Media materials and services may be used for two different but closely related purposes: motivating people to participate in informational and educational experiences, and motivating them to learn. As more librarians and patrons begin to use the audiovisual media they may be induced to question conventional principles of composition and work to expand the narrow guidelines of linguistic communication. Hopefully they will discover the joy and satisfaction that comes from designing messages which appeal to a wider range of the perceptive powers in other human beings. This manual is an attempt to overcome the reader's initial reluctance to use a variety of media. Besides an introduction the report contains: (1) elements of programming, (2) production planning, (3) program production and (4) graphics preparation. (For more information on this subject see LI 002 783 and LI 002 784 to LI 002 786.)
MEDIA DESIGNED PROGRAMS

for Librarians

by

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## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Elements of Programming</td>
<td>5</td>
</tr>
<tr>
<td>Production Planning</td>
<td>14</td>
</tr>
<tr>
<td>Program Production</td>
<td>30</td>
</tr>
<tr>
<td>Graphics Preparation</td>
<td>41</td>
</tr>
</tbody>
</table>
INTRODUCTION

Even though we may be living in the McLuhan age, most people still design their communication messages by the principles of freshman linguistic composition. Creative and logical composition is most often based upon a linear model of communication and employs the medium of language exclusively. Such message design not only follows the syntax of the language but tends to stylize the discourse unit according to logical conventions.

Consequently when an audiovisual media production is being contemplated, it often becomes difficult for the would-be communicator to think in terms of media message design. The logic is different, being more inductive. The mere juxtaposition of two visuals or two sounds entails significance. In other words, the "suspicious" human mind of the receiver upon perceiving two visuals or objects together, immediately probes for the intentions of the sender, which should be, but may not be supported by the narrative.

The juxtaposition of images or sounds, or both leads to an hypothesis about significance of them in the mind of the receiver. The hypothesis should be confirmed by the narrative. But unfortunately it may not be; and this lack of congruity in designing the message results in ineffective communication. Little attention is given to this problem in language composition courses because actually it is mainly a nonverbal not a linguistic consideration.

The emphasis upon the composition of audiovisual messages is not a whimsical consideration. For years, the teachers of elementary and secondary English studies have given considerable attention and frequently major emphasis to audiovisual composition. Indeed for the inchoate student with a limited cultural background the composition of logical, linguist discourse units is often an absurdity.

Counselor librarians who work with the cultural disadvantaged also use the principles of audiovisual composition. Librarians have begun to realize that patrons who do not have linguistic flexibility must be involved in a wider range of experiential situations. The patron is encouraged to take home a camera or recorder and to "create" audiovisual compositions which represent his interests and problems. Once developed, these audiovisual message units can serve as a bridge between the patron and more "sophisticated" linguistic activity under the guidance of the librarian.
With media, the librarian soon finds that it is possible to present the various program formats with greater compression than is usual and at the same time to expose the audience to a wide range of stimuli. A great deal of traditional program time is consumed in describing examples and in relating experiences and applications. Audience perception can be triggered more economically of time and with greater participant apprehension using one or more audiovisuals in compacted sequence and conceptually interlocked communications context.

The difference between traditional program format and the integrated media program may in part be a matter of degree. But there are also significant difference of kind. The integrated media program is a component in a system of communication where the patron and his purposes are the center of attention rather than the librarian and his information. Opportunities for patron participation and feedback are deliberately increased, made possible in part by the more purposeful and economical use of lecture time.

The concept of programing is fundamental to the development of media integrated programs. Materials, iconic or verbal, are neither a supplement to content nor a crutch for communications method. Responsibility for program content remains with the librarian who may be either an individual or part of a team. Once content has been determined and worked into logical program units, then the materials are marshalled for communication effectiveness. Some content is better presented in oral/print patterns, some in visuals, some in audio materials.

Once the learnings, the attitudes and skills have been specified for any program, a learning atmosphere is created utilizing a wide range of communication techniques. Large media integrated programs are supplemented by small learning groups, individual counseling, self-instructional sequences and resource center research. Materials are programed into short sequences. Film clips, a few slides, a scene from a television program on the previous evening, a single transparency or two, for example, are much more effective when introduced at the pertinent psychological moment. This "teachable" moment may occur at the beginning, middle or end of a presentation. But it seems to occur best when participants are challenged or "provoked" into thinking.

Conceptual interlock is at the core of the librarian-patron-resource relationship. Instructed in the use of one piece of media equipment, one reserve book, or in one library service routine, subsequent utilization of that equipment, book or routine will in turn give further and related instruction. In this manner the patron is introduced to the process of search and discovery of knowledge in available learning resources. The requirements for
information surprises call for the immediate availability for use singly, or in combination, of the full range of communication resources.

Increased participation in and understanding of information sources are expected as citizens follow up more of the increased perceptual stimuli to which they are exposed through integrated mass media programming along insights of their own choosing. Involvement is fundamental to the communications process. Citizens should find available many community and library experiences contrived for learning which they can follow-up on their own. An example might be a programmed text, or an audiotape clip that will give them some needed instruction in sequence, or a film clip that will demonstrate the same or another information source.

Administrators also are especially appreciative of the dividends in staff growth and development which accrue to the extent that media equipment, materials and back-up staff are made available and are utilized by communications librarians. Responsibility for communications leadership may often be delegated to a communications specialist. However, mass media programming is one fundamental and educational method by which library administration can promote the growth and development professional staff resources and evaluate the relevance of library services to the recent findings of community needs and interests.

Both telemation and TV studio facilities are communications systems. They differ largely in the degree of change of format which the lecturer can exert while the program is in session. In telemation the lecturer is presenting a production "live" before an audience reaction he can vary the pacing of the program as well as the sequence of audio-visuals. Consequently, telemation is often considered to be a cybernetic system.

In television production on the other hand the roles of narrator and producer-director are disassociated. The production is scripted so that the director and cameramen know when to cue in the cameras and the duration of each shot. Consequently in television production the sequence and cycling of images and sound effects is carefully pre-programmed. There is little if any opportunity to take advantage of audience feedback in modifying, let alone changing the sequencing of program elements.

This manual therefore is not a theoretical presentation. It has been prepared, not to consider let alone solve the problem of nonverbal and iconic communication, but only in an attempt to overcome the reader's initial reluctance to use a variety of media.

As more librarians and patrons begin to use the audiovisual media
they may be induced to question conventional principles of composition and work to expand the narrow guidelines of linguistic communication. Hopefully, they will discover the joy and satisfaction that comes from designing messages which appeals to a wider range of the perceptive powers in other human beings.
ELEMENTS OF PROGRAMING

Media materials and services may be used for two different but closely related purposes: motivating people to participate in informational and educational experiences; and for motivating them to learn. Almost identical principles of programming are used in either instance. In motivating to participate, the media are so orchestrated that it becomes difficult for individuals in the target group to avoid thinking about the message. No one ever stops learning. To move beyond participation and motivate individuals to learn they must be involved in sequential experiences where learning can occur. In either instance media of all types can be used effectively.

Materials and media must be selected not because they simply coincide with program content. They are selected according to principles discussed below as being integral to the communication objectives of a particular program. The program should be designed especially for the unique characteristics of a specific group of individuals. Crucial considerations in the production include the quality of the materials, the purposes to be achieved through use to meet the characteristic of the participants. The media selected are used to reinforce program objectives and to satisfy the identified needs of the target group.

The program producer's purpose is the communications objective, i.e., the identifiable understandings, abilities, attitudes and appreciations that are to be acquired by the receiver as a result of his participation. The receiver's purpose is the goal, i.e., the problem, the assignment that he can be persuaded to realize as valuable to him. The message and learning experience are so contrived and structured that the participant will be in a better position to understand his problem and with critical and creative insight develop new solutions. The goal is to make the participant aware of his needs and stimulate his thoughts about a solution.

Selection of materials is a basic knowledge and skill in the professional repertoire of every librarian. The same principles used to build library collections are employed in selecting materials from that collection for educational programming. Constant evaluation questions include the following:

1. Are the materials usable in direct relation to an instructional program? To a specific experience, or problem-solving activity?
2. Is the content to be communicated by the material useful and important? For the individual? For the community? For society?

3. Will the material contribute to major instructional purposes? Or, toward the major goals of the learners?

4. Does the difficulty level of the instructional program coincide with the understandings, abilities, attitudes, and appreciations of the participants?

5. Will the material be likely to call for vicarious experiences, i.e., thinking, reacting, discussing, studying?

6. Does the program warrant use of a variety of media? If so, what is the relation of the software (program) to hardware (equipment)?

7. Is the content to be communicated presented in terms of problems and activities of the learners, i.e., the problem-solving approach? Logically arranged subject-matter may be called for at advanced levels of study; or like Shores study outline. (Louis Shores. Basic Reference Sources. ALA, 1954. p. 238)

8. Is the content to be presented by the material sufficiently rich in concepts and relationships?

9. Does the material possess appropriate data content to facilitate the process of inference? In number of examples to warrant sound conclusions?

10. Is the material accurate, typical, and up to date?

11. Is the kind of material uniquely adapted to the achievement of the desired learning objective?

12. Is the content of the material in good taste according to the standards of the library?

13. Can the materials be used within a regular program period of time?

14. Is the material or medium capable of meeting educational functions?

The novice in media utilization soon discovers that audiences of today are sophisticated in their appreciation of production quality, photographic composition and clarity, artistic balance and color, and program content design. In selecting ready-made materials the producer's modes of communication and his methods of presentation must be considered. Some facts may be overemphasized, others obscured or distorted.

The quality of production may be substandard as, for example, where narration is used instead of dialog that would ensure better participant response. Here too, librarians have long been cognizant of the importance of technical quality. The
basic general principles are applied to all types of media materials:

1. Is technical quality of the material artistic?
2. Is the producer's mode of communication adequate for the purpose? Is the message put over clearly, forcefully, in ways that attract and hold attention?
3. Are physical size, format, and color satisfactory?
4. Is workmanship adequate in the construction of the material?
5. Is the content free of extraneous conflicts and distractions?
6. Is careful planning by the producer obvious in the content and structure of the material?
7. Did the producer of the material set out to produce the material for audiences with whom you wish to communicate?

In addition, libraries are familiar with and competent in the use of audiovisual bibliographies, as well as "consumers reports" services for equipment, the most important among these being the reports of the ALA Library Technology Project. Bibliographic and evaluative services are basic in any library agency regardless of size. Competent use of the indexing and abstracting services provide an initial screening that must be supplemented by previewing in order to ensure that the medium material is appropriate for the specific audience for whom the program is being designed.

Previewing of media materials alerts the program producer to the necessity of planning for audience readiness in order that effective participation may eventually occur during the program. When the producer knows the advantages of each film, slide, chart or model, the job of developing audience readiness is easier. Participants need to feel that the program or sequence of learning experiences is significant for them or boredom will occur. Problem-solving activities are dominant characteristics of the learning process and message design. The participants need to be told how a particular material will contribute to important learning results. The following points may be considered in developing a framework for the presentation of program material:

1. Give an introductory talk, describe a case, or tell about an incident that introduces the content to be presented.
2. Set up a problem or assignment to focus attention on a
felt need for learning, or raise a series of questions, perhaps writing them on the chalkboard, or handing them out in duplicated sheet form. It is essential to have learning purposes in mind because otherwise proper questions and discussion assignments will be appropriate and pertinent only by chance.

3. Tell how the content to be presented by film, model, or demonstration is related to previous experience, future plans and assignments, or on-the-job performance.

4. Direct attention of participants to key processes, issues, or ideas consistent with learning objectives. Perhaps three to five references of this nature are sufficient instead of using lengthy motion pictures or long sets of slides.

5. Point out the difficulties that will be encountered.

6. When using realistic materials state that the materials provide opportunity to "travel" to the location for on-the-spot observation.

7. Do not use an entire film if only a portion is relevant. By previewing, only the portion needed can be selected and used.

In the preparation process, due attention should be given to physical facilities and conditions. Prearrangements for the handling of materials and equipment should be made so as to safeguard them and provide for economy of time. Each communicator is responsible in some degree for understanding the programming and operation of equipment even though a studio director is available.

Systems Analysis

Systems analysis is particularly important in helping the program producer decide upon a course of action before, during and immediately after the use of media materials. Communicators should guide participants in the important processes of reacting to and taking appropriate action as a result of an audiovisual experience. Participation of the audience is the key to the potential value of media learning situations as indeed it is for any learning experience. The program should be structured so as to activate mental activity: initiating, planning, questioning, searching and generalizing about significant experiences. Outcome learnings will act as feedback and as reinforcement. These outcome learnings include: using other devices and materials, discussions, experiment and evaluation, supplementary reading, writing articles, preparing exhibits, becoming involved with a community action group.
Participant reactions should not be left to chance. Thought-type questions are particularly appropriate for guidance. Group guidance is a significant experience for individuals and should have high priority in library service. Such questions may produce among participants spontaneous reactions and require a minimum of effort. Participants may also recall items of content, comparison of participants' ideas with content situations and perhaps continuing discussion. More extended study may involve an investigation of the facts, pertinent applications and possible generalizations. This feedback aspect of a systems approach in program planning is closely related to the skills of reading, viewing and listening which presumably have as their goal some concept of maturity. The following questions may suggest a method for a feedback agenda:

1. Ask for clarification or amplification of points made in the speech, program, or visual presentation.
2. Ask for additional information, raising points that were not covered in the program.
3. Challenge any points which seem to be illogical or are not fully proved by the communicator.

Reading:

The principles of maturity in reading apply as well to listening and viewing. Much more time is spent exercising viewing and listening skills which however are not any less difficult to learn if critical and creative thinking is to be pursued. It is not difficult to appreciate and realize the application of these characteristics as sought-for objectives of any media learning experience.

1. A genuine enthusiasm for reading.
2. Tendency to read: (a) a wide variety of materials that contribute pleasure, widen horizons, and stimulate creative thinking; (b) serious materials which promote a growing understanding of one's self, of others, and of problems of a social, moral, and ethical nature; and (c) intensively in a particular field relating to a central core.
3. Ability to translate words into meanings, to secure a clear grasp and understanding of the ideas presented, and to sense clearly the mood and feelings intended.
4. Capacity for and habit of making use of all that one knows or can find out in interpreting the meaning of the ideas read.
5. Ability to perceive strengths and weaknesses in what is
read, to detect bias and propaganda, and to think critically concerning the validity and values of the ideas presented and the adequacy and soundness of the author's presentation, views, and conclusions. This involves an emotional apprehension, either favorable or unfavorable, as well as a penetrating intellectual grasp of what is read measured on some scale of comprehension.

6. Tendency to fuse the new ideas acquired through reading with previous experience, thus acquiring new or clear understandings, broadened interests, rational attitudes, improved patterns of thinking and behaving, and richer and more stable personalities.

7. Capacity to adjust one's reading pace to the needs of the occasion and to the demands of adequate interpretation. (Gray & Rogers, *Maturity in Reading*. Chicago University Press, 1956.)

**Listening:**

The following sets of criteria have been added for listening and then for viewing in order to exhibit the ease with which this transformation can be made. Because a person is hearing something does not mean that he is listening -- just as seeing is not reading. It is difficult to think independently while listening to a speaker. While going off on your own thoughts you may miss several of the next points made. A person may hear what the communicator says and yet not listen in any of these four ways:

1. Purposefully -- to gain information -- to make life more enjoyable.
2. Accurately -- speakers do not need to scream nor to repeat themselves constantly if participants are to listen intently.
3. Critically -- think of what Hitler did to his listeners.
4. Responsively -- those numbers in football call for a certain action -- so does an explanation of behavior.

Motivation is important in all types of learning. Learning to listen is no exception. Just as a real interest in and desire for reading is the most important factor in teaching reading so must we develop a need for listening. A person develops little need for listening when the leader continually talks. We as librarians need to be sure that what we say is important to hear and important to hear from us. Sometimes the things we say might better be said by group members in group discussions. We listen much more carefully to a discussion in which we are expected to participate, and to one in which we are interested.
A. Listening for enjoyment and appreciation (to oral reading and speaking):
   1. Enjoy the development of a story or the surprise of a joke.
   2. Listen for tuneful words and pleasing rhythm.
   3. Visualize descriptive and dramatic passages.
   4. React to the mood set by an author.
   5. Appreciate a speaker's or writer's (oral reading) style.
   6. Be aware of the favorable or unfavorable effects of voice, posture, or gestures.
   7. Note how character is revealed through dialog.

B. Listening for information and for specific purposes:
   1. For the answer to a specific question.
   2. To follow directions, step by step.
   3. To reproduce what is said, as in a message.
   4. Follow sequence in a story, play or demonstration.
   5. Listen for main ideas, for detail - descriptive, supplementary.
   6. Relate details to respective main points.
   7. Take running notes which reflect the speaker's outline.
   8. Interpret new words through context.

C. Listening to criticize and evaluate:
   1. Distinguish between the truth and rationalization.
   2. Discriminate between fact and opinion.
   3. Listen for evidence which supports a speaker's statement.
   4. Detect prejudice and bias.
   5. Evaluate propaganda by a check against observable facts.
   6. Recognize sales-pressure techniques.
   7. Sense a speaker's purpose.

Viewing:

As any classroom instructor knows, viewing which has not been integrated into the instructional enterprise more often lulls one's mind than arouses the anxiety so necessary to the processes of critical thinking. Unless carefully organized in an educative sequence, visuals will confuse rather than lead the mind to abstract and to generalize. Viewing experiences are largely programmed sequences which come to the individual through mass media and other projection equipment. Occasions seldom if ever arise to stop the sequence and pause for reflection and comparison. Questions such as the following may prove helpful in a post-experience reflection.
1. For whom and for what purpose was the visual sequence produced?
2. Are the sponsor and/or producer recognized as responsible persons in this area of programming? Or, are sensational scenes and sounds sought for their own sake?
3. Does the presentation have a theme? Is the theme lost in a maze of visual detail? Or, is it obscured by a sound track loaded with sounds?
4. Have scenes been selected for sequential effect? How much irrelevant visualization was included?
5. Was your curiosity aroused by the presentation to read and study further?

Evaluation:

Obviously from the above thought-provoking questions in the areas of reading, listening and viewing, it is hardly necessary to reiterate the importance of organizing participant feedback around problem-solving activities. But to such traditional methods as guide sheets, panel discussion, role play, buzz sessions, etc., can be added the unique learning opportunity of having participants prepare their own audio-visual materials for whatever presentation they are going to make. Considerable participation and feedback is involved in having participants develop communicative materials for follow-up sessions.

In media productions critical appraisal must continually be subject to evaluation of both the audiovisual materials and the accompanying techniques. There is no magic in, nor end to evaluation. It is a continuing process that is built into the total media production and involves all the participants as well. The following questions may be extended as the communicator gains insight in introducing material at the appropriate "teachable moment."

1. What did participants like about the content of the material used?
2. Did participants react to the content the way expected?
3. Was the material too trivial or superficial for the characteristics of the group?
4. Was the material actually worth the time and effort, or should other types of material have been located?
5. Did the content of the materials help to release the energies of the participants?
6. Was irrelevant material used? Can it be eliminated?

The operational techniques will also be included in the
A systems approach to media programming suggests various appraisal methods and techniques and will help to round out such guiding questions as the following.

1. Was the problem, or assignment significant, appealing, and functional?
2. Was the readiness of the group misjudged?
3. Were the thought-type questions poorly phrased for the kind of mental action needed?
4. Did the activities resulting from the use of the material lack challenge and significance?
5. Were the program purposes valid?
6. Were any circumstances beyond control at fault?
7. Are the sources of evidence (participant responses) for appraisal valid?
Television and telemation production use all the librarian skills of communication both professional and those of a liberal education. Basic to the communication process are the skills of composition, precise or abstract writing, notetaking and outlining. Such skills are put to use not for the traditional composition outline but in exciting and perceptually stimulating ways that help to ensure more effective participation in the communicative and feedback processes.

In passing, it is worth noting the tragic time lag between the findings of audiovisual research and perceptual psychology, and the applications in teaching freshman composition. The teaching of English Composition still in most instances hews to the rhetorical line of a print-oriented and linear logic. Stimulus-response psychology, let alone transactional perception, has yet to make an impact. Many students, especially those brought-up in the television era, remain estranged from the limiting and crippling emphasis upon traditional logic.

It is necessary to make a special effort to employ the potential of audiovisual materials for the composition of communicative messages. Telemation and television production offer the advantages of a systems approach to message design. Telemation production is also the basis of television programming. Consequently, the only adaptation of telemation necessary is to confine the presentation of the message to the proportions of a television picture tube. On the other hand, telemation capacity itself has the dimensions of the proscenium arch and as such presents problems of selection and in the emphasis of particular perceptual cues.

Some method of presentation is essential for ease of viewing and for notetaking in telemation. A pattern of message design will make it possible for the viewer to organize the otherwise disparate audio and visual cues. As a result, his perceptions can be evaluated, interpreted and organized into meaningful (for him) feedback patterns. Once the art of telemation programming has been learned, it is much easier to write a script for television production.
A telemation screen is a large flat surface with reflective qualities for use with front projection or the telemation area may be 3-5 separate screens side by side on one wall of the classroom. However, for more effective utilization, the equipment can be placed behind the screen. When the telemation screen is mounted for rear projection, the screen is made of translucent plastic which allows the images to be projected through its surface. But in either instance, the screen is large enough to accommodate several images usually in combinations of three to five. The main image is usually quite large and is flanked by two smaller images on either side. The smaller telemation screen should be able to accommodate three images as in the above example.

As a minimum, three images are required for effective telemation production, and some method of order and/or rotation must be worked out so that presentations do not confuse the audience. Sequence and cycling of the points to be made and the illustrations should be made explicit and be used consistently within any one message production. The main elements of any composition include as a minimum the main topics, sub-topics or sub-headings and illustrations or examples. It should be kept in mind that the communication must be made effective and satisfying for the audience. Some opportunity for feedback should be included in the sequencing of main points, sub-points and examples.

The main and sub-topics of the composition are usually made in point-outline format together with complete or abbreviated expository statements. Such statements are brief extracts from the lecture narration and appear in a manner similar to running chapter titles. This will help the audience remember its sense of direction. The smaller screens on the telemation screen can be used in some predetermined regular order for the same purposes, after the general outline dimensions of the message and its presentation have been introduced on the larger screen.

Once the telemation program has been introduced on the larger image area, and is underway, then the main and sub-topics may be transferred to the side images of the screen. From that point on, the larger image can be used for the illustrative content of the program. Such content is largely composed of the illustrations and the filmed on-going sequences used to visually enrich the bare outline, as well as to present the source's viewpoint and the examples of applications which to a large degree are similar in function to the paragraphs and chapters of a printed message.

When a five-image telemation facility is employed, the other
two small images can be used to pin-point detail from the large image or present parallel and subsidiary visuals whether moving or still. In that event, the large image can be used periodically for provisional summation purposes and sequences which provide vicarious emotional involvement. Thought questions can be posed for discussion later. Immediate feedback can be facilitated by using questions with blank spaces that require the insertion of appropriate terms. Such questions are reminiscent of programed texts and serve a similar function. Learning can also be assisted if a notes outline is distributed to the audience. The main points should be outlined in order to indicate the structure of the lecture and much free space will make it possible for the student to take his notes in an organized way.

At this point it is well to explore the location of the narrator in relation to the telemation screen. The narrator, as speaker or teacher, stands behind a lectern to the side of the screen. In permanent installations the lectern can be wired for push-button control of all visuals and sound-effects. In addition, the narrator may have an overhead projector beside him to record immediate insights which occur while the presentation is underway.

It should be obvious from such a physical layout that in telemation the narrator is the producer as well as the director. He may be assisted by a media technician and backed up by a graphics studio but essentially he is presenting a production "live" before an audience. Depending upon audience reaction he can vary the pacing of the program as well as the sequence of audiovisuals.

In television production on the other hand the roles of narrator and producer-director are disassociated. The production is scripted so that director and camera-men know when to cue in the cameras and the duration of each shot. In television production the sequence and cycling of images and sound effects is carefully pre-programmed. However, there is little if any opportunity to take advantage of audience feedback in modifying, let alone changing the sequence of program elements.

However, in television production the composition, formatting, and sequencing of the various images does not require the same definition as that of the telemation screen. In television it is the producer who is responsible for changing the scene from a long shot to a close-up and for sequencing from the narrator to the visuals and back again.
Two main approaches may be used in planning media programs whether for telemation or television. One can begin either with an idea for a program, or with an authority who will appear on the program. Whichever way the program is begun, one or more people present and develop one main idea. It is difficult to deal with more than one main focus of attention in a half-hour or even an hour program.

As in any programing the selection of content and the use of technique are fundamental decisions to be made. The effective planner will consider both the objectives and the topic and then select the technique appropriate to the objectives within the content range of the subject and the anticipated response of the viewing audience. There appear to be, at least in rough outline, four major situations where the communication objectives require careful determination of appropriate technique: information transmission, understanding a problem, problem solving and development of a skill.

1. **Information** can be transmitted effectively by any of the one-to-many patterns of communication. The informed and organized speaker is a traditional technique that serves a perennial need. In order to induce some variety in program make-up an information film, filmstrip or set of slides can be used as alternatives. A working paper or fact sheet also adds variety particularly as a prelude to discussion. The rigorous format of the speaker-based program can be made more flexible by a symposium of several brief talks on various aspects of the topic. A combination of several of these techniques will further extend flexibility. Question periods for clarification and amplification will encourage feedback.

2. Whenever the understanding of a problem or of various points of view is to be accomplished, any of the few-to-many patterns of communication can be used. Initially, of course, it may be necessary to use again one of the information methods discussed above to define the problem. But such a presentation must be brief and followed immediately by a panel, role-play or discussion. A panel is a small group of people discussing a problem or issue from several points of view. In the role-play, brief enactments occur which depict ways of attacking a problem and open up the problem for discussion by the larger group. In other instances a small group can be picked as representative of the audience in order to discuss the problem or issue.

3. In order to move the understanding of a problem towards a solution, any of the above methods can be used. But once the
problem has been sharply defined and the participants are familiar with all of its aspects, then elements of an action agenda must be incorporated into the proceedings. Otherwise it is difficult to arrive at the consensus necessary to decision making.

4. Finally, situations may be required where it is possible to learn a skill. Such an endeavor must include an opportunity where practice and development can occur as, for example, in writing agency policy, in planning for evaluation, or in program planning. In addition, case study and simulation provide for skills-learning where on-going situations are not available for practicum.

There are several types of programs or program formats. It is helpful to think in terms of the program as a SERIES OF PICTURES. List all the things you could show that would help get across your idea, and plan in terms of the whole series -- thirteen weeks or seven weeks -- so that a sequence of ideas can be developed visually.

1. **LECTURE DEMONSTRATION** is adaptable to television because it enables the viewer to get close to what is being demonstrated -- closer sometimes than the demonstrator.

2. **ILLUSTRATED REPORT** can employ all sorts of visuals: pictures, art work, film, etc.

3. **INTERVIEW** can be part of a program and needs a guest worth listening to with something to show as well as an interviewer who asks the questions the audience would like answered.
4. SMALL TV CLASS is used by teachers with three or four members of the class to represent a classroom situation. Here you can use a guest authority as with other formats, or employ the technique for micro-teaching as well as group counseling.

5. SKIT is a short dramatic piece used within a program as an illustration. It can make an idea clear in less time than narration and with more impact.

If you begin with an IDEA, here are some questions that need answering:

1. Is the idea original? Has it been done before? Why do you think it should be repeated? What will you add to it?

2. Can the idea be presented visually in a "seeing and action" medium? If there is no action or nothing to show, the program might better be done on radio.

3. What is the purpose of the program? What main idea do you want to get across to the audience?

4. To whom is the program directed? Is the subject of interest to the people who would be watching at this time of day? Who needs to know what about the topic?

5. Is the subject timely in terms of the developments in its field, or current to the time of year? Can it be made timely by making relations explicit to the mass media?
6. What questions would you expect the audience to ask? Will you be answering them during the program?

7. Have you so planned the program that the audience will be stimulated to further learning about the subject?

If you begin with an AUTHORITY, some questions may serve as guidelines:

1. Is he personable?
2. Is he interesting to talk to?
3. Is he informal and relaxed when addressing a group or does he freeze up?
4. Is his manner smooth, unhurried, friendly, enthusiastic, sincere, warm?
5. Does he know his subject? Can he talk about it simply and clearly without using extensive notes?

Nothing has been said about beauty or good looks because these qualities are not the important ones. There are, however, certain things to avoid in choosing your authority.

Rarely are we concerned about the person who talks too loud. More often the person looks down at the table at notes and does not speak loud enough.

If you are talking with a guest on the program think of the cameraman as another person sitting in on the conversation. In this way you will be politely including the viewer.
If your voice is softer than that of the other person, speak louder so that both voices will be balanced in the microphone.

If both voices are equally loud but you are sitting and he is standing, one of you will be closer to the mike. One should speak louder than the other. Consequently, it is better to use chest mikes.

If you are going to walk from one part of the set to another, say so before you go. For example, say, "Let's go over to the blackboard and see what Mary has drawn."

Talk slowly. Make points simply. Use anecdotes and examples whenever possible, and change pace for variety.

If you are accustomed to speaking before groups of people, such as classes or audiences, remember that on TV you are talking to one or two people in front of a TV set.

Do not choose people simply because they are heads of departments or organizations. If their work is largely administrative, they may not have the intimate contact with the activity that is necessary to the presentation on television.

Do not choose people who need to memorize material, use extensive notes, or read a script during the program. If they tell it in their own words, the effect is much more apt to be informal and interesting.

Do not choose people merely because they have worked hard on a committee.
Once you have chosen an authority for your program, you may find that other problems have also been solved. The authority may have access to various collections of visuals. He may be able to bring in other specialists in the field, or have valuable suggestions that arise from background knowledge.

**THE TV SCRIPT OUTLINE**

After the format has been decided, and the general outline of what is going to happen has been talked through with the people involved, a rough TV outline should be drawn up for each program. This outline helps you visualize the action on the program as the viewer will. The outline should be discussed with your TV producer. In telecommunication, however, you are your own producer assisted only by a technician. But in any event an outline must be developed.

When your outline has been checked and any needed suggestions have been made, you should fill in the necessary detail. This becomes your working TV script from which the producer or director and his crew work to put your program on the air. The TV script should follow the following outline:

1. Draw a line down the center of a piece of paper (8 1/2 x 11).

2. At the top of the left side print the word "VIDEO". At the top of the right side print the word "AUDIO".

3. Indicate the things you want to show or do on the left side.
Outline what you want to say on the right side.

4. Open with an interest getter. An unusual and compelling opening makes your viewers want to watch. Avoid introductions and long beginnings. Your viewer will switch channels during the first half minute of the program. Open with something happening—not merely with someone saying that something is going to happen.

5. Use outline form. Avoid word-for-word scripting of what is going to be said. Use double space.

6. Allow one minute for announcer's introduction and one minute for sign-off. This gives you twenty-eight minutes of actual program time in a half-hour show.

7. Indicate how much time you expect for each part of the program in the right hand margin. The director can see whether each segment is running on time.

8. Plan a smooth transition from one part to the next, that is, from demonstration to skit, to guest, etc.

9. Ask the producer weeks before program time about any unusual or doubtful visual material before planning your script around it.

10. Spread visual presentations throughout the program rather than having it all at once. Use action to support your words whenever possible.
11. The script cue for a film should be a definite sentence about fifteen words long. Try to include the name of the film; for example, "The film 'How Television Works' will show us the important aspects of commercial television."

12. Do not ask for slides directly on the air. Use the same cue as for any photo or drawing: "I'd like to show you some pictures of the Media Communications Lab. The first one shows . . . ", etc.

13. Allow for unexpected time adjustments running over or under time. If you plan for summarizing at the end, they can be eliminated if you are running over. Or, they can be a more complete review if you run under time. Have pertinent extra fill material at hand in case you need it. More often people run under time than over time.

14. "Off Set" refers to drawings, charts, pictures, etc. on an easel not on the set with you. The drawings or pictures fill the screen while you talk. They are changed by the director on cue as you mention each one. Don't say, "Look at this picture". Rather, "I have a picture of the Boston Public Library. Notice how the shape . . . ", etc. Any visuals used should be numbered in the top right corner in order of appearance.

15. If SEVERAL pictures are used consecutively, they should all be the same size, and mounted on
12" x 16" gray cardboard with at least two-inch margins. OFF SET USE should be indicated in the TV script, on the video (left) side as "Off Set #1", etc.

16. If you handle or point to visuals, they are considered On Set. They should be numbered consecutively. On Set visuals should be mounted on light cardboard 21" high by 28" wide. Print should be 2" to 3" bold letters. Lines in drawings should be 1/4" to 1/2" thick.

17. It is a good idea to indicate size of all visuals in the video side of the outline.

REHEARSALS

Rehearsals make program participants thoroughly familiar with what they have to do and say. Rehearsals enable them to be completely at ease with one another.

Choose a place where you can set up a table, desk, chairs and other props according to your floor plan.

If you are doing a direct-audience program, talk to the camera during rehearsal. The lower lens takes the picture only when the camera red light is on. Change from one camera to the other so that you can practice turning casually as the red light on the cameras change.

Talk slowly; there is a natural tendency to speed up during the program. Your viewer cannot ask you to repeat something he missed. Be sure to have extra material (FILL) in case you do speed up when on air.
Do not memorize. Be so familiar with your material that you can talk in your own words.

Go through any rehearsal demonstration completely. You will know if all your props are workable. There will be less chance of having to apologize to viewers if a piece of equipment does not work properly or because you forgot to bring something essential. Time your demonstrations as well as all other segments of the program. Write the time of each segment in the right hand margin of the page.

Make no changes in script after rehearsal unless you plan another rehearsal. A change that seems insignificant to you could spoil your program. Be sure that you have held enough rehearsals.

SHOWING VISUAL MATERIALS

Keep materials and equipment out of sight until needed. This prevents distraction and avoids clatter. Use trays for moving several small objects on and off the table. Do not let your hands or fingers hide what you are showing.

If you are demonstrating the making of anything, be sure to have the finished product as well as samples in various stages of completion.

Use the table as a reference point. Do not lift objects. Hold each visual on the table in the showing area for at least thirty seconds so that the viewer can get a good look. If a visual is worth looking at, it is worth looking at for at least thirty seconds. Have at least five sentences of comment about each picture.
When showing several objects on the table, bring the next object into view before setting aside the one just shown. This eliminates a shot of the bare table. Make all movements slowly and deliberately.

Talk slowly. Fast talk is confusing. Let the picture speak for itself. Look at the camera when you are talking or showing the viewer something.

When showing material on an easel, point slowly and stay long enough (about 30 seconds) so that the director can get a good closeup. Use a pencil for showing (rubber end) rather than a finger. The pencil hides less of the visual.

Do not ignore accidents if obvious. Explain briefly what happened and continue.

AT PROGRAM TIME

Be in the studio or production room with all your materials well ahead of time. The director will want to go through your script, checking on movement of the participants and the placement of visuals. He knows what can and cannot be done with cameras, crew, and space. Accept his decision or the quality of your production is likely to suffer.

Shortly before program time and after you have taken your position on the set, the director will hold up his finger for 'standby to begin'. Stand or sit quietly in your opening position until he points his finger at you. That's your signal or 'cue' to begin.
If the camera moves toward you (dollies in) it is getting a larger picture of what you are showing. If the camera backs off (dollies out) it is getting a more complete view of the set.

If you must use notes, they should never be more than key words or phrases, and the print large enough so that they can be read at a glance.

The lower center lens takes the picture and the red light on the camera is on when the camera is on the air. When the light on the other camera goes on casually turn and face it.

Don't fidget, stare around the studio, look nervous or look bored. Show a vital interest in what you are doing as well as what others on the program are saying and doing. You never know when your picture is on the air, even when you're not talking. Avoid unnecessary movement or noise during the program.

Never whisper a cue or direction to another person on the program with you. You cannot hide anything from either the camera or the mike. Simply ask a question in a normal voice which suggests his next point; for example, "John, don't you have a demonstration to show how circulation works?"

Never change the script order of using visuals. Cameras are set by the director according to your script. Any change may make it impossible to get your desired picture.

Ignore the movement and actions of the director or crew. The crew is following the director's orders through earphones. Viewers will be distracted if they see your eyes wander.
If the director or the producer gives you a signal do not acknowledge it by a shake of the head or an eye movement. Just do what the signal calls for. The signal will be held long enough so that they know you have seen it.

Time must be filled exactly. In a 30-minute program you have twenty-eight minutes. One minute is used by the announcer for the opening and one minute for the close. It is most important that you be able to slow down or speed up toward the end of the program so that you can get off the air exactly on time. That is why certain signals are used to guide you for the time left toward the end of the program. Be sure you understand the use of the signals. Do not stop in the middle of a sentence, but finish within seconds.

If you are offering free material, have an ADDRESS SLIDE, or visual. Indicate where the address slide is to be used in the script. Within the last few minutes is a good place to say: Send to (PROGRAM SERIES NAME) at this address. The slide will appear on the screen. Repeat what the address visual or slide says.

Wear shirts and blouses of pastels or gray, suits and dresses of medium contrast and conservative design, regular street make-up. Do not wear highly contrasting colors such as white shirt and black suit or stripes, busy patterns, or shiny jewelry.
PROGRAM PRODUCTION

Some production techniques can be acquired by almost anyone with little training. Most people can master the techniques of simple drawing, tracing, cutting-out, mounting and lettering. Additional training can be obtained in order to use high contrast photography, "technation", color photography, airbrushing, and silk screen printing. After mastering the simple techniques everyone should try to learn the more advanced methods so that the production of a greater variety of visuals becomes possible. An individual should produce many of his own visuals, in order to improve himself and the quality of his visuals.

Local production uses "tearsheets" as the primary source of illustration. A long range program can be developed in which these tearsheets are compiled, adapted and manipulated for a variety of visual images to be displayed in different ways. The basic techniques include mounting, lettering, coloring, and photography.

The vertical file is in constant evolution. Over a long period of time and by collecting from a variety of sources, new relationships and understandings of a complex process or event can be discovered. Old subject matter may suggest new approaches to the subject or new ways through which this information may be used with an audience. As he is tearsheeting, the communicator is not only gaining knowledge of new materials, but is also reviewing and re-enforcing his understanding of familiar subject matter.

Tearsheets are still pictures, maps, charts, diagrams, etc., obtained from such sources as magazines, calendars, brochures and other printed sources. Every individual should have an extensive file of illustrations collected from these sources. The value of the vertical file goes beyond the subject matter content of the tearsheet. Values are realized not only from the simple act of collecting, but also from the artistic format of the illustration, from the filing of these materials, and from using these illustrations in program production. Subject content is usually the basis for collecting the tearsheet and the means for keeping up with the continual expansion of knowledge.

Collecting and examining visual materials on the basis of subject matter will aid the communicator in reviewing and evaluating his program content, its sequence and scope. In the simple act of tearsheeting, the communicator will discover which sources are best for certain materials and subjects. Certain magazines are best for scientific materials, while others are best for materials in the social sciences. Some illustrations are more authentic in fact and presentation, which establishes the reliability of the source and illustrator.
By going through sources of illustrated materials, one becomes aware of the various types of visuals. Tearsheeting teaches one to see photographs, maps, graphs, cartoons, diagrams and drawings. By continual comparison, one becomes aware of what constitutes a good visual, effective presentation, and how various materials and techniques can be combined. Tearsheeting develops a visual-mindedness which carries over into the production of teaching visuals.

Illustrations suggest layouts for bulletin boards and ways of presenting numerical data. Articles explain new techniques for preparing overhead transparencies. The file contains examples of different uses of color: emphases, showing relationships, simulation of reality. Tearsheets show ways of using various art techniques, typography or readability, legibility, and impact.

Classification of the tearsheets develops a sharper consciousness of the content of what has been collected as well as possible uses. Besides the values gained from collecting, other ones develop during design and production. The most important of these is organization or programming. "What do I wish to say. To whom am I speaking? Why is this information important to the listener? What effect do I want to achieve? What medium of communication will best serve the situation?" Answers to these Laswellian questions determine the content, form, level, and method of the program presentation, and the producer is on the way to creating effective visuals.

The content and form of the visuals should be sketched out to determine what production techniques and what materials will be needed to create the artwork and the finished product. The most important value is "software" organization and design. Determining what he is going to say, how he is going to say it, and what effects he wishes to achieve, helps the program planner do a more effective job of communicating. He will be reviewing content, and evaluating the approach and techniques of the presentation. The content and form of the visual can be changed, as new approaches to the problem are suggested. New combination of materials and techniques reinforces the information which takes place in the learning process.

Once the illustrations have been located or created, the producer will utilize techniques of mounting, lettering, coloring and photography for format conversion. Mounting is a system of preservation and restoration, and makes the visual more attractive, permanent, and easier to use. Lettering identifies and adds supplementary information. The information can be emphasized and re-enforced. Coloring may be used for emphasis, identification,
classification, clarification, variation, and simulation of reality. Photographic techniques can convert opaque materials to transparencies. They are used to enlarge, reduce, or duplicate the original artwork or illustration.

Constant exposure to visualization helps the producer review and evaluate the content and the presentation method. "Is this what I want to say? Is this the best way of showing this information? Is the lettering legible? Does the color give the impression I wish to create?" By participating in developing the production, he becomes more familiar with the content and with the sequence of the various aspects of the presentation. This means a more effective presentation, and more effective communication.

The finished product is created because appropriate commercial visuals are not available. Producer designed visuals fit a specific local need for a specific local audience. They supplement and re-enforce instruction received from films, filmstrips, tapes, records, instructional television and teaching machines.

Local production stimulates more effective presentation. The producer's interest and enthusiasm in speaking or teaching will be increased. He will evaluate more critically what and how he is communicating. Local production stimulates inventiveness. New ways of using visual materials become familiar both in content and purpose. The producer finds his morale improved when he can say, "I made this visual. It really helped me speak". In other words, local production insures use.

PLANNING VISUALS

People who talk before groups often underestimate the need for showing. In TV what we see is as important as what we hear. Still, every visual must have a purpose.

Here are some of the many different types of visuals you can use. In all cases the size of the visuals should be indicated in the TV script outline (e.g., Lantern 12" high).
1. LIVE OBJECTS: The real thing rather than the model or picture of it is always the best type of visual, provided it is not too large to bring into the studio. Some large objects that have been used include a card catalog, an Egyptian mummy, an iron lung, a chicken hatchery and a milking machine.

2. ART: Replicas of art are usually copyrighted and must be used only with the written permission of the copyright owner. Actual art pieces should be discussed with the producer as to best use. Any art work to be hung should be brought to studio all ready to hang. Remember to describe the color during the program, since this is not color TV.

3. BOOKS: All material between the covers of a book is copyrighted. Signed permission from the Publisher for its use must be obtained one month before the program. This time permits clearance of alternative items when permission is not obtained. Pictures in books are not good if they are small or if a person is showing them On Set. If the picture covers most of the page it can best be shown by using an extra copy of the book on an easel off the set very close to the camera. This is "Off Set" use. Book jackets (no copyright or permission is needed for showing outside of book) show up well if they face camera and are on a desk or table top.
4. MAPS: Don't use commercial maps; the lines are too busy and confused. Make an outline map using bold lines of black or white on gray. Size 21" x 28" at least for "On Set" use.

5. POSTERS: Use heavy bold lines -- black or white on gray. Posters should be mounted on light cardboard. Indicate if they are to be hung on flats in studio or used on easels.

6. CHARTS: Use either black or white card. If chart is used Off Set try to have it 8 x 10" or 11 x 14". If you want to point to it On Set, have it 21 x 28". Any printing shown On Set must be at least TWO INCHES high. Make letters heavy.

7. LIVE GRAPHICS: A low cost visual method -- this refers to any drawing done while person is on camera. You can use heavy chalk on blackboard, grease pencil on plastic or charcoal on art board. Use heavy lines, wide margins and simple drawing. Any printing shown On Set must be at least TWO INCHES high. Make letters heavy.

8. STILL PICTURES: Dull finish, not shiny (matte) or else the pictures will need to be sprayed at studio so as not to reflect studio lights. They should be 8" high by 10" wide for Off Set use, mounted on an 11" by 14" gray card. If other sizes are used, maintain a ratio of three units high by four units wide. Use closeups rather than pictures taken at a distance. Pictures can be shown by the performer if the pictures are large enough, i.e., 16 x 20". This is On Set. If the
pictures are small they must be shown Off Set and handled by the director.

9. FLANNEL GRAPH: A 25" x 37" flannel-covered board is good for explaining economic material, plans, etc. Also good for adding visual material and removing it quickly. Arrangements or pictured articles can be changed quickly. Back your cutouts with flannel strip.

10. MAGNETIC BOARD: Is 28" x 30". You can place a lightweight map or picture over this, position and reposition objects on it easily, and remove them quickly.

11. BLACKBOARD FLAT: A flat with a 24" x 36" frame which can hold up to a dozen sheets of gray or black construction paper 23" x 35". Sheets can be prepared beforehand or a person can draw with chalk On Set and remove each sheet rather than erase as with blackboard or greenboard.

12. BLACKBOARD EASEL: Similar to No. 11 but a big easel rather than a flat.

13. GREENBOARD: 36" x 48" - like a slate blackboard it can be erased and is double sided.
SLIDES: 2" x 2" positives (only center area is transmitted). Should be numbered in order of use in script and tested before the program. Sometimes the slides do not show up well on TV and must be eliminated. If you are planning a program around the use of slides, plan on about four per minute and test slides before making up your script outline.

FILMSTRIPS: Permission to show filmstrips on TV must be obtained from the maker and filed at station. Strips must be tested. Include cues for filmstrips in your TV script. Filmstrips do not have sound. The person using them will have to look at pictures on a special TV set (monitor) in the studio and read captions from cards held in the hand as the pictures come on air. Each card should be numbered and contain sketch of the picture and the caption to avoid error.

FILM: Film may be either black or white or color film. It must be 16 mm and of sound speed which is 24 frames a second. A film or segment of a film (film clip) can be used without sound. You describe it in the studio while it is being run. You see it on a special TV set (monitor) in the studio while you talk about it. Permission must be obtained from the copyright owner. If you wish to show only a sound film without sound, you need written permission stating this from the copyright owner. After written permission has been obtained film must be tested and timed by producer. Footage count may differ by minutes either way; be prepared to adjust time.
ARTWORK SPECIFICATIONS FOR SLIDE AND CAMERA CARD

Board Size:  
11" x 14"

Artwork Area 7¾ x 10":  
It is advisable to keep content away from border and especially corners of artwork area.

Bleed:  
Extend background beyond artwork area. (2" on all sides)

EXAMPLE NO BLEED:  (Limits framing)

EXAMPLE BLEED:

Super Slide: Artwork done black on white card (Slide negative used)

Super Card: Artwork done white on black card

Artwork Values for Slides: Avoid: Contrast blocks of black and white except for supers.

Avoid: Use of white card for artwork background except for super slide.
When light background is desired, use off-white card. Popular choice is gray card (50%) which successfully compliments either black or white art.

**Artwork Values for Camera Cards:**

Use pastels (pale yellow, blue or buff) as opposed to pure white on artwork and background except for super card.

Specifications for slide artwork apply to art for Camera Cards.

**SLIDE SPECIFICATIONS:**

Specifications for 2 x 2 transparent slides, mounted in glass, are as follows:

- **Working Area:**
  - 1" x 23/32"

- Additional Information

  - **Audiotape:** Should be 7 1/2 r.p.m. - single track.
  - **Recordings:** 33, 45 or 78 - Monoaural.
  - **Film:** 16mm - 24 frames-per-second.
  - **Copy:**
    - 10 seconds - approximately 25 words.
    - 20 seconds - approximately 45 words.
    - 30 seconds - approximately 70 words.
    - 60 seconds - approximately 135 words.
FOR THE LADIES: Wear a simple tailored dress or blouse, free of frills. Hats that do not shade the face are acceptable if you feel comfortable in them. Avoid wearing black or white. Blues, grays and pastels make the most attractive picture. Regular street make-up is best. If you have light eyebrows and lashes, touch them up with medium brown eye make-up. Lipstick should be of a medium color. Don't wear jewelry that sparkles.

FOR MEN ONLY: Wear a medium color suit in which you feel comfortable and, if possible, a pastel shirt. White and dark colors cause "halo" effects. Don't wear tie pins, etc. that sparkle. Make-up is usually unnecessary unless there is a problem of 5 o'clock shadow.

WRITTEN PERMISSIONS FROM COPYRIGHT OWNERS

You must obtain permission for the use on television of anything inside of books, any pictures, art reproductions, and all or part of a moving picture film or film strip. This written permission must be sent to the producer with your scripts.

In asking publishers or holders of copyright for permission to use materials on Educational Television make it as easy for them to agree as possible.

Send them a form they can sign; enclose a self-addressed stamped envelope. Send requests out early -- at least one month before the program.

Here is a sample request for clearance to be sent to publishers:

(FOR BOOKS, ARTICLES, STORIES IN COLLECTIONS, POEMS, MUSIC, FILMS, ETC.)

To Publisher

Gentlemen:

We need your permission to use the following (book or music) on an educational television series entitled (program series title) to be presented on WQED, Pittsburgh, Pennsylvania, on (day, date, time).
May we have permission to use

<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Page(s)</th>
</tr>
</thead>
</table>

[YES] [NO] (Publisher’s Representative)
Signature

We will appreciate your signing and returning this letter at the earliest possible date.

Thank you for your courtesy.

Sincerely yours,

(Your signature)

(Your organization)
GRAPHICS PREPARATION

The following notes have been provided for a basic understanding of each of the techniques for preparing visualization of message content. With understanding should grow sophistication in use and thus greater satisfaction will accompany more extensive use of media communication.

Graphics:

A. Graphics are used as the basis of most media production.

B. Graphics for still projection
   a. These Graphics should be prepared approximately 1-2 weeks in advance because they are time consuming to prepare.
   b. Each Graphic should be considered for a format of horizontal proportions measuring 3 units by 4 units on the sides.
   c. The amount of copy per graphic should be kept to a reasonably small amount to maintain legibility in the classroom. Although in duplicating pages, tables, forms, etc. it may be necessary to produce an entire projection on small type.
   d. Lettering is limited to 3 possibilities.
      1. Hand lettering for special purposes.
      2. Transfer-type or press-type.
      3. Leroy or guide lettering.
e. Charts, graphs, artwork, etc. can also be performed.
f. Color is somewhat limited.
   The graphics themselves may be completed in anything from black to full color.

Reproduction of Graphics for Still Projection:

A. Overhead transparencies can only be produced from a 7 1/4" x 10" format.

a. The original artwork or master must be 7 1/4" x 10" preferably in a horizontal format.
b. Overhead transparencies cannot be produced in full color in the Media Lab, but can be done at Hillman.
c. Separate colors may be produced from black and white masters.
   Separate color overlays may be produced to give a full color affect.
d. Full color production can only be hand painted on transparent film.
e. Transparencies are produced on Xerox machine, Thermofax or Technifax Diazo process.
B. 3½" x 4" lantern slides.

- Lantern slides may be taken from black and white, half-tone, high contrast, or color graphics.
- This is a photographic process and will only produce black and white slides. Color film has not yet been made for this process.
- Dimensions for masters should be kept between 3½" x 4" to 20" x 30" in a horizontal format.
- Also small 3-dimensional objects may be photographed.
  
  Size limitations should be determined by sight at the lab.

C. 2" x 2" slides (for use in the carousel projector).

- 2" x 2" slides may be taken from any type of graphic.
- The lab has two ways of producing 2" x 2" slides.
  1. The 35 mm reflex camera.
     a. Visual dimensions should be kept from 10" x 15" to any size larger.
     b. This process will produce full color visuals.
2. The Polaroid MP-3 camera (same as 3½" x 4" process).
Dimensions must be maintained no larger than 5" x 7".

Projection of still visuals:

A. For good availability of projectors, an operator and set-up time, a week's advanced notice would be preferred for a proper showing.

B. Types of projectors available at lab.
   a. Two carousel 2" x 2" projectors.
      Capacity of 80 slides per tray.
   b. One Cavalcade 2" x 2" projector.
      Capacity 30 slides per tray.
   c. One 3-3/4" x 4" lantern projector.
      Manually operated.
   d. Two Visu-Com overhead projectors.
      Format 7" x 10" horizontal format stage only.
   e. One Projection Optics overhead projector.
      10" x 10" format stage.
   f. One Beseler Opaque projector.
      For projecting opaque visuals in a format up to 10" x 10".
Sound motion pictures (16 mm):

A. The Media Lab has a small collection of films available for usage at the Library School. These films should be confirmed by a week's advanced notice.

B. Commercial or Educational films are available for renting or borrowing from various universities, regional centers, or commercial distributors. These films should be confirmed in as many as two months in advance to ensure delivery. Currently the lab has authorization to order films directly from its own office.

C. Cinescopes are sound motion pictures and can be copied from video tapes which have been previously recorded.
   a. These 16 mm films can be used more readily than video tapes at places where video tape playback equipment is less available.
   b. At the present time, this is the only means of producing a 16 mm motion picture at the Library School.
D. Equipment for 16 mm film showings.

a. A 16 mm sound movie projector.
   16 mm projectors are easily used by anyone.
   a. They usually have their own set of individual operating instructions.
      Threading of film through the projector is usually the same pattern. Care must be taken in this process to prevent film breakage and a bad showing.
   b. Special thought must be taken to maintain extra projection bulbs on location of a showing in case of bulb failure.

E. Operation of equipment.
   a. The location should be well ventilated and darkened.
   b. Showings should be set up minutes in advance to insure no failures, proper focus of image or no sound failures.
   c. For showing on rear screens, much more preparation is needed to reverse image and connect the sound system.
      Rear screen movie projectors are preferable to eliminate projector operation noise.

F. Rented or borrowed films should be returned on schedule in order to maintain the film schedule at the next location for showing.
**Video Taping:**

A. Recording.
   a. Recording productions should be planned a week in advance.
   b. Graphics, films, slides, transparencies or charts and graphs should be completed in the correct format of 3 units by 4 units horizontally with a 1 3/4" bleed area or border.
   c. Graphics should be tested for recording settings and legibility of playback on TV monitors.
   d. Lettering should be legible enough for an average person to read from a 27" screen at 20 feet.
e. If more type is needed to fit on screens they should be made on additional graphics.

f. For large charts, graphs, etc., where the entire image must appear on the screen, special camera panning, zooming and/or special camera effects must be utilized. Extra time should be allotted for the camera to follow along each explained part of the visual so that the recorded image may communicate with the viewer.

g. A great amount of time is needed in preparation for setting and proofing-out equipment.
   All electrical connections must be checked and made sure that they work.
   Camera frequencies and controls must be set for the proper lighting.
   Audio microphones must be set to pick up audio for entire production.
   Intercom should be set up between camera operators and equipment operator.
   A written script should be checked to make sure of comprehension.
   A final cleaning and checking of equipment is needed just prior to recording.

h. The recording must run from beginning to end for best results.
   Due to the fact that our equipment has no electronic editing, the recording process should not stop during the recording session. Stopping the recorder and starting again will cause a bad break in the picture and result in several vertical flips in the TV monitor. Once the recording is completed it must be checked throughout. This is the only method of assurance that the machine recorded on the tape properly.
   It is important to note that there is no method of insurance in the duration of recording to know if the machine is recording properly.

B. Playback of tapes.
   a. TV monitors and sound system should be set up approximately 30 minutes ahead of time.
   b. Enough monitors should be set up so that everyone can see the smallest detail on either side or top and bottom of the screen.
1. A trial run should be made to set volumes, tracking control and picture brightness and contrast controls.
2. An intercom should be set up between the classroom and the control room for any case of audio or video failure.

C. Storage of tapes.
   a. Video tapes should be stored in a vertical (standing book) position. They should be ideally stored in a cool dry place.
   b. Special care should be taken to avoid unnecessary rough handling. Poor storage will result in damaged tapes and will cause a poor playback.

D. Equipment.
   a. The equipment should be cleaned after each operating hour.
   b. The equipment should be checked over and serviced at a minimum of 3 months. Neglect in cleaning or servicing will always result in a poor quality of playback and recording.
   c. Electrical connections. All connections should be soldered and made permanent. Constant moving, plugging and unplugging of connections will result in poor operation. It is ideal to have all video taping equipment set up permanently.

Rear Screen Projection:
All programs should be planned in advance. Certain physical and technical limitations occur on most of the projectors used. Only one projector may be turned on and off from the classroom. This is due to the possible overloading of a circuit. If more than one projector is to be operated an operator should be available behind the screens to aid in the production. Special sound systems need to be implemented: To communicate from the lecturer to the operator behind the screen to cue the slides. To project sound from a sound motion picture.

**AVOID DISAPPOINTMENT**

1. Schedule EARLY with the media lab secretary.

2. SCRIPT to media technician 1 WEEK before rehearsal.

3. REHEARSE 3 DAYS before production deadline.
GLOSSARY

AD LIB - An action or speech that has no written script.

ANNO - In a script, indicates announcer's part either on or off cameras.

ASPECT RATIO - 3 units high to 4 units wide like your television screen, with the long side on the horizontal.

AUDIO - Refers to the part of the television program that is heard.

BOOM MIKE - Microphone suspended on the end of a movable metal arm attached to a stand. The boom operator adjusts the boom toward the person speaking according to the director's instructions.

BUSINESS - Visual action indicated by the TV writer or developed by the director or performer to clarify the character or situation.

BUSY - A term used to describe the background or other objects making up the television picture that are so arranged as to distract your attention from the main object of interest.

CAMERA (TV) - Unit on a dolly with three or four lenses on the front of it. The camera picks up the image and transforms it into electrical impulses. Camera is operated by cameraman who receives his instruction from the director through his earphones.

CAMERA LIGHT (TALLEY LIGHT) - Small light on front of camera which is lit when camera is on the air.

CHECK LIST - Mimeographed form containing information vital to the production.

"CLEAR" - Spoken by floor manager at the end of the program means that studio is off the air. Don't move or talk until "clear" signal is heard.

COUNT DOWN - 10 seconds prior to air on tape time.

C.U. (CLOSE UP) - Very narrow angle picture; the object viewed or part of it fills the TV screen; for example: a hand, a book, a plant, a toy or chart.
CUE - A sentence or action which signals the person in front of
the camera to begin action, stop action, etc.

CYCLORAMA - A rounded screen used as a background area.

DIRECTOR - In charge of the program while it is on the air.

DOLLY (noun) - A stand on wheels on which a camera or boom microphone is mounted.

DOLLY (verb) - To move the camera in toward, away, right or left,
from the subject on the dolly.

DRY RUN (Rehearsal) - Rehearsal without cameras.

EASEL - A stand on which pictures, charts, maps, etc. can be
placed. Can be used either "on" or "off" set.

FILL MATERIAL - Extra material indicated in the script to be used
in case program runs under the time planned.

FILM - 8 mm - small size home movie film suitable for professional
use.
16 mm - standard movie film for TV. Can be used with or
without sound-on-film but must be taken at 24 frames
per second (sound speed).
35 mm - size used for film strips and 2" x 2" slides.

FILM CUE - A definite statement or action indicated in script
which signals the director to begin the motion picture
planned for this point.

FILM CLIP - A section clipped from a motion picture which is shown
independently of the rest of the reel. 16 mm only can be used,
shot at 24 frames per second.

FILM STRIP - Several 35 mm frames shown individually. Pictures are
described by performer in the studio.

FLAT - Large cloth covered frame used as the background of the set
if desired.

FLANNEL GRAPH - 25" x 37" board covered with flannel and mounted
on an easel. Cutouts backed with strips of flannel or sand-
paper will adhere to the board, but can be moved from place
to place on it and easily removed.
FLIP CARD - Photo or art work on cardboard (3 x 4 ratio). Cards are numbered on front upper right corner and placed in sequence so they can be pulled off one at a time.


FLOOR PLAN - A plan of the set showing location of furniture and other props. Used to plot action before rehearsal.

FORMAT - Outline of a program with all ingredients listed.

GIVE AWAY - Materials that are offered free to the TV audience.

KINESCOPE - A sound motion picture, photographed from the kinescope or picture tube of a TV, while playback of a video tape is in process on the TV.

MAGNETIC BOARD - 28" x 30" metallic board. Maps and drawings on light paper can be placed on the board and objects attached to small magnets can be moved from place to place on the paper.

MONITOR - A TV set used in the studio for checking what is going out over the air, but cannot pick up its own signal as your home set can. A monitor is also used in the studio for cueing.

OFF SET - An area away from the scene of action. The camera can get in very close to visuals placed Off Set. The viewer sees these Off Set visuals while the performer On Set talks but is not seen. Performer can see Off Set visuals he is talking about on studio monitor.

ON CAMERA - Refers to person or visual being photographed by the camera on the air.

ON SET - A small area where the action takes place, i.e. the studio.

PRODUCER - Helps you organize material for TV production. Channels scripts and floor plans to director. Is in the studio to assist you on the day your program is telecast.

PROP - Short for "properties". The furniture, visuals, etc. required to make a desired set.

"ROLL FILM" - Director's cue for projectionist to start film on the air.
SCRIPT - See "TELEVISION SCRIPT OUTLINE".

SET - Area within which the action takes place; on TV a very com-pressed space, i.e. the studio.

SHOT (noun) - A picture taken by a TV camera.

SKIT - A brief acting out of a situation within a program.

SLIDES - 35 mm positive film mounted on a 2" x 2" frame. May con-tain pictures and/or titles.

STAND-BY - (noun) - Anything held in reserve to be used only if necessary.

"STAND BY" (verb) - Instruction that program is about to go on the air.

STILL - Photograph or other picture used for illustration on TV program. It should be matte or dull finish so as to avoid reflecting lights into the camera.

STRETCH - To slow down or use "fill" material so as to take more time.

STRIKE (verb) - Remove the props in a staging area; generally, to clear the area for another program.

TELEVISION SCRIPT OUTLINE - An outline of a TV program. The left-hand of the page indicates what is being seen and the right-half outlines what is being said.

VIDEO - Refers to that part of the TV program that is seen.

VIDEO TAPE - Magnetic tape on which audio and video is recorded.

VIEWER - Person watching your program in front of a television set.

WIND UP - Circular motion of arm by floor manager signalling person to finish sentence; stop and stay put until "clear".