
Audio-Visual Materials in the Library

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IT IS WITHIN THE IMMEDIATE MEMORY of most librarians when there was little consideration given to the place of audio-visual materials in the library program, since the sole function of the library was construed to be the dissemination of knowledge through the medium of the printed word. Today almost all libraries are making some use of audio-visual materials, in the form of micro-film, filmstrips, 16 mm. films, tape recorders, phonograph records or ceiling projectors. Audio-visual materials are now recognized as another medium of communications, and are incorporated into the service program of most libraries. As the result of intriguing electronic developments, librarians are now standing at the threshold of a new era wherein these devices will assume a far more important function in the operation of the library. The following paragraphs will view the present situation with a brief glance at the already predictable future.

One of the most pronounced trends has been the establishment of audio-visual centers in many libraries, occasionally including both the art and music departments as major subdivisions.

These centers offer an extensive collection of audio-visual catalogs and guides, films, filmstrips, phonograph records, and such facilities as preview booths, listening rooms, tape recorders, opaque projectors and other audio-visual devices.

With the increasing number of states requiring audio-visual instruction as part of the certification requirement, many colleges and universities are offering courses in the field. There is a sharp divergence in thinking on the subject of the library's responsibility in the audio-visual field. One faction holds that the material is not within the library's bailiwick, while those librarians who are engaged in the work feel a natural affinity toward the subject. The audio-visual center as a department of the library has proved most successful in many large operations.

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Librarians without a background in audio-visual devices frequently feel at a loss when faced with the problem of selecting the necessary equipment to establish an audio-visual center. Unfortunately, there are no critical evaluations of audio-visual equipment currently available to serve as a guide. This problem is under consideration by the Audio-Visual Round Table of the American Library Association, and it is hoped that some solution will be forthcoming.

In the interim, interested librarians should participate in the activities of audio-visual groups in order to profit from the experiences of those actively engaged in the field.

In the following discussion of audio-visual equipment a few of the infinite number of possible applications of audio-visual materials will be discussed, along with certain criteria which have been developed to guide in the selection of equipment.

Today 16 mm. film is playing an increasingly important part in the communication of ideas. Each year the major film producers present an increasingly valuable selection of motion picture film to supplement books and other printed materials in the extension of learning. The medium has also been used both by and for libraries to disseminate information concerning the utilization of their services. Public libraries entered the audio-visual field as early as the 1920's, but it was not until 1942 when a substantial number of libraries made film lending one of their regular services. With the impetus provided by the Carnegie Corporation, film circuits were established in Missouri and Ohio, and at the present time over 200 public libraries participate in nineteen separate film circuit programs. In addition, some seventy-two libraries maintain their own independent film lending program.

In order to encourage the use of the films, many libraries provide regularly scheduled film showings, group discussion leaders, and in some instances projector rental service.

A few public libraries, and many universities produce their own film for both personal use and general distribution, and a few industrial libraries are charged with the responsibility of distributing their sponsored films to libraries, schools, and community organizations.

Libraries which do not maintain their own film collections frequently provide referral service using the catalogs of university film bureaus and commercial distributors, or such reference tools as the *Educational Film Guide*, a Wilson publication, and the *Blue Book of Educational Films*, published by *Educational Screen*.

There are a number of 16 mm. projectors available, with no more

than five worthy of serious consideration. The cost of most projectors is competitive and they are of comparable weight. The popular brands are of sturdy construction and generally require little maintenance, although repair facilities should be immediately available in the event of a breakdown. In selecting any equipment, there should be a side-by-side comparison, since it is the only logical way of comparing such factors as ease of operation, procedure for set-up and threading, noise of operation, access to controls, quality of sound reproduction and rewind process. A noisy projector is most disconcerting, and such seldom used features as a clutch for single frame viewing and reverse should not cloud the obvious disadvantages.

All of the popular makes of projectors have provision for the use of microphone, phonograph, and radio tuner through the amplification system. In installations where the machine is to be permanently mounted, it is desirable to provide permanently mounted auxiliary speakers which can be connected to the projector to be used instead of the unit's own speaker which is generally of limited quality.

As with motion picture projectors, there are a number of filmstrip projectors available, but only a few worthy of consideration. Once again, a side-by-side comparison of the products is to be desired. The prospective purchaser can then compare brilliance of image, sturdiness of construction, ease of operation, and amount of heat reaching the surface of the slide or filmstrip. In recent tests, the temperature of slides being projected in two makes of equipment was in excess of 200 degrees. Such heat would tend to do considerable damage to any transparency.

The varying quality of the lenses needs to be observed, with particular attention given to aberrations and true color reproduction. Projectors purchased for library use should be capable of handling both 2 x 2" slides and 35 mm. filmstrip. The ease of shifting from slide to filmstrip operation and the construction of the slide mechanism should be given careful scrutiny.

A great number of the libraries who have entered the audio-visual field have done so through the medium of phonograph records. The revival of interest in phonograph records can be dated from the introduction of the longplay records by the Columbia Record Company in 1948. With increased fidelity, longer, uninterrupted playing time and ease of storage, phonograph records resumed their former position as a principal source of music listening.

This innovation also heralded the beginning of the high fidelity era,

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with the new vocabulary of "woofer," "tweeter," "back-loaded horn," and other such phrases.

Some libraries supply records only for circulation, while others provide earphone connections, listening booths or entire rooms devoted to presentation of recorded concerts. In a few situations, the entire library is wired so as to permit a background of pleasant listening throughout the building.

The major number of libraries limit their record collections to long-play discs because of their inherent advantages. Where facilities for record listening are provided, versatile equipment is not required. Any phonograph can be adapted for earphone listening by the addition of inexpensive phone plugs along a line attached to the speaker plug. Such an installation along the edge of a table would permit its use as both a study and listening table.

It is possible for libraries to venture into the high fidelity field without making too great an investment in equipment. Unfortunately there are no regulations regarding the use of the term "high fidelity" in advertising, so the novice should consult the several readable books on the subject, as well as seeking the advice of a reputable dealer. Several of the large electronic distributors have elaborate catalogs which will serve as a guide in equipment selection.

Librarians desiring to obtain a true high fidelity installation are encouraged to assemble the component parts rather than obtain the one-cabinet commercial unit which is high fidelity in name only. No true high fidelity signal is possible when the record turntable and speaker are in the same enclosure. Since the speaker cabinet is as important as the speaker, considerable attention should be given to the selection of both units. The number of speakers in an enclosure is not the sole criteria of quality. Coaxial (woofer and tweeter) or triaxial (woofer, midrange and tweeter) speakers are necessary for quality reproduction.

To preserve the original fidelity of the record one should consider only the diamond needle. Diamond needles are seldom provided as original equipment on phonographs, but must be purchased separately. The osmium or sapphire needles which are provided begin to cause damage after 20 or 65 hours of record playing respectively, while the diamond is good for a minimum of some 800 hours. There is no such thing as a permanent needle, nor is there one needle which will satisfactorily play both standard and microgroove records.

Television is not a completely new medium of communication, the first experiments having been conducted during the latter part of the

nineteenth century. The last decade, however, has witnessed the development of the black and white screen from squint to room size, and the advent of color television. A network of coaxial cables now interconnects the country, permitting a communality of viewing experience. The recent advent of educational television has drawn many libraries into the arena, either through production of their own programs, or by the simple expedient of providing a viewing area. The new facet, educational television, is designed to provide both the in-school and out-of-school viewers with the incentive to either broaden or continue his learning experience. Libraries can encourage these prospective patrons by making the necessary materials available in a convenient and attractive manner.

Closed-circuit television, which is a television network whose viewers are confined to those sets connected to the same coaxial cable, is finding an ever-increasing application at the college level. At the present time classes are conducted by means of this system, with the master teacher shared by a number of viewers, either in the same or in distant institutions. In other situations, experiments which could be viewed only by small groups can now be electronically magnified so that the entire classroom or a series of classrooms may view simultaneously. While these applications of closed-circuit television may have no immediate application to the library, it is conceivable that some future date will see reference work done by television. Visualize, for example, the classroom situation wherein there might arise a question on the definition of a word, the location of a specific area, or the detail of some drawing or picture. Through a coaxial cable, the instructor could request the necessary material from the librarian via the intercom. The class could then view the projected image on the television screen. Perhaps this will not take place tomorrow, but certainly it will happen in the foreseeable future.

At the present time, it is no longer necessary for a class, in order to view a film, to be subject to the confusion of having a projector brought into the classroom. Instead, the film can be projected into the lense of a television camera and viewed wherever desired on the television screen. School architects are already looking forward to the day when auditoriums will be a thing of the past. The guest lecturer will make his appearance in the school's television studio and be viewed by the interested classes in their own rooms.

These are not idle dreams, but reality as of today. The modern videcon television camera is about the size of a shoebox and can be operated by persons with only an elementary knowledge of

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television. Ordinary classroom lighting is generally adequate and no expensive fixtures are required. Such television cameras are presently available for some \$800.00, or about the cost of two 16 mm. projectors. The coaxial cable needed to connect the camera with the television receiver costs only about seven cents a foot. There is a completely remote television camera available which can be operated by persons outside the room in which the image is being televised. This would facilitate its use in situations where the presence of a cameraman would tend to disrupt the classroom. With this installation it would be possible to observe a student or master teacher without disturbing the normal classroom situation.

The recent announcement by Ampex of a tape recorder which will record both the sound and picture of a television program opens an entirely new vista for the use of these media. When the equipment is available on the commercial market, it will be possible for libraries to have their own collection of television documentaries, special event programs, local productions, and other noteworthy programs.

For the present, however, there is available for the conventional tape recorder a vast collection of pre-recorded tapes covering a wide array of musical selections, plays, lectures, current events, and other materials which should be available from the library.

Many state universities offer a tape recording service, as does the National Tape Repository at Kent University, Kent, Ohio, which provides copies of the desired tapes for a very nominal fee.

To prevent the accidental erasure of these tapes, libraries can acquire tape playbacks, which will play the tape without any danger of erasure. This equipment is less expensive than the conventional tape recorder since it has no recording mechanism.

Few institutions are making full use of the tape recorder. A tape library of the sounds of our time would prove invaluable to historians of some future date. Those who have heard the Edward R. Murrow series *I Can Hear It Now* will recall the pleasure of hearing again recently forgotten events.

Within the foreseeable future, the tape recorder will doubtless replace the phonograph record as the custodian of recorded sound. Tape has many inherent advantages, including the lack of surface noise, ease of storage, fidelity of reproduction, and the facility which permits re-use of the tape when desired.

The usual commercial tape recorder is a dual-track machine capable of handling a 7" tape at both 3¾" and 7½" per second. The faster tape speed gives the increased frequency response desired for recording

musical presentations with their wider tonal range. Professional tape recorders have tape speeds of fifteen and thirty inches per second, which are required to give the ultimate in sound reproduction. There are a number of tape recorders on the market, and the selection should be made with the greatest of care. The equipment should have a smoothly operating tape control mechanism, a fast forward and fast rewind, and an output plug for an external speaker. The machine should be of sturdy construction, with a frequency response of from 50 to 10,000 cycles per second. Although there is a degree of fallacy in most specifications, the sound-to-noise should be no less than 50 decibels with distortion of ± 2 decibels or less. In the purchase of a tape recorder, there is no substitute for quality.

The future of audio-visual devices will be a fascinating one in view of the new developments already in the experimental stage. A new device now being tested will transmit a film via microwave to the classroom in response to a coded signal from the instructor. In the central library, the "film" will be in the form of a small card with an iron oxide surface which will store both the audio and video signals.

With television in color and stored on magnetic tape, films available at the flick of a finger and problems of scheduling, personnel, and human inefficiency minimized, the age of electronic miracles is here. Librarians who would continue to offer their patrons from the full storehouse of knowledge need but to venture into the audio-visual field for all the supplements to the printed page.