ABSTRACT
        Eccles Medical Sciences Library at the University of
Utah has developed a computer-generated catalog for its audiovisual
health and medical materials. The catalog contains four sections: (1)
the main listing of type of media, with descriptions, call numbers,
and Medical Subject Headings (MeSH) used for each item; (2) a listing
by title, with call number; (3) a listing by MeSH subject headings;
and (4) a gross categories list. While there are some problems with
the system the computer-generated catalog allows increased access by
users from physically diverse locations and could form the basis of a
union catalog for health institutions in the Salt Lake area. (LS)

A Computer Generated Audiovisuals Catalog

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The increasing reliance on audiovisual materials to support the multi-faceted teaching needs of health professionals and learning needs of health science students has grown more rapidly than our ability as librarians to access and retrieve information about and actual items of audiovisual programs. The established tools of journal literature and monograph retrieval find no parallel in the audiovisual arena.

PROBLEMS

The lack of comprehensive tools has been complicated by the following factors in accessing and retrieving audiovisuals:

(1) One of the most common cataloging guides for medical nonprint materials, the NMAC cataloging guide,[1] is not going to be the basis for cataloging of nonprint materials of the National Library of Medicine's AV line project. Instead the more complex and professionally demanding revised Chapter 12 of AACR[2] will be the basis of AV line cataloging.

(2) The AV line project to be administered by the National Library of Medicine and described in the Report on Educational Materials Project Development[3] will only include AAMC/AADS recommended audiovisuals.

(3) The general consideration of in-house productions as ephemeral and hence not subject to cataloging make these materials highly inaccessable even to the institution's own patrons.

(4) The consideration of the terminology of the educator and learner
not being the same as that of the clinician and researcher poses
problems of adequate subject heading access.

(5) Whereas journals and monographs are purchased and retained by
libraries, audiovisuals may be on various kinds of loan to libraries
cataloging of these imply ready access which may not conform
to the policies of the lending department.

(6) Piracy of copyrighted audiovisual materials makes the culprit
department as well as the library reluctant to catalog the fruits
of this act.

ORIGIN AND DEVELOPMENT OF THE
ECCLES LIBRARY AUDIOVISUAL CATALOG

The Eccles Medical Sciences Library serves the Schools of Nursing,
Medicine, Pharmacy, College of Health, University Hospital, Utah State
Medical Association, Utah State Dental Society as well as the hospitals in
the State of Utah through a grant from NLM for extension services and
responsibility for consortia activities. The audiovisual department of
the library began a computerized listing of its own audiovisual holdings in
1973 to provide a needed service to these diverse as well as physically
divergent groups. The need existed for a catalog which could be easily updated
and distributed to its various user groups since the library is seen by many
of the users to be physically remote from their own facilities. The library
retained the services of a computer science/library science student who was
doing his term project on an automated library project. The Cobol program
which this student developed provided the basic program for the audiovisual
catalog.

DESCRIPTION OF THE CATALOG

The catalog is divided into four access points: the main listing arranged by type of media with the inclusion of description, call number, and MeSH headings used for each item (figure one); by title with only call number given (figure two); subject approach by MeSH (figure three); subject approach by gross categories (figure four).

We use the University of Vermont classification scheme with modifications.[4] The call number reflects the media format code plus a distinctive number, the first part of which is the year the library acquired the item and the second part is the unique item number assigned in accession number sequence. Our shelf arrangement is by media format rather than subject classification since we maintain a closed stack collection. The "ECC" below the call number signifies Eccles Medical Sciences Library and represents the location marker area should our program be used as the basis of a union list. The number in parenthesis in the far right corner of the entry represents the computer number which is used only when coding the data to tie together all keypunch cards of each entry. We have now dropped the abbreviated annotation since the patron can determine the content by the MeSH headings noted. The annotation can never replace the viewing of the item itself to determine its usefulness to his particular teaching/learning need. However, because "browsibility" is necessary as an initial weeding process for the patron, we keep files of media descriptions, annotations, and evaluations for him to consult before viewing our motion pictures, filmstrips, and listening to our audiocassettes. Our slide sets have either an accompanying small booklet describing each slide in the set, or a study guide which refers to each slide.

Having media format access to our collection is useful because: (1) many patrons limit their audiovisual searches to one kind of format: they may have access to only a 16mm projector or they need a small group presentation medium

or they want to listen to medical topics from their car audiocassette players; (2) it helps visualize the collection for the patron in terms of the formats of media we collect and the relative number of items we own in each format: he then knows whether he can expect to find his subject interest in the format he wants; (3) the media format suggests the types of equipment we own: the patron can use our facility to playback programs he may have acquired on his own; (4) the need for a certain format may stimulate a patron to suggest programs which he is familiar with in order to build our collection and have those programs readily available to him; and (5) it encourages departments to place materials in our collection since they know from looking at our catalog that we collect and maintain a variety of media formats.

The other three sections of our catalog contain only the title and call number. For a more complete description of the item, the patron uses the media code to access the information in the media format section of the catalog (the media section is arranged alphabetically by media code and then numerically under the format by accession number). The 63 gross categories are a modification of the NLM Synopsis of classes.[5] Up to three MeSH terms and up to three gross categories are assigned for each media item.

The use of two subject approaches was necessitated by (1) patrons not having a specific subject in mind or a broader based subject than MeSH access could give them; (2) subject requests for what the audiovisual department owns which are greatly facilitated by simply photo copying the appropriate gross categories that correspond to the requestors' departments; (3) the MeSH approach allows for searching supportive audiovisual materials from MEDLINE requests as well as subject cataloging with monograph and serial collections (catalog cards are generated for our audiovisual materials and interfiled with

the other cards in our main card catalog); (4) the MeSH approach is familiar to most patrons who are clinicians/researchers/educators; (5) the book lists of new acquisitions which the library distributes quarterly are arranged by gross categories which can contain both print and nonprint acquisitions; (6) gross categories make it easier to then identify he extent of our collection in any one department for the patron and aids the audiovisual librarian in identifying acquisition needs to provide a well rounded collection (as new purchases are considered they can be classified by gross categories and descriptions sent to appropriate faculty members for comment); and (7) updates of audiovisual subject searches for faculty are facilitated by gross categories for both in-house collection and purchase considerations updates.

PROCEDURE FOR INPUTING CATALOG DATA

The cataloging department of the library processes print and nonprint materials. Both generate catalog card sets. The NMAC cataloging guide[1] is used for cataloging the audiovisual collection. For nonprint materials and those print materials accompanied by audiovisual materials, an extra catalog card is made from which the audiovisual assistant codes the information onto IBM coding sheets which the keypunch department of the University of Utah Computer Center uses to generate keypunch cards. We have our program on keypunch cards for backup against magnetic tape loss or erasure. The keypunch cards are run along with the program already on tape and our previous data stored on tape to generate an updated catalog. We will generate an updated catalog every year until our collection, which now stands at 300 items, grows to where supplements are more cost-effective than entire catalog runs and where the update delay is not tolerable.

We have experimented with keypunching from catalog cards rather than
coding sheets (done by underlining in different colors those data elements
which go on each card for the keypuncher) and on-line input from the two
terminals we have in the library. Studies of the cost-effectiveness of each
of these procedures have not yet been completed.

THE AV CATALOG AS BASIS OF A UNION LIST

A group of hospital librarians and other persons responsible for audio-
visual collections from various health institutions in the Salt Lake City
area and surrounding areas have been meeting to discuss the possibilities of
making the Eccles Medical Sciences Library Audiovisual Catalog the basis of
a union list of audiovisual materials in the health sciences. The advantages
of such a listing would be: (1) the greater possibility of locating and
using items not held by the local institution; (2) wider usability and
hence greater possible use of local resources by more patrons; (3) to encourage
broader based support of audiovisual collections (by each facility) by
identifying their growing new constituency; (4) to avoid costly duplication
of materials which are valuable but not heavily demanded at any one local
facility at all times; (5) to encourage unique collection development; (6) to
identify a basic core collection and/or core subject needs of audiovisual
materials for small hospital needs (this could be done on a simple basis of
a facility noting which items were most heavily requested); (7) to be able to
obtain evaluations, whether written or oral, of materials noted; (8) to be
able to consult only one tool for sub-regional health media holdings; and
(9) to make available to each participating institution a print-out of their
own holdings by all four catalog sections.

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The changes in the catalog design that would be necessary before such a listing would be possible are: (1) the deletion of a unique accession number for a media item since facilities classify their collections differently and utilizing only a standard media code in order to generate the media format section of the catalog. Arrangement under each media format would be alphabetically by title (2) the inclusion of location codes after each entry in all sections of the catalog denoting place held and local call number, if any.

While the centralizing of the processing for holdings information is desirable, it may not be feasible. The way the project is now envisioned, the data collection and arrangement into computer compatible format is the responsibility of each individual institution. While the descriptive cataloging and coding can be easily taught, the assigning of MeSH and gross headings is a professional responsibility. The problems we need to resolve are: (1) who will be responsible for generating subject headings when no local librarian is available; (2) will local editing be acceptable; (3) how will computer reprogramming costs be distributed; (4) how will the costs of computer time and printing of the union list be distributed; and (5) what are the costs to each facility of getting their audiovisual holdings into computer compatible format in terms of personnel commitment, file organization, keypunch operation, and time spent organizing and participating in a cooperative venture.

DISCUSSION

Both the audiovisual catalog and the proposed union lists are attempts at addressing the six broader based problems posed earlier in the paper of access and retrieval of audiovisual materials. While there are no subject content barriers to inclusion in these catalogs and while simplicity of

cataloging format runs counter to current NLM decisions, the other problems are still with us. We do not attempt to catalog all in-house productions. Those in-house productions we do receive are classified as "LOL" (locally produced) and do not receive their rightful place in the appropriate media format section. They need to be reviewed by subject specialists for their current educational and content value. However, they are accessible by MeSH, Gross Categories and by title. Behavioral objectives may be desirable as access points but standards for generating them are lacking. The differences in style between the AVLOC Catalog[6] and the Health Sciences Consortium Catalog[7] point out some of the discrepancies that occur in behavioral objectives catalogs. Since even these catalogs include subject access, behavioral objectives may only be a secondary access point to be used once a subject has been determined. Audience level is included in many catalogs. Our catalog includes only the audience designation "consumer audience" when an item is both appropriate for health professional and consumer viewing. If joint health science curriculum is eminent, it may be pre-emptory to include any audience level in a catalog. In many cases, even without the overlapping-health-sciences-curriculum philosophy, patrons shy away from materials noted as being appropriate for other health professionals when, in fact, portions or the whole may be quite applicable to the patron's subject needs. We do include "nursing" as a gross category for those materials which are very definitely areas of nursing concern but we assign other gross categories to these items as applicable. If, for example, the title "Care of the Coronary Patient" is directed to the ICU nurse, we assign the subjects "Nursing" and "Cardiovascular System" to that item. The medical student who runs across this title and checks this item out may glean information he might have missed had the item been only accessible under "Nursing."

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We do not catalog audiovisual materials which are on loan to us by departments, even those on long term loan because: (1) they may be retracted by the lending department at some point; (2) they were placed in the library for the teaching needs of that particular department and must be readily available to the department; (3) ready access is the library's strongest point in favor of centrally locating departmental collections; and (4) it is frustrating for the patron and difficult for the librarian to explain that a retrieved title from the catalog is only available for in-library use rather than our normal one-week circulation period. We do have a typed listing of all our reserve materials arranged by class designations in a notebook at the front desk alongside our computer catalog. We should make formal requests of departments for permission to catalog their loaned collections with the stipulation that the materials would be placed on reserve at those times when they were required as class materials.

Pirated materials show up upon technical evaluation since reproductions of copies are poorer technically than those copies made by the producer from his original. The patron, perhaps, is better served by their noninclusion in a catalog.

SUMMARY

In being able to distribute copies of our computerized catalog either in part or in total to our various user groups, and in its inclusion in a union listing, we feel we have made some progress in accessing and retrieving audiovisual materials.

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MP16   FIRST DAYS OF LIFE   16 MIN.
73- 35   WOOLF, RALPH   (0020)
            MCGRAW-HILL   N.D.
ECC   IN COLOR WITH SOUND.
                         PRENATAL DEVELOPMENT, NATURAL
                         CHILDBIRTH OF THE HUMAN INFANT
                         CONSUMER AUDIENCE.
              1. EMBRYOLOGY
              2. NATURAL CHILDBIRTH

MP16   DISORDERS OF THE HEARTBEAT
73- 63   AMER. HEART ASSOCIATION   20 MIN.
            WEXLER FILM PRODUCTIONS   (0165)
ECC   IN COLOR WITH SOUND.   N.D.
              1. ARRHYTHMIA--DIAGNOSIS
              2. ARRHYTHMIA--ETIOLOGY
              3. HEART CONDUCTION SYSTEM

MP16   MODERN OBSTETRICS: NORMAL DELIVERY
73- 84   AMA   27 MIN.
            AMER. COLLEGE OF OBSTETRICS   (0164)
ECC   IN COLOR WITH SOUND.   1972
                         CONSUMER AUDIENCE.
              1. DELIVERY
              2. LABOR
              3. OBSTETRICS

MP16   I THINK
73- 65   FELDMAN, GENE   19 MIN.
            WOMBAT PRODUCTIONS   (0163)
ECC   IN COLOR WITH SOUND.   1973
                         CONSUMER AUDIENCE.
              1. ADOLESCENT PSYCHOLOGY
              2. SOCIAL PROBLEMS--IN ADOLESCENCE

FIGURE ONE

AC2 72- 25   ECC FABRICATING LIFE, AN ESSAY REPORT: NEW WAYS TO BE-
                          TTER FOOD

MP16 73- 55   ECC FIRST DAYS OF LIFE

LCL 72- 59   ECC FOOD ALLERGIES

LCL 72- 72   ECC FROM THE LAB

MP16 73-192   ECC FUNCTIONS OF THE HEART

SL2 71- 21   ECC FUNDAMENTALS OF OPHTHALMOSCOPY

SL2 73-187   ECC GASTROINTESTINAL BLEEDING

LCL 70- 0   ECC HALLUCINOGENIC DRUGS, USES AND ABUSES

MS8 73-101   ECC HEARING: AUDITORY SYSTEM

MS8 72- 41   ECC HEART

SL2 71- 20   ECC HISTOLOGY OF THE HUMAN EYE: AN ATLAS AND TEXTBOOK

SL2 73- 16   ECC HISTOLOGY OF THE HUMAN TEMPORAL BONE

LCL 71- 20   ECC HOSPITAL DRUG PROFILE SYSTEMS

SL2 72- 39   ECC HUMAN DEVELOPMENT

SL2 72- 40   ECC HUMAN GENETICS

SL2 68- 53   ECC HUMAN MYCOSES

SL2 72- 56   ECC HUMAN REPRODUCTION

LCL 71- 19   ECC HYPERLIPIDEMIA

LCL 71- 2   ECC HYPNOSIS AND MODERN MEDICINE

LCL 73-200   ECC HYPNOTIC INDUCTION TECHNIQUE AND HYPNOTIC DEEPENI-
                          NG TECHNIQUE

MP16 73- 60   ECC H+2 CONCERNING TWO HEROIN ADDICTS

MP16 73- 65   ECC I THINK

                                   13   FIGURE TWO

SUBJECT/TITLE   MEDIA NUMBER

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DRUG ADDICTION   MP16 73- 86   ECC
   H+2 CONCERNING TWO HEROIN ADDICTS

DRUG CONTAMINATION   LCL   71-   4   ECC
   TOXICOLOGY

DRUG INTERACTIONS   LCL   71- 16   ECC
   TO DRUG OR NOT TO DRUG-THAT IS THE QUESTION

DRUG INTERACTIONS   LCL   72- 69   ECC
   DRUG INTERACTIONS

DRUG THERAPY--INSTRUMENTATION   MS8   73- 42   ECC
   VENOUS CORDGRAM

DRUG UTILIZATION   LCL   70-   6   ECC
   HALLUCINOGENIC DRUGS, USES AND ABUSES

DRUG UTILIZATIONS   LCL   71- 16   ECC
   TO DRUG OR NOT TO DRUG-THAT IS THE QUESTION

DRUGS--ADVERSE EFFECTS   SC2   73- 45 PT.   1 ECC
   DRUG PHOTOSENSITIVITY - CLINICAL FEATURES AND MECHANISMS OF ACTION

EAR--ABNORMALITIES   MP16 73-150   ECC
   TRANSLABYRINTHINE APPROACH TO INTERNAL AUDITORY MEATUS & POSTERIOR FOSSA

EDEMA   MP16 73-194   ECC
   ALDOSTERONE AND EDEMA

EDUCATION   LCL   73-213   ECC
   THE FUTURE OF ACADEMIC DEPARTMENTS

ELECTROLYTES   LCL   72- 54   ECC
   ELECTROLYTES

ELECTROPHYSIOLOGY   VT3   73- 88   ECC
   INTRODUCTION TO ELECTROPHYSIOLOGY OF THE HEART

EMBRYOLOGY   MP16 73- 35   ECC
   FIRST DAYS OF LIFE

EMBRYOLOGY   SL2   72- 39   ECC
   HUMAN DEVELOPMENT

EMERGENCIES   LCL   71-   1   ECC
   EMERGENCY AND OUTPATIENT RECORDS

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FIGURE THREE

MEDIA NUMBER   TITLE
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                OBSTETICS-GYNECOLOGY

AC2 72- 10   ECC BIRTH CONTROL: PROBLEMS AND PROSPECTS

AC2 73- 58   ECC RIGHT TO LIFE

ACC 73- 59   ECC TOWARD AN ETHIC FOR THE NEW EMBRYOLOGY

LCL 72- 73   ECC NURSE'S ROLL WITH PARENTS OF PREMATURE OR ABNORMA-
                     L INFANTS

LCL 72- 70   ECC TECHNIQUE OF CESAREAN SECTION

MP16 72- 33   ECC BREAST AND ITS DISEASES

MP16 73- 35   ECC FIRST DAYS OF LIFE

MP16 73- 04   ECC MODERN OBSTETRICS: NORMAL DELIVERY

MP6 13- 2   ECC EARLY DIAGNOSIS AND MANAGING BREAST CANCER

MP8 73- 3 PT. 1 ECC UTERINE CANCER

MP8 73- 4 PT. 2 ECC UTERINE CANCER

MP8 73- 0   ECC ROUTINE PELVIC EXAMINATIONS

SL2 70- 9   ECC LAPAROSCOPY, CULDOSCOPY, AND GYNECOGRAPHY

SL2 72- 3   ECC BREAST DISEASES

SL2 72- 30   ECC HUMAN REPRODUCTION

SL2 72- 39   ECC HUMAN DEVELOPMENT

SL2 73- 10   ECC ENDOMETRIAL BIOPSY STUDIES

SS2 71- 23   ECC STEREOCOLPOSCOPIC ATLAS OF THE UTERINE CERVIC: BA-
                     SIC MANUAL

                OPTHALMOLOGY

ACC 72- 29   ECC VISION, NIGHT BLINDNESS AND DR. WALD

MSB 73-152   ECC SIGHT: VISUAL SYSTEM

                                      15   FIGURE FOUR