OPTICAL METHODS

THE PLAYER

The VP-1000 is but one video disc system available on the market today. On the other hand, it is the only system that makes use of laser design technology developed four years ago by MCA and Philips. The system, by definition, is described as the "laser optical method." Unlike other video disc players, in the laser optical method, retrieval of the encoded audio/video information from the software is accomplished without making contact with the disc. For this reason, the laser optical method is described as a "non-contact" system.

HOW IT WORKS

To understand how the VP-1000 LASERDISC™ Player operates, you must first know a little about the software. Like conventional audio discs, playback information is stored in the form of electronic pulses etched on the disc's surface. In the case of the LASERDISC™ record, playback information is stored in 54,000 circular tracks etched onto the disc forming a spiral pattern which runs from the inside of the disc to the outside edge—the opposite in which normal records are recorded. Each track contains thousands of small microscopic indentations or "pits" etched on the information face of the disc which is located 0.043 in. (1.1mm) beneath the transparent acrylic surface. These "pits" comprise the electronic audio/video information stored on the disc for playback with a maximum playing time of one hour per side.

¹Reprinted from a Pioneer Advertisement.
DISC PLAYBACK

To retrieve the audio/video information stored on the LASERDISC™ record for playback, the VP-1000 makes use of a small laser. This laser, while in operation, projects a continuous beam of light onto the disc on an area measuring no more than one micron (0.001 millimeter) in diameter. As the disc spins at a speed of 1,800 rpm, the microfine laser beam is scanned across the surface of the disc. When the laser beam strikes a "pit" it is reflected back into the system. These reflected light pulses comprise the audio/video information etched on the disc in three channels, two for audio and one for video. The two independent audio channels make stereo and bilingual programming possible.

Since no direct contact is made with the software by the playback device, the disc is not subject to wear and as a result can be played repeatedly without any loss of fidelity. In addition, the information surface lies beneath a thick transparent acrylic so you can handle the disc without fear of damage to the playing surface. In short, LASERDISC™ records, last indefinitely. For those seriously considering the purchase of a video disc player, we advise that you pay considerable attention to the software used with that system. A video disc player is only as good as the software played on it.

THE CONTROL PANEL

Though at first glance the VP-1000's control panel might appear a bit complicated, thanks to its built-in microcomputer, its operation is simple and easy. To appreciate some of the features and functions of the VP-1000, turn your attention to the photo of the control panel.
Many of the control functions featured on the main panel are also offered on the optional remote control RU-1000. With it, remote operation of the VP-1000 can be performed at distances of up to 30 ft. for added operating ease.

**PLAY MODE**

The VP-1000 offers a variety of playback modes such as slow motion and still/step. However, audio reproduction is only available in the normal PLAY mode. Playback times of up to one hour per side are available with extended play CLV (constant linear velocity) and 30 minutes per side with CAV (constant angular velocity) discs.

**SPECIAL EFFECTS**

In addition to normal playback from LASERDISC™ records the VP-1000 also offers a wide range of special effects for increased viewing enjoyment and for close-up study of the program material. Unlike some "contact" video disc systems, special effects don't have to be programmed on the software itself for playback. In addition, a single frame of video information (stop action) can be played continuously without causing wear or damage to the disc.

**FAST x 3**

With the VP-1000, normal video playback can be speeded up 3 times both in the forward and reverse modes. This feature enables you to quickly search through portions of the disc to find specific program material or for a comic special effect.
SLOW SPEED

In addition to fast forward and reverse video playback, the VP-1000 also offers slow-motion viewing. A special control is provided which enables you to adjust slow playback speed from the normal rate of 30 frames/sec. to as slow as 1 frame every 5 seconds.

STILL/STEP

This feature enables you to view video material frame by frame in either forward or reverse playback modes. Each time the control is pressed, the video image advances one frame. This feature is ideal for viewing sports and educational material where a more in-depth study of fast action or complicated subject matter is desired. The VP-1000 also features a PAUSE control which lets you interrupt video and audio playback temporarily.

DISPLAY AND SEARCH FUNCTIONS

To provide fast and convenient random access to any portion of the material stored on the disc, the VP-1000 employs a built-in microcomputer. With it, a number of search operations can be performed to expedite location and display of playback material.

FRAME DISPLAY

During the manufacture of LASERDISC™ records, each frame of video information is encoded with a number which in playback can be displayed on the screen for reference. This frame number is used to identify and locate individual frames of video information for playback.
CHAPTER DISPLAY

In addition to individual frame numbers, LASERDISC™ records, depending on the subject matter, are also encoded with chapter numbers to identify specific portions of program material. Like frame numbers, chapter numbers can also be displayed on the screen during playback to facilitate the search of program material.

SEARCH

The VP-1000's search feature enables you to locate any given portion of material on the disc for playback. By entering either a frame or chapter number into the system via the digit keys, the VP-1000 will automatically locate the frame or the beginning of a chapter assigned and then play back the material on command. There is also a scan feature which lets you quickly survey the contents of the disc to locate desired program material.
LASERDISC™ SPECIFICATIONS

GENERAL

System and disc spec. ........................................... Comply with Philips-MCA specifications

*1Maximum playing time
   ............................................ Standard video disc (CAV); 30 minutes/side
   ............................................ Extended video disc (CLV); 60 minutes/side

Spindle motor revolutions
   ............................................ Standard video disc; 1800 RPM
   ............................................ Extended video disc; 1800 RPM
   (inner circumference)
   to 600 RPM (outer circumference)

Laser. ............................................ 6328 angstrom, He-Ne 1mW

VIDEO CHARACTERISTICS

Video response ........................................... NTSC specification

Video output
   Level ............................................ 1Vp-p nominal sync. negative, terminated
   Impedance ..................................... 75 ohms unbalanced
   Terminal ....................................... F type jack

Signal-to-noise ratio. ................................ More than 42dB

VHF output
   Channel ....................................... Channel 3 or 4 (switchable)
   Level ......................................... More than 60 dBu
   (comply with FCC specifications)
   Impedance ..................................... 75 ohms unbalanced
   Terminal ....................................... F type jack

AUDIO CHARACTERISTICS

Audio output ........................................... Two channels; stereo or two individual channels

   Level ......................................... 650mV nominal (1kHz 100% mod. 50k ohms terminated)

*1Actual playback time differs for each disc
Impedance..........................Less than 2.2k ohms unbalanced
Terminal.............................Stereo pinjacks

Total harmonic distortion........Less than 0.3% (1 kHz 75% mod.)
Signal-to-noise-ratio.............More than 55dB (1 kHz 100% mod. using
IIIF A network for weighing)
Frequency response..................40Hz to 20kHz (3dB reference to
1kHz 10% mod.)

FUNCTIONS

Play..................................Normal play mode with sounds
Pause
Fast x 3..............................Forward and reverse
Scan.................................Forward and reverse
(Scan time (90 mm travel) less than
30 sec.)
Slow..................................Forward and reverse (standard video
disc only)
Variable speed control (normal speed to
1 frame/sec.)
Still/step............................Still picture; step forward and reverse
Frame number display..............ON/OFF (standard video disc)
Elapsed time display..............ON/OFF (extended video disc)
*2Chapter number display........ON/OFF
Search
..................................Frame number search (standard video
disc only): 15 sec.
.................................*2Chapter number search: 15 sec.
Auto repeat
*2Chapter stop.....................Stop motion at the change of chapter
Picture stop........................Special disc only
Remote control.....................Infrared wireless remote
control/wired remote control
(Optional function)

OTHERS

Power requirements................AC 120V 60Hz
Power consumption..................95 watts
Dimensions (WxHxD)..................21-11/16x15-7/8x5-5/8 in 550x405x142 mm
Net weight (without
package)............................45.2 lbs. (20.5kg)

NOTE: Specifications and design subject to possible modification
without notice.

*2Only for discs with recorded chapter codes.
APPENDIX C

REVISIONS TO THE INTERVIEW GUIDE AND
PRELIMINARY INTERVIEW GUIDES
Revisions to Interview Guide I

This section will discuss major changes in the structure of the interview guide. Changes pertaining to specific questions will be discussed only when these changes are germane to the structure of the guide. Changes in the interview guide occurred after rereading The Focused-Interview, discussions with faculty members, and following individual stages of the pilot study.

Revision One

Merton, Fiske, and Kendall (1956) recommend that by reinstating the original stimulus situation the interviewer can encourage detailed reporting of responses by subjects. According to their research, the process of retrospection is enhanced through the use of verbal cues. Three types of verbal cues are recommended:

1. Questions referring to the process of retrospections: examples include questions beginning with the words, "look back to ___________" or "thinking back to ___________.

2. Questions including references to the stimulus situation: allusions to the stimulus situation focus the interviewee's attention to his original experience and curb the ever present tendency to report current appraisals of past experiences.

3. Verbal cues to past responses: are used to help elicit detailed reports of responses, i.e., "What were your feelings when you watched that part?"

The following verbal cues were incorporated into the interview guide:
1. **Questions referring to the process of retrospection:** the first two questions regarding the person's evaluation of the film series began as follows, "Thinking back to when you showed the film ________" and "Thinking back again. . . ."

2. **Questions including references to the stimulus situation:** several questions were rephrased to include the name of the film(s) which the interviewee had used. Examples include: "What course do you use ________ in?" and "Thinking back again, what was your general impression of ________?"

3. **Verbal cues to past responses:** several questions were worded in an effort to solicit the interviewee's impressions and feelings regarding the film series. Examples include: "What was your impression of the audience response which the film provoked?" or "Do you feel any segments have historical significance?"

**Revision Two**

In order to allow the interviewee the freedom to direct the focus of the interview Merton, Fiske, and Kendall (1956) recommend that unstructured questions be placed at the beginning of the interview. Consequently, the interview guide was restructured and Section B. Course/Film Integration was placed at the start of the interview guide. Thus, the order became: A. Course Film/Integration, B. The Modular Format, C. General Use of Films in the Classroom, and D. Demographics. The section on Demographics was placed at the end of the interview guide because it was felt that interviewees would feel less threatened if questions regarding demographics were placed at the end of the interview.
Revision Three

Prior to the first pilot study interview the format of the interview guide was restructured in order to allow the interviewer ample space to record responses onto the interview sheet. Whenever possible the interviewer tried to predict the range of responses to a particular question and include these responses on the interview guide. This was done to facilitate the interview process. During the interview the interviewer could check the appropriate responses instead of having to record the responses manually.

Examples include:

A. Course/Film Series Integration:
   1. Which films do you use most often?
      a. The Teacher and Technology
      b. The Information Explosion
      c. The Process of Communication
      d. Perception and Communication
      e. Music Research
      f. Communication Conference
      g. The Communication Revolution
      h. Sidney Pressey and the Teaching Machine

   5. Thinking back again, what was your general impression of (title of the films the person used)?
      very good___ good___ fair___ poor___ dated___

B. The Modular Format:
   1. Are you aware of the modular format? Yes___ No___
Revision Four

To facilitate the recording of the date the interviewer devised code names for each of the films. Codes consisted of the first letters of the major words of the film titles. Codes are as follows:

The Teacher and Technology ................................................. T.T.
The Information Explosion .................................................... I.E.
The Process of Communication .............................................. Pr.C.
Perception and Communication ............................................ Pe.C.
Music Research ................................................................. M.R.
The Communication Revolution ........................................... C.R.
Communication Conference ................................................ C.C.
Sidney Pressey and the Teaching Machine .............................. S.P.

Revision Five

Prior to the first interview of the pilot study each category of the interview guide was expanded. It was felt that this expansion would facilitate the gathering of in-depth responses. In many cases, the order of questions was changed to facilitate the spontaneity of the interview, and to help the questioning process appear less choppy and abrupt.
Interview Guide I

A. Demographics:
   1. What department are you in?
   2. Have you any training formal/informal in film or audiovisual instruction?
   3. Have you ever made a film?

B. Course/Film Series Integration:
   1. What course is the film/series used in?
   2. Which films of the series are used? In which order?
   3. What are the learning objectives which the film/series was chosen to fulfill?
   4. Does it fulfill them?
   5. What is the principal audience of the film/series?
   6. Why did you start to use the series?
   7. How often do you use the film/series?
   8. Why do you continue to use this film/series?
   9. Do you use any parts historically?

C. Ratings:
   1. How would you rate the content of the film/series?
   2. How would you rate the technical quality?
   3. Which if any parts do you feel are obsolete?

D. The Modular Format:
   1. Have you ever transferred any of the films to video or Super 8?
   2. Have you used the manual?
   3. Have you ever rearranged the films? How did you do this? I.e., by splicing them together, threading up the projector, etc?
4. Would you prefer the series to be in short reels? If so, in which format? I.e., video, Super 8 cassettes, short 16mm reels?

E. General Use of Films Within the Classroom?

1. How do you plan for the use of films in your teaching?

2. How do you select a particular film at a particular time? What is your source of information?

3. How do you evaluate films?

4. How do you evaluate student response?

Is there anything else you want to say about your use of these films?
Interview Guide II

A. Course/Film Series Integration:

1. Which films of the series have you used?
   a. The Teacher and Technology
   b. The Information Explosion
   c. The Process of Communication
   d. Perception and Communication
   e. Music Research
   f. The Communication Conference
   g. Communication Revolution
   h. Sidney Pressey and the Teaching Machine

2. Have you seen any others?
   a. The Teacher and Technology
   b. The Information Explosion
   c. The Process of Communication
   d. Perception and Communication
   e. Music Research
   f. The Communication Conference
   g. Communication Revolution
   h. Sidney Pressey and the Teaching Machine

3. What course do you use______________________________ in?

4. What is the title of the course?
   What kinds of topics do you take up in it?
   What is the principal audience?
   Academic level?
5. Thinking back to when you showed the films which learning objectives did you hope for them to fulfill? Do you feel that they did? Why? Why not?

6. How often have you used this film series?

7. Thinking back again, what was your general impression ________ (film title) ____________?
   very good____ good____ fair____ poor____ dated____

8. How would you rate it as a learning facilitator?
   very good____ good____ fair____ poor____

9. What is your evaluation of the technical quality?
   very good____ good____ fair____ poor____

10. What is your evaluation of the content?
    very good____ good____ fair____ poor____

11. What is your impression of the films as film?
    very good____ good____ fair____ poor____

12. What was your impression of the audience response which the film(s) provoked?
    very good____ good____ fair____ poor____

13. Do you feel that any segments have historical significance?

B. The Modular Format:

1. Have you ever used the film manual? Yes____ No____

2. Are you aware of the modular format? Yes____ No____

3. What is your impression of the modular format?
4. Have you ever rearranged the films? How?

5. What was the rearrangement sequence used? Did you use this more than once? Yes___ No___ Have you used other sequences? Yes___ No___ If so, which?

6. Have you ever transferred the films to other media? Video____ Super 8____ Short 16mm reels____?

Have you ever transferred any other films to other media?
Video____ Super 8____ Short 16mm reels____?

7. Have you ever discussed this film series with other faculty members? Yes___ No___ Are they aware of it? Have any of them expressed interest in using it? Yes___ No___

C. General Use of Films Within the Classroom:

1. How do you select a particular film at a particular time? What is your source of information?

2. On the day in which you use a film in class what in particular do you do?

3. Do you ever use films with other media? Yes___ No___ Which?

4. How do you evaluate a film? What do you do?

5. What areas of educational communications and media are left out of this film series?

6. What kinds of films are needed in this area?
D. **Demographics:**

1. What is the formal name of the department you teach in?

2. Do you have any training in audiovisual education?

3. Have you ever made a film? Yes___ No___

4. Do you have any interest in photography? Yes___ No___

5. How long have you taught this course?

6. How many films do you show a year?

7. Could you describe the nature of your academic department? Is it oriented toward graduate study____ undergraduate study____? Is it oriented toward liberal arts____ research____ practicum____?

E. Is there anything else you'd like to say about this film series or the use of films within the classroom?
After the first pilot interview it was felt that the interview guide was not producing the degree of depth necessary for a successful appraisal of film utilization. To overcome this problem interview probes were written into the interview guide. Examples include:

A. Course/Film Series Integration:

9. What was your impression of the audience response which the film provoked? (probe) Did they ask many questions?

C. General Film Utilization Patterns:

4. On the day in which you use a film in class, what in particular do you do? (probes)
   - Introduce it?
   - Summarize it?
   - Discuss it with the class?
   - Give handouts?
   - Give a test on the film?

5. Do you ever use films with other media? (probes)
   - Video?
   - Slides?
   - Photographs?
   - Overhead transparencies?

(see final version of the interview guide for further examples)

During the subsequent pilot study interviews, the interviewer felt that the necessary degree of depth of responses was being achieved. Therefore, the only additional changes to the interview guide were the rewording of ambiguous questions and changes in question order to facilitate the spontaneity of the interview process. Prior to the
actual gathering of data the interview guide was again reviewed by members of the advisory committee, and Dr. Alfred Clarke, a faculty member of the department of sociology, with a specialization in visual sociology.
APPENDIX D

DESCRIPTIONS OF INDIVIDUAL FILMS
THE INFORMATION EXPLOSION (B/W with color segment. Time: 34:20).

This film suggests the spirit of the revolution in communication that has made it possible for any information, verbal and pictorial, to be stored, duplicated, transferred or transformed, distributed, and received over distances and with speeds unimaginéd by the human mind a few decades ago. It is concerned with how this flood of information may be responsibly processed, and with the effects of it all on the lives of children. It is composed of six segments:

Communication Revolution (Code: "Infor-Expl-1"). Color-B/W.

Time: 7:06.

A montage of scenes showing the variety of messages and media that constantly assault the senses of the man-in-the-street—messages from radio, advertising, film, newspapers, signal devices—and from other people. The basic emotion is confusion. The basic question is, "How does anyone make sense out of all this?"

Dr. Edgar Dale, in the setting of a bookstore filled with paperbacks, addresses the viewer directly, asking key questions about the nature of the revolution in human communications, and its origin. The scene shifts to Stanford University where Dr. Wilbur Schramm is seen talking to a group of students. As Schramm's voice comes in over the picture, he outlines the background to communication history over an animated sequence depicting man's attempts to communicate from cave paintings through the printing press, to the recent electronic revolution.


Edgar Dale returns to the screen, calling attention to the tremendous explosion of knowledge resulting from the sophistication and proliferation of message-generating media and systems of media. The problem of bringing this flood under control is mentioned and examples of how it is being organized in print, film, by computer, and by other methods are suggested.

---

Communication in Government (Code: "Infor-Expl-3"). B/W. Time: 2:03.

This segment is taken from a televised Presidential press conference held by John Kennedy. It briefly, but effectively illuminates the importance of keeping a free exchange of information between nations; the necessity of a constant dialog possible through the international media of communication. It also raises questions of news management and national security.


A leading airline company uses telephone conference lines and rapid transmission and retrieval systems for both audio and visual information to keep its top executives informed on current company business throughout the nation. An "executive briefing session" is pictured in which two-way communication through a variety of media, is established and information on all phases of this airline's operation is analyzed on a daily basis.


The Ohio Medical radio network, through FM, presents new medical information to busy doctors and medical students. Two-way hookups permit live discussion between students at medical centers and leading medical experts, such as Dr. Albert Sabin, pictured in this segment, whose message originates at a distance and yet reaches a scattered, yet crucial audience throughout a wide area. The unique potential of radio (supplemented by other media) is pointed up as a way of bringing the explosion of information under control in the expanding and critical area of medical knowledge.


Edgar Dale introduces the final segment which emphasizes the necessity for teachers to know much more than they do about the influences of media experiences on children outside their school hours. An elementary school boy and a high school girl, in short case studies, relate some of their listening, reading, and viewing habits. The influence of teachers and parents is strongly suggested. Dale concludes by pointing out that teachers need to be concerned and aware of media influences on children, a view supported by Gilbert Seldes, Marshall McLuhan, and I. Keith Tyler who comment briefly on the need for developing, in the very young, a race of critics.
THE PROCESS OF COMMUNICATION (B/W with color segment. Time: 45:33).

This film explores the process of communication beginning with an animated theoretical model, followed by sequences which progressively elaborate and illuminate the theory through illustrations drawn from communications networks in military, industrial, research, and teaching settings. It is composed of eight segments:


An animated kaleidoscope deluge of neutral and then sharply emotional symbols represent the bewildering array of stimuli from which we select and upon which we must act. A simple communications model is constructed from the key elements—sender, receiver, message, medium, feedback, noise. Communication, in this context, is described as purposeful messages limited to those formulated and sent with intent to produce some kind of effect on the thought or action of the receiver. Some of the difficulties in the process are suggested.


Dr. George C. Gerbner, Dean of the Annenberg School of Communication, adds philosophical depth to the foregoing model of communication. His concern is with the total process, with the importance of feedback, and control of the communication situation, thus preparing the viewer for thoughtful analysis of the sequence to come.


The training of hostesses at the United Airlines educational center in Chicago is the setting for this application of the communications model to skills training. Here, message content is largely fixed, objectives are clear, presentation is concrete, varied, and direct, and feedback is tolerated but not essential. The situation is seen as one of quantitative transfer of information in a linear manner common to many, and perhaps most, skills training situations in education.


In the program for advanced career officers at the Command and General Staff College at Fort Leavenworth, Kansas, objectives are fixed
and clear messages are prepared by expert designers, delivered by experts in presentation using a multiple-media approach. Sound tactical answers must be arrived at, but a high order of decision-making is also involved requiring more complex communication networks and feedback systems than in simple skills training. In this segment, a very complete system of messages is seen transmitted with high efficiency in a careful simulated situation that demands positive feedback within well-defined limits.


In another highly organized simulated environment, educational administrators are seen at The Ohio State University in a workshop of the University Council on Educational Administration. Here, through films, tapes, filmstrips, written and spoken messages, educational and administrative decisions must be made on sometimes ambiguous and incomplete information. The objectives are less clearly defined than in a skills training or military program, and the answers are, therefore, generally more complex. Feedback, in the form of human interaction and dialog, is an essential, and perhaps the most important element of this model.


The process of communication carried over into a sophisticated simulation situation is shown in the system developed for teacher training by Bert Kersh at the University of Oregon's College of Education in Monmouth. Here, students receive in-depth orientation to a mythical "Mr. Land's Sixth Grade" classroom which they will be required to take over. Through case histories of each student, slides on the background of the school and the class, and other records of the community, the teachers in training gain understandings of the environment. Each faces an 8mm rear screen projector as Mr. Land turns the class over to him. Each then must cope with a series of specially filmed situations presented on a life-size rear projector screen with controls supervised by the instructor to produce immediate and realistic feedback.


Two computer-based teaching-learning systems at The University of Illinois are seen in operation as mechanically and electronically complete models of the total communication process. All the basic elements of a human teacher-student information processing system are present. The built-in perceptual memories and feedback functions are unique features in the PLATO and Socrates systems shown and explained by Dr. Lawrence Stolurow and Dr. Donald Bitzer, developers of these respective systems. Implications for the teacher and the learner conclude this segment.
Dr. George Gerbner ties together the major elements and some of the key issues in the process of communication. The emphasis is on the function of the professional teacher and his responsibility and role in the process. This segment, and the major film of which it is a part, concludes with a statement by a thoughtful high school teacher who sees his role as one of helping students discover, explore, and build their own meaningful relations in a world of increasing, multiple-imaged stimuli.
PERCEPTION AND COMMUNICATION (B/W with color segment.
Time: 32:00).

This film is a series of concrete examples of how human perception affects the communication process and the individual's concept of reality. Two major theories of perception—the cognitive and the transactional—are introduced, each being illustrated to varying degrees in the six segments of which this major film is composed:


An opening montage of pre-school children exploring their environment reminds us of the importance of the senses in the learning process. At an outdoor art show in an elementary school we see a variety of interpretive paintings of a cat, suggesting that although the child's perceptions vary widely in the first years of life, they tend to become somewhat conventionalized by the time they reach sixth grade.

At a summer camp for blind children we note how other senses are used to compensate for the loss of sight and that often these senses remain undeveloped in 'normal' children through lack of use. Finally, as learning moves from the level of the concrete to the abstract, the difficult of testing accuracy of perception by sensory means alone is increased.


Dr. Kenneth Norberg of Sacramento State College defines the relation of perception to education, and introduces the fact that there are many theories of perception. One of these, he explains, is the cognitive theory, one of the exponents of which is Dr. James Gibson of Cornell University. In a short section we hear a fragment of Dr. Gibson's theory. In the same way, Norberg introduces Dr. Hadley Cantril who is heard in a brief excerpt on transactional theory of perception. Norbert finally relates some of these theories to applications in industry training programs, intercultural programs, and programs for the culturally deprived.


The thesis here is the importance of perceptions of other human beings, and documentation of the fact that one can learn to improve his ability to be perceptive and to improve, thereby, his communication skills. Airlines education director, W. Phil Herriott explains a program on which the company spent four
years to fill a gap in the training of customer service agents. Using films, programmed text, tapes, role-playing, and discussion, customer service agents are shown in various instructional settings. Herriott states that this course in "perceptive action" has been successful, that perceptual skills can be sharpened and trained, and that specially prepared media and materials of instruction play a critical part in the training program.


At a gathering of university foreign students, one of the first Peace Corps volunteers relates her experiences in teaching agriculture in Sarawak. We are reminded that whatever the situation, teachers and students face the problem of reaching common understandings. It is easier to see the problem of perception in a foreign culture where the barriers are most obvious, but the application to all educational situations should be clear. As in the airlines training program segment which precedes this one, it is seen that perceptions can be sharpened and behavior made more perceptive through a training program involving films, simulation, and other materials along with thoughtful evaluation of the rich, concrete experiences found in the working situation itself.


It is often more difficult to see the barriers to communication operating in sub-culture within our own culture than in the case of the intercultural perceptions found in the previous segment. In this one, we see a group of five-year-olds on a school playground who look and seem no different from others of their same age group. Actually, they are "Headstart" children whose special, limited perceptions are seen by a visit to one of their homes and by the stories told by Headstart teachers in a discussion of how to develop "perceptual skills" in their students. The first-hand observations of these teachers, their active exploration of barriers with children who have never seen a peach before, or celebrated a birthday, or seen a photograph of themselves, or visited a farm, are the back-bone of this documentary report. In the course of this exploration, as in the two previous segments, we are reminded that the skill of perceiving may be learned by both teachers and students. We must never take the background of any student for granted; and any and all media must be used, along with concrete experiences, to develop common, basic concepts of the world around us.


Dr. Kenneth Norberg appears in this final segment to pull together some of the key relationships of perception to the educational
environment. Exploring subject matter through different media, different experiences, different points of view, is the best insurance for accuracy of perception. The teacher must be trained to be more perceptive of himself and must learn to help students not only develop common perceptions, but also the ability to perceive differently and creatively through multisensory experiences of all types.
THE TEACHER AND TECHNOLOGY (B/W. Time: 49:10).

The beginnings and history of the impact of technology on education is traced in the opening sequences of this film, followed by a series of pictorially documented programs which illustrate some of the ways in which technology is being used to meet the dual problem of masses of students and the need for individual instruction. Throughout, the implications for the role of the student, teachers, and school administrator are suggested, and the film ends with segments on how the school and the teacher of tomorrow might look based on working prototypes found in programs existent today. The total film is composed of eleven segments:


In a montage of young people in self-instructional, media-centered experiences including models, tapes, oscilloscopes, computers, teaching machines, exhibits, and other technological developments, the point implied is that, after all, all learning is self-learning and that while Johnny must still learn to read, the fact is that the Second Industrial Revolution has caught up with education. Instructional Technology is here to stay.

The History of Instructional Technology (Code: "Teach-Tech-2"). B/W. Time 4:06.

Dr. James D. Finn, of the University of Southern California defines "instructional technology," and outlines the major phases in its historic development. It is pointed out that technology is more than a matter of materials and hardware. It involves a way of organizing instructional resources and the interaction of science, art, and human values. It implies effects upon curriculum, school architecture, the role of the student, teacher, and administrator, and these effects are crucial in a time when we must learn or perish.


The Air Force Academy in Colorado Springs is used as an example of highly organized media use through the centralized services and facilities of an Audio Visual Center under the supervision of a Media Specialist. Major H. B. Hitchens, Director of this Center, explains the
facilities, featuring the unique concept of "teacher-centered television" CCTV. Implied is the role of the audiovisual specialist; centralization of materials and equipment; teacher control of a multi-media teaching-learning system in which the teacher is described as a "manager of instructional resources."

Media and the Humanities (Code: "Teach-Tech-4"). B/W. Time: 5:05.

At Stephens College, in Columbia, Missouri, Professor Charles Madden, Chairman of the Communications Department, is seen using an amplified telephone to bring into his class and to other colleges in this communications network, the voices of authors John Dos Passos, Vance Bourjolly, and Ralph Ellison. The point is made that technology, far from dehumanizing education, may be essential if we are to bring vital and otherwise inaccessible experiences to the classroom. The use of other simple aids—the 2x2 projector, and the chalkboard—is seen in the course of the presentation. Direct feedback from student to author is provided in this telephone dialog, with the teacher still serving an indispensable function. The final point in this segment is that the teacher, through technology, now has resources that give him direct access to more knowledge than Renaissance man ever dreamed of.


The Brigham Young Laboratory School, in Provo, Utah, is viewed as an example of a growing number of programs based on individualized instruction, independent study, and the use of both programmed and non-programmed materials. The breakdown of learning activities into independent study, small group, and large group instruction, individual testing, and counseling is seen. Lowell Thomson, Director of the Laboratory School, describes the program with comments by several teachers.


While the computer, as part of the arsenal of technological tools in education, will doubtless have much wider application in the future, it is used in the John Marshall High School in Portland, Oregon, to generate the logistics for a complex class schedule. The effect of the computer, far from mechanizing the routine of this school, has liberated students and teachers and made possible a flexibility in the schedules of both not possible without computer feedback. The result, according to Principal Gaynor Petrequin, was "to vitalize learning and teaching by individualizing instruction." The work of the library, department resource centers, the school audiovisual center, and the open lab is suggested.
Media and the Curriculum (Code: "Teach-Tech-7"). B/W.
Time: 6:36.

The Valley Winds Elementary School in St. Louis, Missouri, is the setting for this brief look into how curriculum, school design, and media and materials of instruction relate in a technological age. The core of this segment is a discussion by the curriculum committee. In this school, instructional materials are an integral part of the experience of both teachers and students. The teacher is not viewed as the sole repository of knowledge, nor as a technician carrying out decisions which have been programmed. Technology is used to help individualize the teaching-learning situation which includes a wide array and variety of accessible materials. The teacher is a transactional agent—planning and prescribing learning experiences from this array.


The use of technology to meet the learning needs of masses of students is seen at The Ohio State University's dial-access system. Nearly 100 courses are presented through an audio-tape facility to which students have direct dial-access from the carrels in the student union building, the main library, and from dormitories on and off the campus. In this extension of the language laboratory idea, is found a possible prototype for individualizing study and bringing homework and classwork closer together in the growing university population. More than 80,000 calls a week, or more than 10,000 student requests daily may be handled by this use of technology in education.

The Instructional Resources Center (Code: "Teach-Tech-9"). B/W. Time: 1:58.

The Instructional Resources Center at the University of Miami is briefly described in this segment which is related to the preceding sequence on how technology is being used to meet the needs of an increased population at The Ohio State University. It is also the linkage sequence to the school of tomorrow segment which follows, suggesting the development of learning centers equipped with both classrooms and studios based on a media-centered design.

The School of Tomorrow (Code: "Teach-Tech-10"). B/W.
Time: 3:35.

This segment poses a series of questions: What will be the shape of the school of tomorrow? How will it meet the educational needs of our time? How will the technological potential of this century be applied to advance educational objectives? Visually, it is a composite drawn from situations seen in previous segments. The attempt is not
to portray a composite of the school of tomorrow, but rather to collect elements which exist today and which may, in one form or another, appear in the schools of the future.

The Teacher of Tomorrow (Code: "Teach-Tech-II"). B/W.
Time 3:02.

The final segment of this film is a capsule of the major theme: "The Teacher and Technology." It begins with a statement by James Finn to the effect that while obvious hazards to human values are introduced by any technological development, technology should not make education less humane unless the teacher fails in his role. Put positively, technology may be the means by which the teacher will come, at last, to play a new, more critical and more excitingly professional role than ever before in the history of education. A succession of shots, taken from previous segments of the film, suggest that some teachers are already beginning to find their professional place in the increasingly technological society of which we are all a part.
Description of Secondary Films

The Program of Films includes four "secondary" films conceived as in-depth material supplementary to the programmed major films and segments. The secondary films, unlike the major films, do not lead viewers step by step but, rather, point directions and invite viewers to discover ideas for themselves.

They are "spin off" materials, produced in the course of collecting documentary evidence for the major films. But in themselves they contain insights of major interest which, it was felt, should be preserved for study. For serious students of communication they will also provide perhaps increasingly useful documentary and historical material.


This film brings together six of the nation's foremost thinkers, teachers, practitioners and innovators of social communications in an informal conference. Those appearing in the film are Edgar Dale, James Finn, George Gerbner, Charles Hoban, Franklin Knower and Kenneth Norberg. This putting together of heads results in illuminating insights on the nature of communication, and how it differs from other social interactions; the social implications of a widespread communication network in most modern societies; the inadequacy of language as a vehicle of communication, and the unintended and expressive meanings of messages that must accompany intended communications; the nature and educational implications of packaged instructional systems; and the teacher's new role in the classroom at the learner's elbow with important decision-making responsibilities in the selection and arrangement of instructional materials and systems.

The most important feature of the film is its informality. No answers are supplied, but each idea is thought through and expressed with feeling and professional conviction. The discussion which is open-ended should be continued in the classroom as a confrontation of ideas between film viewers on questions like: What is the nature of communication? How does communication differ from other kinds of social interaction? What is intrinsic in language that makes it
an inadequate vehicle of communication? Can we ever communicate with perfection? What are instructional systems and how do they affect the teacher's role?


The Communication Revolution presents Edgar Dale, Marshall McLuhan, Gilbert Seldes, and I. Keith Tyler in a discussion of the impact of newer communications media on Western civilization.

The questions raised are philosophical. What kind of a world was the world of print? Did the printed word force a linearity of thought; a more powerful logical structuring of reality? Did the print medium foster intellectualism and individualism? Was the printed word really the undoing of the Feudal System in Europe?

Similar questions are raised about the new electronic media. What is the nature of the new media? Are they a new "staple" to which modern economic and social systems must adjust? Do these media, through a more inclusive, deeply sensuous commitment create "involved but unthinking" people? Is the "all-at-onceness" of the new media (as distinguished from the line-by-line exposure in written material) really affecting our ways of structuring reality?

McLuhan talks of "cool" and "hot" media, of a global culture being made possible by radio, of the new distribution of power through a new distribution of information and of the inevitable need of teaching media discrimination in schools and colleges. Seldes calls for "a race of critics."

These and other provocative questions are raised, and insightful points of view are provided which should provide a springboard for discussion.

TEACHING MACHINES AND SIDNEY PRESSEY (Code: "S-3"). B/W. Time: 11:45.

This is a portrait of Sidney Pressey, Emeritus Professor of Psychology at The Ohio State University who presents the historic teaching machine he invented in 1925 as a self-teaching, self-testing device.

The film relates that the U.S. Navy made use of one of Pressey's early models in Naval training shortly after the Second World War but the time was not ripe. The American education was not ready for this innovation. The concept of the teaching machine was refined by B. F. Skinner more than thirty years later. The teaching machine became more versatile, much more elaborately related to learning theory, and it presented instructional content that had been more carefully programmed.
Pressey reflects on those earliest models of teaching machines and feedback devices like the punch-board and the chemo-card. He points out that the uniqueness of the teaching machine is that it requires participation through active response, offers rewards to learners, and makes available to the teacher the learner's profile of learning experience.

The film ends by historically relating Pressey's work to that of Skinner and Norman Crowder pointing out that the teaching machine might be the best teaching aid teachers ever had.

The film should stimulate discussion of basic questions such as: What is the role of the teaching machine and the teacher? What is the relationship between the teaching machine and the learner? What is the relationship of the machine (hardware) and the program (logical or psychological structuring of instruction)? What is the significance of teaching machine development in light of its present status in education?


This film was produced by The Ohio State University for The Music Educators Conference of the N.E.A. under contract with the U.S. Office of Education. It should serve at least two instructional objectives: (1) to suggest to music teachers interesting possibilities in teaching music skills and analyzing musicality; and (2) to provide students of educational technology with an exciting application of programmed instruction to the teaching of non-verbal, creative skills. It is also an interesting example of a "research report on celluloid." It is composed of two parts, designed after the segment concept, so each may be used separately.

In Part I (Time: 6:55) subtitled Self Teaching of Music Fundamentals, we visit Dr. Charles Spohn's Audio Visual Music Laboratory at The Ohio State University which is equipped to handle individualized instruction through programmed tapes and materials. Students are shown using a variety of presentation and feedback devices such as the Conn Dynalevel, the Conn Strobotuner, and the Tachitron. Through these programmed laboratory experiences the student can proceed at his own rate, sharpening his abilities to perceive musical intervals, sounds and rhythms. The "controlled" laboratory situation provides the teacher with an opportunity to be a better professional and researcher through analysis of learning behavior.

Part II (Time: 10:00) subtitled Analysis of Musical Behavior, shows how Dr. Edward Maltzman at the Leslie Ellis Elementary School in Cambridge, Massachusetts used teaching machines to investigate the nature of musicality. Musical behavior is broken into basic component skills and taught to learners using techniques of matching, shaping,
and fading that are part of any Skinnerian programming technique. The electronic program devices and feedback systems used are specially designed for this project.

Concluding remarks by Professor B. F. Skinner point up the possibilities, through such research, of making musicality, along with other creative learning, a matter of well-programmed instruction—a set of planned and rewarding experiences rather than a series of lucky circumstances. Apart from the usual questions about teaching machines and programmed learning, this film raises the significant question: Can musicality, along with other forms of creative learnings be programmed?
APPENDIX E

PREVIOUS SURVEY INSTRUMENTS

1. QUESTIONNAIRE FOR THE 1967 STUDY
Evaluation of Communications Films

Your Name (optional):________________________________________
Title:________________________________ Position:_______________
School or Organization:______________________________________

1. In which of the following situations have you used any of the Communications Films? Check appropriate answer or answers.

Method of Presentation

___ Classroom projection
   ___ Group study
   ___ Individual study

___ Television
   ___ Group study
   ___ Individual study

Audience

___ Teacher education
   ___ Elementary
   ___ Secondary
   ___ Other

___ Media workshop
   Indicate type of group________

___ Industrial training program
   Indicate type of group________

___ Religious education

___ Community education
   Indicate type of group________

___ Other
   Describe briefly______________

2. Which of the following most accurately describes the usefulness of the Communications Films in helping you satisfy your specific instructional objectives?

   Very useful______ Useful______ Not useful______
Evaluation - 2

3. Which of the following do you think best describes the manual that accompanies these films?
   Essential____  Helpful____  Not helpful____
   Not necessary____  Have not used it____

4. Have you used individual segments of the films by themselves?
   Yes____  No____

5. What provisions have you made for showing individual segments of the films?
   Cut individual segments out of film. ..............
   Put entire film on projector, threaded up on segment. ..............
   Spliced individual segments together ..............
   Other ..........................................................

6. Have you rearranged segments to "make your own film?"
   Yes____  No____

7. If segments have been rearranged, which splicing method was used?
   Tape splice____  Cement splice ____

8. How were individual segments in the films located?
   Looking at the picture. ..................................
   Code numbers on edge of film. ......................
   Listening to the sound track. .......................
   Reference to manual listing descriptions of segments .................................
   Other ..........................................................

9. Would the Communications Film Series be more useful to you if all segments were available as separate short films?
   Yes____  No____

10. If your answer to Question 9 was "yes," which of the following formats would you prefer?
    16mm reels____  8mm cartridge____
    8mm reels____  Video tape____  Other_____
11. Please rate the entire series of films on the following general factors. Check under the heading you feel is most appropriate.

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<th>Good</th>
<th>Adequate</th>
<th>Poor</th>
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<tr>
<td>Technical quality of photography</td>
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<td>Technical quality of sound</td>
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<td>Authenticity of content</td>
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<td>Student response</td>
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</table>

12. If any of the major (planetary) films have been of special use to you, please list them below.

13. If any of the secondary (satellite) films have been of special use to you, please list them below.

14. If any of the individual segments (asteroids) in the films have been of special use to you, please list them below.

15. Please make any other comments you may have concerning the films below or on the back of this sheet.

16. Do you wish to have a copy of the results of this survey sent to you?

   Yes______ No_____
1. The following list is the entire series of Communications Films. Write the word "most" in the blank space beside the one film you think is the most valuable and the word "least" in the blank space beside the one film you think is the least valuable.

_______ 1. THE INFORMATION EXPLOSION
Presents the media and messages that surround us. Shows communication networks in government, industry, and the professions.

_______ 2. THE PROCESS OF COMMUNICATION
Illustrates the theory and method of communication. Shows eight models of communication in industrial, military, and educational settings.

_______ 3. PERCEPTION AND COMMUNICATION
Introduces contrasting theories of how human perception affects the communication process. Relates theory to Peace Corps, military and industrial training.

_______ 4. THE TEACHER AND TECHNOLOGY
Demonstrates current uses of instructional technology in school administration, teacher-training programs, and classroom situations.

_______ 5. COMMUNICATION CONFERENCE
George Gerbner, Charles Hoban, Franklin Knower, and Kenneth Norberg discuss media in education.

_______ 6. THE COMMUNICATION REVOLUTION
Edgar Dale, Marshall McLuhan, Gilbert Seldes, and Keith Tyler discuss the impact of the information explosion on our contemporary civilization.

_______ 7. TEACHING MACHINES AND SIDNEY PRESSEY
Sidney Pressey presents the historic teaching machine he invented in 1925.

_______ 8. MUSIC RESEARCH
Shows Charles Spohn's audio visual music laboratory at Ohio State University; demonstrates Edward Maltzman's music laboratory for elementary children.
2. In what sequence (or order) do you generally use these films? List by the number assigned to each film.

3. What major instructional purpose does this particular choice of sequence serve?

(Please turn to next page)
1. The following is a list of the segments in the film The Information Explosion. Write the word "most" in the blank space beside the one segment you think is the most valuable and the word "least" in the blank space beside the segment you think is the least valuable.

1. "Communication Revolution"
Media and messages: the flood of information that surrounds us; the history of communication by Wilbur Schramm.

2. "Information Storage, Retrieval, Control"
Discussion: Dr. Edgar Dale, Ohio State University.

3. "Communication in Government"

4. "Communication in Industry"
Use of communications systems to keep executives of an airline company informed.

5. "Communication in the Professions"
The Ohio Medical Radio Network: Dr. Albert Sabin.

6. "Media and Children"
Comments by elementary and high school students; discussion: McLuhan, Dale, Tyler, and Seldes.

2. Have you used an individual segment from this film by itself?

Yes _____ No _____

3. If your answer to Question 2 is "yes," check the segment (or segments) you have used.

(1) ____ (2) ____ (3) ____

(4) ____ (5) ____ (6) ____

4. What instructional purpose did the use of this particular segment (or segments) serve?

________________________________________________________________________
5. Have you spliced two or more segments from this film for use in different combinations?
   Yes _____ No _____

6. If your answer to Question 5 was "yes," indicate the sequence (or order) in which you arranged these segments. List by the number assigned to each segment.

7. What instructional objective did this particular choice of sequence serve?

(Please turn to next page)
1. The following is a list of the segments in the film The Process of Communication. Write the word "most" in the blank space beside the one segment you think is the most valuable and the word "least" in the blank space beside the one segment you think is the least valuable.

_________ 1. "A Model of Communication"
   Animated symbols showing the communication process in theory.

_________ 2. "Theory of Communication"
   Discussion of human communication: Dr. George Gerbner, Annenberg School of Communication.

_________ 3. "Industry Model"
   Hostess training, United Air Lines Center, Chicago.

_________ 4. "Military Model"
   Use of media and simulation in officer training, command and General Staff College, Ft. Leavenworth.

_________ 5. "Administration Model"
   Use of media and simulation in education administrative training, Ohio State University.

_________ 6. "Teacher Education Model"
   Use of Media and simulation to train teachers, University of Oregon.

_________ 7. "Computer Model"
   Computer-based learning systems, PLATO and SOCRATES, University of Illinois.

_________ 8. "The Teacher as a Model of Communication"
   Comments by William Oberteuffer, science teacher; discussion: Dr. George Gerbner, Annenberg School of Communication.

2. Have you used an individual segment from this film by itself?
   Yes _____  No _____
3. If you answer to Question 2 is "yes," check the segment (or segments) you have used.

(1)  (2)  (3)  (4)  
(5)  (6)  (7)  (8)  

4. What instructional purpose did the use of this particular segment (or segments) serve?

_____________________________________________________________________

_____________________________________________________________________

5. Have you spliced two or more segments from this film for use in different combinations?

Yes  No  

6. If your answer to Question 5 was "yes," indicate the sequence (or order) in which you arranged these segments. List by the number assigned to each segment.

_____________________________________________________________________

7. What instructional objective did this particular choice of sequence serve?

_____________________________________________________________________

_____________________________________________________________________

(Please turn to next page)
The following is a list of the segments in the film Perception and Communication. Write the word "most" in the blank space beside the one segment you think is the most valuable and the word "least" in the blank space beside the segment you think is the least valuable.

1. ________ 1. "Sensory Learning"
   Perception training, pre-school children.

2. ________ 2. "Theories of Perception"
   Dr. Kenneth Norberg, Sacramento State College and psychologists James Gibson and Hadley Cantril.

3. ________ 3. "Perception Training"
   United Airline customer service training.

4. ________ 4. "Inter-cultural Perception"
   Peace Corps volunteer relates experiences in Sarawak.

5. ________ 5. "Perception and Deprivation"
   Headstart teacher training and Headstart children's experiences in school, on the farm, and at home.

6. ________ 6. "Perception and Education"
   Discussion: Dr. Kenneth Norberg, Sacramento State College.

2. Have you used an individual segment from this film by itself?
   Yes _____ No _____

3. If your answer to Question 2 is "yes," check the segment (or segments) you have used.
   (1) ____  (2) ____  (3) ____
   (4) ____  (5) ____  (6) ____

4. What instructional purpose did the use of this particular segment (or segments) serve?

   __________________________________________________________
5. Have you spliced two or more segments from this film for use in different combinations?

   Yes _____  No _____

6. If your answer to Question 5 is "yes," indicate the sequence (or order) in which you arranged these segments. List by the number assigned to each segment.

   ___________________________________________________________

7. What instructional objective did this particular choice of sequence serve?

   ___________________________________________________________

   (Please turn to next page)
1. The following is a list of the segments in the film The Teacher and Technology. Write the word "most" in the blank space beside the one segment you think is the most valuable and the word "least" in the blank space beside the segment you think is the least valuable.

1. "Learning as Self-Learning"
   Instructional technology overview.

2. "History of Instructional Technology"
   Discussion: Dr. James Finn, University of Southern California.

3. "Media and the Military"
   Audio visual center and teacher-centered television, Air Force Academy, Colorado.

4. "Media and the Humanities"
   Amplified telephone with John Dos Passos, Ralph Ellison, and Vance Bourjolly, Stephens College, Missouri.

5. "Media and the Continuous Progress School"
   Independent study program, Brigham Young Laboratory School, Utah.

6. "The Computerized School"
   Flexible curriculum and class scheduling by computer, John Marshall High School, Oregon.

7. "Media and Curriculum"
   Discussion of curriculum, media of instruction, and the teacher as a transactional agent, Valley Winds Elementary School, Missouri.

8. "Media and the Masses"
   Dial access system, Ohio State University.

9. "The Instructional Resources Center"
   Teaching by television, electronic feedback, and multi-media usage, Learning Center, University of Miami, Florida.

10. "The School of Tomorrow"
    A composite of previous segments which forms an outline of what the school of tomorrow may be.

11. "The Teacher of Tomorrow"
    A composite view of the role and responsibilities of the teacher in a technological age.
2. Have you used an individual segment from this film by itself?
   Yes ____  No ____

3. If your answer to Question 2 is "yes," check the segment (or segments) you have used.
   (1) ____  (2) ____  (3) ____  (4) ____
   (5) ____  (6) ____  (7) ____  (8) ____
   (9) ____  (10) ____  (11) ____

4. What instructional purpose did the use of this particular segment (or segments) serve?
   ___________________________________________

5. Have you spliced two or more segments from this film for use in different combinations?
   Yes ____  No ____

6. If your answer to Question 5 is "yes," indicate the sequence (or order) in which you arranged these segments. List by the number assigned to each segment.
   ___________________________________________

7. What instructional objective did this particular choice of sequence serve?
   ___________________________________________

(Please turn to next page)
1. We would like to know if you have spliced any segment or segments from one film to a segment in any of the other three major films. If so, please show the order in which you arranged them.

For example: If you spliced "Communication in Industry (Segment 4)" from The Information Explosion with "Industry Model (Segment 9)" from the Process of Communication and "Perception Training (Segment 17)" from Perception and Communication in that order, you would indicate this by number 4 9 17 in the boxes below.

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<td>1</td>
<td>Communication Revolution</td>
<td>7</td>
<td>A Model of Communication</td>
<td>15</td>
<td>Sensory Learning</td>
<td>21</td>
<td>Learning as Self-learning</td>
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<tr>
<td>2</td>
<td>Information Storage, Retrieval, Control</td>
<td>8</td>
<td>Theory of Communication</td>
<td>16</td>
<td>Theories of Perception</td>
<td>22</td>
<td>History of Instructional Technology</td>
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<td>3</td>
<td>Communication in Government</td>
<td>9</td>
<td>Industry Model</td>
<td>17</td>
<td>Perception Training</td>
<td>23</td>
<td>Media and the Military</td>
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<td>4</td>
<td>Communication in Industry</td>
<td>10</td>
<td>Military Model</td>
<td>18</td>
<td>Intercultural Perception</td>
<td>24</td>
<td>Media and the Humanities</td>
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<td>5</td>
<td>Communication in the Professions</td>
<td>11</td>
<td>Administrative Model</td>
<td>19</td>
<td>Perception and Deprivation</td>
<td>25</td>
<td>Media and the Continuous Progress School</td>
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<tr>
<td>6</td>
<td>Media and Children</td>
<td>12</td>
<td>Teacher Training Model</td>
<td>20</td>
<td>Perception and Education</td>
<td>26</td>
<td>The Computerized School</td>
</tr>
</tbody>
</table>

The arrangements you have used:

- 4 9 17
2. Questionnaire for the 1971 Study

Evaluation of Communications Films

Your Name (optional) ____________________________________________

Title __________________ Position ____________________________

School or Organization __________________________________________

This questionnaire is for the purpose of obtaining your opinions about the content, structure, and utility (in terms of your own instructional objectives) of the series of 16mm films produced by The Ohio State University Department of Photography & Cinema for the Department of Health, Education, and Welfare, U.S. Office of Education, entitled A Galaxy of Motion Picture Documents on Communication Theory and the New Educational Media.

The questionnaire asks for seven evaluations:

   Evaluation 1 - Usefulness of films in the series
   Evaluation 2 - General evaluation of the films
   Evaluations 3, 4, 5, 6 - Specific evaluations of the major films in the series
   Evaluation 7 - Usage patterns of individual segments of the major films in the series

The estimated time for completing the questionnaire is twenty minutes.

In order to help us in our continuing effort to improve the design of instructional films, we ask your cooperation in filling out the attached forms, answering them as candidly and accurately as possible, and returning them to us by April 15 in the enclosed envelope.

If you have not used these films personally, please forward this material to the instructor who has. Additional questionnaires will be provided if requested.

Thank you!

I would like to have a copy of the results of this survey:

   Yes ____   No ____
1. The following Ohio State University - United States Office of Education produced films on Communication Theory and the New Educational Media are now in use in your institution. Write the word "most" in the blank space beside the one film you have found to be the most useful, and the word "least" in the blank space beside the one film you have found to be the least useful.

_________ 1. THE INFORMATION EXPLOSION
Presents the media and messages that surround us. Shows communication networks in government, industry, and the professions.

_________ 2. THE PROCESS OF COMMUNICATION
Illustrates the theory and method of communication. Shows eight models of communication in industrial, military, and educational settings.

_________ 3. PERCEPTION AND COMMUNICATION
Introduces contrasting theories of how human perception affects the communication process. Relates theory to Peace Corps, military and industrial training.

_________ 4. THE TEACHER AND TECHNOLOGY
Demonstrates current use of instructional technology in school administration, teacher-training programs, and classroom situations.

_________ 5. COMMUNICATION CONFERENCE
George Gerbner, Charles Hoban, Franklin Knower, and Kenneth Norberg discuss media in education.

_________ 6. THE COMMUNICATION REVOLUTION
Edgar Dale, Marshall McLuhan, Gilbert Seldes, and Keith Tyler discuss the impact of the information explosion on our contemporary civilization.

_________ 7. TEACHING MACHINES AND SIDNEY PRESSEY
Sidney Pressey presents the historic teaching machine he invented in 1925.

_________ 8. MUSIC RESEARCH
Shows Charles Spohn's audio visual music laboratory at Ohio State University; demonstrates Edward Maltzman's music laboratory for elementary children.

2. In what sequence (or order) do you generally find these films used? List by the number assigned to each film.
General Evaluation of Communications Films

1. In which of the following situations have you used any of the Communications Films? Check appropriate answer or answers.

Method of Presentation

- ________ Classroom projection
- ________ Group study
- ________ Individual study
- ________ Workshops
- ________ Television
- ________ Group study
- ________ Individual study
- ________ Closed circuit
- ________ Open circuit

Audience

- ________ Teacher education
- ________ Elementary
- ________ Secondary
- ________ Other

- ________ Media Workshops
- Indicate type of group ____________________________

- ________ Industrial training program
- Indicate type of group ____________________________

- ________ Religious education

- ________ Community education
- Indicate type of group ____________________________

- ________ Other
- Describe briefly ____________________________

2. Which of the following most accurately describes the usefulness of the Communications Films in helping you satisfy your specific instructional objectives?

Very useful _____  Useful _____  Not useful _____
3. Which of the following do you think best describes the manual that accompanies these films?

   Essential _____  Helpful _____  Not helpful _____
   Not necessary _____  Have not used it _____

4. Have you used individual segments of the films by themselves?
   Yes _____  No _____

5. What provisions have you made for showing individual segments of the films?
   Cut individual segments out of film _____
   Put entire film on projector, threaded up on segment _____
   Spliced individual segments together _____
   Other ______________________________________________________

6. Have you rearranged segments to "make your own film?"
   Yes _____  No _____

7. If segments have been rearranged, which splicing method was used?
   Tape splice _____  Cement splice _____

8. How were individual segments in the films located?
   Looking at the picture _____
   Code numbers on edge of film _____
   Listening to the sound track _____
   Reference to manual listing descriptions of segments _____
   Other ______________________________________________________

9. Would the Communications Film Series be more useful to you if all segments were available as separate short films?
   Yes _____  No _____

10. If your answer to Question 9 was "yes," which of the following formats would you prefer?
   16mm reels _____  Super 8mm cartridge _____
   Super 8mm reels _____  Video tape _____  Other _____
11. Please rate the entire series of films on the following general factors. Check under the heading you feel is most appropriate.

<table>
<thead>
<tr>
<th></th>
<th>Very Good</th>
<th>Good</th>
<th>Adequate</th>
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<tr>
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<tr>
<td>Authenticity of content</td>
<td></td>
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<td></td>
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<tr>
<td>Student response</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

12. Please make any other comments you may have concerning the films below or on the back of this sheet.
The Information Explosion

1. The following is a list of the segments in the film The Information Explosion. Write the word "most" in the blank space beside the one segment you think is the most valuable and the word "least" in the blank space beside the segment you think is the least valuable.

   __________ 1. "Communication Revolution"
   Media and messages: the flood of information that surrounds us; the history of communication by Wilbur Schramm.

   __________ 2. "Information Storage, Retrieval, Control"
   Discussion: Dr. Edgar Dale, Ohio State University.

   __________ 3. "Communication in Government"

   __________ 4. "Communication in Industry"
   Use of communications systems to keep executives of an airline company informed.

   __________ 5. "Communication in the Professions"
   The Ohio Medical Radio Network: Dr. Albert Sabin.

   __________ 6. "Media and Children"
   Comments by elementary and high school students; discussion: McLuhan, Dale, Tyler, and Seldes.

2. Have you used an individual segment from this film by itself?
   Yes _____ No _____

3. If your answer to Question 2 is "yes," check the segment (or segments) you have used.

   (1) ___ (2) ___ (3) ___ (4) ___ (5) ___ (6) ___

4. What instructional purpose did the use of this particular segment (or segments) serve?

   ____________________________________________
   ____________________________________________
   ____________________________________________
5. Have you spliced two or more segments from this film for use in different combinations?
   Yes ____  No ____

6. If your answer to Question 5 was "yes," indicate the sequence (or order) in which you arranged these segments. List by the number assigned to each segment.

7. What INSTRUCTIONAL OBJECTIVE did this particular choice of sequence serve?

(Please turn to next page)
The Process of Communication

1. The following is a list of the segments in the film The Process of Communication. Write the word "most" in the blank space beside the one segment you think is the most valuable and the word "least" in the blank space beside the one segment you think is the least valuable.

   1. "A Model of Communication"
      Animated symbols showing the communication process in theory.
   
   2. "Theory of Communication"
      Discussion of Human Communication: Dr. George Gerbner, Annenberg School of Communication.
   
   3. "Industry Model"
      Hostess training, United Air Lines Center, Chicago.
   
   4. "Military Model"
      Use of media and simulation in officer training, Command and General Staff College, Ft. Leavenworth.
   
   5. "Administration Model"
      Use of media and simulation in educational administrative training, Ohio State University.
   
   6. "Teacher Education Model"
      Use of Media and simulation to train teachers, University of Oregon.
   
   7. "Computer Model"
      Computer-based learning systems, PLATO and SOCRATES, University of Illinois.
   
   8. "The Teacher as a Model of Communication"
      Comments by William Oberteuffer, science teacher; discussion: Dr. George Gerbner, Annenberg School of Communication.

2. Have you used an individual segment from this film by itself?
   Yes _____ No _____

3. If your answer to Question 2 is "yes," check the segment (or segments) you have used.

   (1) ____ (2) ____ (3) ____ (4) ____
   (5) ____ (6) ____ (7) ____ (8) ____
4. What instructional purpose did the use of this particular segment (or segments) serve?

________________________________________________________________________

5. Have you spliced two or more segments from this film for use in different combinations?
   Yes _____  No _____

6. If your answer to Question 5 was "yes," indicate the sequence (or order) in which you arranged these segments. List by the number assigned to each segment.

________________________________________________________________________

7. What INSTRUCTIONAL OBJECTIVE did this particular choice of sequence serve?

________________________________________________________________________

(Please turn to next page)
Perception and Communication

1. The following is a list of the segments in the film Perception and Communication. Write the word "most" in the blank space beside the one segment you think is the most valuable and the word "least" in the blank space beside the segment you think is the least valuable.

_________ 1. "Sensory Learning"
Perception training, pre-school children.

_________ 2. "Theories of Perception"
Dr. Kenneth Norberg, Sacramento State College and psychologists James Gibson and Hadley Cantril.

_________ 3. "Perception Training"
United Airline customer service training.

_________ 4. "Inter-cultural Perception"
Peace Corps volunteer relates experiences in Sarawak.

_________ 5. "Perception and Deprivation"
Headstart teacher training and Headstart children's experiences in school, on the farm, and at home.

_________ 6. "Perception and Education"
Discussion: Dr. Kenneth Norberg, Sacramento State College.

2. Have you used an individual segment from this film by itself?
Yes _____ No _____

3. If your answer to Question 2 is "yes," check the segment (or segments) you have used.

   (1) ___ (2) ___ (3) ___
   (4) ___ (5) ___ (6) ___

4. What instructional purpose did the use of this particular segment (or segments) serve?

__________________________________________________________________________
5. Have you spliced two or more segments from this film for use in different combinations?

Yes _____ No _____

6. If your answer to Question 5 is "yes," indicate the sequence (or order) in which you arranged these segments. List by the number assigned to each segment.

7. What INSTRUCTIONAL OBJECTIVE did this particular choice of sequence serve?

(Please turn to next page)
1. The following is a list of the segments in the film The Teacher and Technology. Write the word "most" in the blank space beside the one segment you think is the most valuable and the word "least" in the blank space beside the segment you think is the least valuable.

1. "Learning as Self-learning" Instructional technology overview.
2. "History of Instructional Technology" Discussion: Dr. James Finn, University of Southern California.
5. "Media and the Continuous Progress School" Independent study program, Brigham Young Laboratory School, Utah.
8. "Media and the Masses" Dial access system, Ohio State University.
10. "The School of Tomorrow" A composite of previous segments which forms an outline of what the school of tomorrow may be.
11. "The Teacher of Tomorrow"
   A composite view of the role and responsibilities of the teacher in a technological age.

2. Have you used an individual segment from this film by itself?
   Yes ____  No ____

3. If your answer to Question 2 is "yes," check the segment (or segments) you have used.
   (1) ____ (2) ____ (3) ____ (4) ____
   (5) ____ (6) ____ (7) ____ (8) ____
   (9) ____ (10) ____ (11) ____

4. What instructional purpose did the use of this particular segment (or segments) serve?

5. Have you spliced two or more segments from this film for use in different combinations?
   Yes ____  No ____

6. If your answer to Question 5 is "yes," indicate the sequence (or order) in which you arranged these segments. List by the number assigned to each segment.

7. What INSTRUCTIONAL OBJECTIVE did this particular choice of sequence serve?

(Please turn to next page)
1. We would like to know if you have spliced any segment or segments from one film to a segment or segments in any of the other three major films. (If so, please show the order in which you arranged them.)

For example: If you spliced "Communication in Industry (Segment 4)" from The Information Explosion with "Industry Model (Segment 9)" from the Process of Communication and "Perception Training (Segment 17)" from Perception and Communication in that order, you would indicate this by number

<table>
<thead>
<tr>
<th>Seq. No.</th>
<th>Process of Communication</th>
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<tbody>
<tr>
<td>7</td>
<td>A Model of Communication</td>
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<td>8</td>
<td>Theory of Communication</td>
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<tr>
<td>9</td>
<td>Industry Model</td>
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<tr>
<td>10</td>
<td>Military Model</td>
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<td>11</td>
<td>Administration Model</td>
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<td>12</td>
<td>Teacher Training Model</td>
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<td>13</td>
<td>Computer Model</td>
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<td>14</td>
<td>The Teacher as a Model of Communication</td>
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The arrangements you have used:

<table>
<thead>
<tr>
<th>Seq. No.</th>
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<tr>
<td>1</td>
<td>Communication Revolution</td>
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<tr>
<td>2</td>
<td>Information Storage</td>
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<td>3</td>
<td>Communication in Government</td>
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<td>4</td>
<td>Communication in Industry</td>
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<td>5</td>
<td>Communication in the Professions</td>
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<td>Media and Children</td>
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<table>
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<th>Seq. No.</th>
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<tr>
<td>15</td>
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<td>Intercultural Perception</td>
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<td>Perception and Deprivation</td>
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<td>Perception and Education</td>
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<td>21</td>
<td>Learning as Self-learning</td>
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<td>22</td>
<td>History of Instructional Technology</td>
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<td>23</td>
<td>Media and the Military</td>
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<td>Media and the Humanities</td>
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<td>25</td>
<td>Media and the Continuous Progress School</td>
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<tr>
<td>26</td>
<td>The Computerized School</td>
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<tr>
<td>27</td>
<td>Media and the Curriculum</td>
</tr>
<tr>
<td>28</td>
<td>Media and the Masses</td>
</tr>
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<td>29</td>
<td>The Instructional Resource Center</td>
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<td>30</td>
<td>The School of Tomorrow</td>
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<tr>
<td>31</td>
<td>The Teacher of Tomorrow</td>
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</table>
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