



# The Selection, Processing and Storage of Non-Print Materials: Aids, Indexes and Guidelines

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WITHIN THE NEXT DECADE, LIBRARY service should undergo the most spectacular transformation it has experienced since the invention of the printing press. Many libraries have already begun in earnest a transition from the distribution of the printed page as their primary task to the provision of computer display and printout services. Instructional and documentary films, phonodiscs, and pre-recorded tapes are standard fare in educational libraries, and some libraries have even gone so far as to establish Telex (Western Union) or TWX (Teletypewriter Exchange System) networks which use teletypewriters as a means of linking libraries together for long-distance communication in order to expedite inter-library loan or computerize materials in anticipation of beginning a data bank and participating in a data transmission network. Nor will it be long before computer terminals and graphic transmission devices have become as familiar as check-out desks and card catalogs, or before data networks are in full operation and library service has been extended directly into the home through dial-access information retrieval systems, both audio and video. Some library patrons will be able to have access to the facilities of their library and national resources directly from homes and offices.

Before the turn of the present century, it is possible that the local or institutional library as we know it now will no longer exist. It will have become a switching center on a vast information network and will be capable of providing a hard copy computer printout of any document, of receiving and transmitting both audio and video

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signals. This library of the future will be located in a building which incorporates a large area for sophisticated computers, flashing lights, and remote terminal stations with a smaller room for citizens who still enjoy the inherent pleasures of browsing through bookstacks.

Thus, as libraries evolve from repositories of printed materials into learning resource centers offering both book and non-book materials, many librarians will increasingly be responsible for learning and handling the intricacies of educational media. Although there is an affinity between librarians and media specialists, the librarian is armed with comprehensive book lists, definitive bibliographies and a wealth of experience, while new media specialists often appear lost in an uncharted wilderness. There are no inclusive listings of available materials, few critical reviews and even less professional literature about selection, processing, and dissemination. It is ironic that the availability of selection tools is in inverse ratio to the cost of the materials.

The *Educational Media Index*,<sup>1</sup> heralded as a complete resource guide for all media, was not continued after its disappointing debut. There are, however, definite plans for reviving this publication in a computer-based format, and a first by-product of this work, an *Index to 16mm Educational Films*, has been issued by the National Information Center for Educational Media, a new organization affiliated with the University of Southern California. Meanwhile, the *Audio-Visual Equipment Directory*,<sup>2</sup> published by the National Audio-Visual Association, is useful since it lists the products of all major manufacturers of audio-visual equipment and accessories, with specifications and sources.

Most information on currently released educational films comes directly from producers. The *Landers Film Reviews*<sup>3</sup> provide substantive critical reviews, while the Educational Film Library Association cards, which are sent out monthly to members, have a very wide coverage. Although most film producers allow prospective purchasers preview privileges, the subject specialists who should do the previewing are not always readily available. Public libraries inaugurating a film collection should consult the ALA's *Films for Libraries*,<sup>4</sup> and the recommendations of metropolitan libraries for help in setting up their basic collections. However, it is more difficult for college and university libraries to begin such collections since no lists of recommended acquisitions are available. Most college and university libraries use circulation statistics to guide their acquisition policies, but even this

information is not generally circulated. However, Illinois, Indiana, Syracuse, Michigan and Florida State Universities do publish catalogs and these would be the best guides to beginning an educational film collection.

Eight mm. single-concept or brief films are now being introduced into the library field. Supplementing these silent films are longer cartridge films with optical or magnetic sound and the less popular 8mm. copies of full-length educational titles. The Technicolor Corporation publishes the most comprehensive list of 8mm. producers.<sup>5</sup>

There are both inclusive indexes and critical evaluations to help in the acquisition of phonodiscs and pre-recorded tapes. The *Schwann Long Playing Record Catalog*<sup>6</sup> provides a complete listing of commercial discs, and the *Hi Fi/Stereo Review's* annual "Basic Repertoire"<sup>7</sup> is one of the more attractive listings of selected music on both records and tape. The *Harrison Catalog of Stereophonic Tapes*<sup>8</sup> lists all currently available professionally produced tapes. The National Center for Audio Tapes at the University of Colorado, Boulder, is the largest source of non-commercial educational tapes. This collection of materials gathered from educational sources is available through most state tape libraries. The *Audio-Visual Equipment Directory*<sup>2</sup> lists the products of all major manufacturers of audio-visual equipment and accessories, with specifications and sources.

One of the major bottlenecks in getting educational media from the producer to the patron has always been the cataloging and catalog production processes. For instance, material which has been rushed to market by the producer is frequently permitted to languish in the domain of the cataloger. Furthermore, the majority of audio-visual specialists have fallen into the practice of cataloging their own material, duplicating the almost identical efforts of other catalogers. Although Library of Congress cards are available for films, filmstrips, and phonodiscs, they are not used by the majority of media centers. In most instances the cards, admittedly, are not available for some time after the material has been released, and even then they frequently do not contain the information most media specialists consider necessary.

It is a hopeful sign in speeding up the delivery of media from the producer to the patron that libraries are now availing themselves of electronic typesetting and computer tape storage systems which are faster and more flexible than keypunched cards and standing type. The electronic typesetting system of catalog production, now being

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used by seven major film libraries, emanates from the facilities of Perry Publications, West Palm Beach, Florida.<sup>9</sup> Here, catalog information is fed directly from typewritten pages into the computer through a Retina Reader, which eliminates the necessity for key-punching. From the information supplied in each cataloging entry, the computer develops a subject and alphabetical index which is then justified, hyphenated and relayed to the phototypesetters which prepare the copy at the rate of eight hundred words per minute. Thus, a task which formerly required several months of typesetting is now accomplished in a matter of hours. Since this electronic typesetting system sets four hundred pages of book-size catalog material in less than twenty minutes, it will be feasible to update film catalogs frequently.

By using the second system—storing catalog information on computer tape rather than in standing type—special subject supplements and other listings can be prepared in any desired format. A number of libraries are now using computers, rather than the conventional card files, to prepare subject catalogs of their collections. When using this system, libraries need only list the titles in their collection and let the computer prepare their catalogs. Computer tape storage is also the first step in the establishment of a data bank which will permit an immediate response from any remote computer console regarding any medium.

As they learn of these new systems, an increasing number of centers are turning to computers to expedite the booking, invoicing and cataloging of audio-visual materials. For example, Syracuse University has developed a state-wide computer-based film library network which permits that large library to serve as the backup for the local and regional libraries. When the desired film is not available from the local or regional library, the computer requests a print from the Syracuse Library. The film will either be booked on the date requested or the patron informed of the first available date.

To coordinate the several efforts in this direction, Anna L. Hyer, Executive Secretary of the Department of Audiovisual Instruction, National Education Association, organized a Task Force on Computerized Booking and Cataloging of Media to develop rules for the cataloging and computerization of media information. The suggestions of this group are now being reviewed by the several subcommittees and will soon be shared with interested groups. Once rules have been adopted, it will be possible to share booking and cataloging

information over data networks in order to improve utilization and eliminate unnecessary duplication of effort. It is hoped that this will help offset some of the cataloging problems discussed in Jay Daily's article in this issue.

Since new innovations are so frequent in the educational media field, storage and dissemination areas must be especially flexible. In designing facilities, the librarian must bear in mind that regional and nationwide data networks are fast approaching realization. The Inter-university Communications Council (EDUCOM) is working toward the establishment of an EDUNET connecting the educational resources and data banks of the nation. And yet, much current library construction does not make provision for the handling of new media resources already available and blandly ignores the telecommunications developments which are certain to become commonplace within the next decade. Stephens College Library is a notable exception; it has provided raceways in the floor of its new building which will permit the structure to be adapted to whatever technology may develop. Thus, libraries must be planned for the future while still meeting the storage and retrieval requirements of the present.

Most audio-visual materials are stored by type and size, and shelved either by accession or Dewey number in specially designed cabinetry. Commercially made storage facilities are generally superior and less expensive than prototypes constructed by building custodians. The arrangement by Dewey is a carry-over from book librarianship and is especially cumbersome in handling media. Books may be examined in the stack area, but media must be used with the aid of projection or listening devices, so that shelving by subject loses much of its seeming advantage. No improvements in the physical retrieval of materials are currently being developed, as far is known, and an accession number system is much simpler for the average layman to comprehend and also gives some indication of the age of the items.

Temperature, humidity and dirt are of major concern when planning for the physical well-being of audio-visual materials. These materials should never be stored in basements or other areas likely to have high humidity or in locations which tend to become unusually warm. Radiators, steam pipes and hot air registers all create problems. Film and equipment rooms should have filtered air whenever possible, with the humidity 40 percent at a temperature of 70 degrees. As there is an inherent dust problem with concrete floors, they should be sealed, painted or covered with tile or carpets. Frequently

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used films should be stored vertically in metal or plastic cans; films in long-term storage should be maintained at 50 degrees with the reels stacked horizontally, never more than six or eight high.<sup>10</sup>

Pre-recorded audio tapes should remain magnetized unless they are erased by magnetic means. They should not be stored in the vicinity of heavy wiring, machinery or in cabinets with magnetic door latches. Occasional playing of stored tapes will improve their storage characteristics, and tapes which have been in storage should be re-wound before being played. Polyester tape is less likely to be adversely affected by heat and humidity than tape with acetate backing. High temperatures seriously increase the printing effect—the transfer of magnetic effect from one layer to another. Tapes in long-term storage should be placed in a can sealed with plastic tape, although tape exposed to extreme temperatures or humidity can usually be restored by being exposed to normal conditions for sixteen to twenty-four hours. It is usually not necessary to clean magnetic tape, although care should be taken to keep the heads, capstan and tape guides of the recorders clean to assure a longer life for the tapes. Audio tapes subject to heavy use should be recorded on the new sandwich tapes which have a layer of plastic over the iron oxide to protect the tape against wear.

The first distribution system for the transmission of pre-recorded tapes was developed by the Louisville Public Library using leased telephone lines. Since that time, several libraries have developed dial-access information retrieval systems which permit their patrons to select both audio and television programs from telephone terminals in remote listening carrels in the library. This service may also be designed to interface with the local telephone company in order to make pre-recorded audio tapes available to the general public.

The number of tapes that can be played simultaneously is determined by the number of tape recorder tracks available. Ampex has developed the "Random Access Audio System" which can provide a maximum of 224 master programs of fifteen minutes each, available with a maximum delay of one minute. When a program is dialed, the high speed duplicator records the program on the tape unit in the individual carrels.<sup>11</sup>

The most recent innovation in the media field is the portable videotape recorder which has already become popular with schools and is gradually invading the home market as its price comes within the consumer budget. The videotape recorder will begin to compete with

the home movie this fall when it appears with a new purse-sized camera and color tape. As these units become adjuncts to the home television set, patrons will soon be requesting videotapes in addition to 16mm. films. A most vexing problem with videotape is that recordings made on one manufacturer's equipment cannot be played on the equipment of another manufacturer. With only a few of the brands is it possible to record a tape on one machine and play it back on another from a different manufacturer. The need for compatible equipment is critical, but there are no indications that it will be immediately forthcoming. With the present equipment, however, libraries can develop their own files of local material, oral history interviews, and similar resources.

In addition to the audio and video distribution systems, several graphic transmission systems have been introduced which will have a profound effect on the sharing of library resources. Xerox,<sup>12</sup> Alden<sup>13</sup> and others have announced the availability of equipment which will transmit graphic images by voice-grade telephone lines. However, most of these systems require that copies be made of the pages to be transmitted. The ITT Videx system<sup>14</sup> permits photographs to be taken and transmitted in twenty to forty seconds, depending upon the quality desired, and audio conversations to take place between picture transmissions. RCA is currently testing a device through which the home television set acts as the receiver for any one of four simultaneous transmissions of graphic material which is reproduced by electrostatic equipment.<sup>15</sup>

Most librarians now realize that they can no longer hope to find stack space for the endless stream of publications, much less for the quantity of new media which is becoming available. Therefore, they must find some system of unlimited storage and immediate retrieval. Microfilm, microfiches, microprint, videofiles and computer printouts will become a part of every librarian's experience. Innovations such as the CAI "Walnut" system which permits microstorage of almost a million documents with retrieval in five seconds are changing our entire concept of document storage.

Every man must have immediate access to all of man's knowledge. Although the task is overwhelming, the considerable duplication in research, the lack of communication, and the dearth of understanding must be eliminated. Some of the problems of the next decade are already obvious. Most libraries, librarians and media specialists are not prepared for the computer era. Automation will impose a greater re-

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sponsibility on the professional librarian. He will be called upon to organize information in a far more exacting manner than ever before.

There will also be personnel problems. Some librarians will miss the personal contact with their patrons, the joy of presiding over a large room filled with studious readers, and the contact with books. They may resent typewritten inquiries from a computer console. Many others will have a natural reluctance to handle apparently exotic computer hardware, even though women in their household tasks may operate far more awesome controls. But the purpose and function of household devices are understood and there is no fear that they might share information gained from us with some unknown audience. However, since today we access any one of several million telephones through direct distance dialing, it is most likely that computer terminals will be readily accepted in libraries, offices and homes.

There will also be changes in format. Neither space nor available monies will permit continued storage of knowledge in books accessed through catalog cards. A *Time* article on libraries reported that Yale would need eight acres of floor space by the year 2040 if they were to continue using the obsolescent card catalog.<sup>16</sup> Sixteen mm. film and videotape may well be replaced by videodiscs—disc-shaped devices that can play a thirty-minute color program through a home television set. Furthermore, library buildings must be designed to accommodate change.

These new media and the demand for knowledge will require new concepts of service. Some libraries must be staffed around the clock to provide information, to send and receive the information being transmitted during the night when network rates are less expensive.

The future for librarians willing to grow with their profession is bright.

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