ABSTRACT
                This study was conducted to assess and identify
continuing education (CE) needs for medical librarianship and to
design, implement, and evaluate program components responsive to
these needs. Needs were assessed through: (1) a survey carried out
within regional Medical Library Association (MLA) groups; (2)
contents of journal literature compared with literature five to ten
years previous to document changes in the field; and (3) comparison
of results of studies conducted by other library groups and
organizations. Despite differences in types of library staff
surveyed, needs identified were in the areas of administration,
audiovisuals, reference tools and services (including on-line
systems), and budgeting. Library staffs had difficulty in
articulating CE needs. Data collected on CE opportunities available
showed course offerings were sparse in areas of need. Organizational
constraints and supports given to staff and CE activities showed CE
is primarily self-directed. Some of the national library associations
seem less interested in supporting CE programs. A model CE program
for health science librarians was developed. The study compared the
MLA CE program at the beginning and end of the project within the
model's framework. Sample questionnaires, data tables, references,
course descriptions, and MLA CE materials are included.
(Author/KP)

CONTINUING LIBRARY EDUCATION:
NEEDS ASSESSMENT AND MODEL PROGRAMS

BY

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1977

CLENE CONCEPT PAPER #5

SPECIAL PREFACE

This Concept Paper was initially prepared by the Medical Library
Association under contract to the National Library of Medicine.
Populations surveyed for the report were drawn from health sciences
library settings and much of the specific information in the publica-
tion focuses on this area of librarianship. Even with this focus,
the Publication Committee of CLENE thinks material presented in this
report has a broader application to the overall planning and practice
of continuing library education. We, therefore, agreed that it would
be appropriate for CLENE to make this material available to a broader
audience than health science librarianship through its publications
program.

Of particular interest to those charged with some kind of respon-
sibility for continuing education are instruments used by the survey
team and the overview of programs offered through other associations
and professions. Survey findings also reflect trends and practices of
interest to a broader audience than health science librarianship.

There is an extensive bibliography in the report which complements
those already done for continuing education in libraries and informa-
tion science personnel, and the report on MLA's continuing education
program offers guidance to anyone working in an association framework.
In all, we feel this is an important publication which will help those
with responsibility for continuing education who are looking to CLENE
for assistance in doing a good job.

Publications Committee
Continuing Library Education
  Network and Exchange

James A. Nelson, Chairman   Muriel L. Fuller
Henry L. Alsmeyer, Jr.   Nancy Sanders
Joanne Crispin   J. Madison Whitehead

PUBLICATIONS PREPARED UNDER NLM GRANT
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* 1.   Berk, Robert. Continuing Education Needs of Health
        Sciences Librarians as Reflected by Changes in
        the Published Literature. 1975. Working Paper
        No. 4 prepared under Grant 5-R01 LM 01857-02.
        126 p.

2.   McConaghey, P. L., Virgo, J. A., and Angione, P. V.
        Continuing Education Needs of Health Sciences
        Library Personnel. Paper presented at the
        Medical Library Association Annual Meeting,
        San Antonio, Texas, 1974. 8 p.

3.   Mickey, Melissa. Developing a Plan for Affirmative
        Action--Human Rights Bibliography. Chicago,
        Medical Library Association, 1973. Working
        Paper No. 3 prepared under Grant 5-R01 LM 01857-02.
        54 p.

4.   Mickey, Melissa. Problems and Programs in Continuing
        Professional Education. Chicago, Medical
        Library Association, 1974. Working Paper No. 1
        prepared under Grant 5-R01 LM 01857-02. 91 p.

5.   Virgo, J. A. Planning and Teaching Continuing
        Education Courses. Paper presented at the
        American Society for Information Science Annual
        Meeting, Boston, 1975, and published in ASIS
        SIG/ED Newsletter, No. ED-76-1, pp. 3-6.

6.   Virgo, J. A. and Angione, P. V. Assessing
        Continuing Education Needs. Paper presented
        at the Medical Library Association Annual
        Meeting, Minneapolis, Minnesota, 1976. 28 p.

7.   Washtien, Joe. A Guide for Planning and Teaching
        Continuing Education Courses. Washington,
        Continuing Library Education Network and Exchange,
        1975. Working Paper No. 2 prepared under Grant
        5-R01 LM 01857-02. 61 p.

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CHAPTER I

INTRODUCTION

Professional education, if it is successful, does not mark
the termination of the educational process; indeed it signifies the
beginning of a life of continuous learning and renewal. This axiom
holds true for medical librarianship as well as for the other profes-
sions. In fact, if the need for continuing education can be inferred
from the growth of knowledge in a particular field, the need in
medical librarianship approaches the need in the biomedical sciences
because medical librarianship functions to supply the bibliographic
apparatus that organizes and disseminates the growing biomedical
knowledge.

In the past, continuous learning was considered the responsibility
of the individual professional but because of the rapid growth of
biomedical knowledge and the vast implications of such growth for
the practicing medical librarian it is increasingly apparent that
continuing professional education is a responsibility that must be
shared by the individual, by the profession, and by society.

Since 1958 the Medical Library Association (MIA) has offered
formal continuing education courses in conjunction with both its
annual and regional meetings. The topics for these courses were
chosen as being responsive to the most pressing needs of medical
librarians as perceived by the MIA Continuing Education Committee.

1

Over the years additional courses were developed and some existing offerings dropped. The program attempted to provide current, relevant information although the quality and variety of experiences were still considered deficient by members within the Association. The courses were aimed primarily at the professional, but also acknowledged that many operating "librarians" who registered for the courses had in actuality no previous library education. The result was that the same course would be offered to people with widely different backgrounds, truly satisfying the needs of few of the participants.

The appointment by the Medical Library Association of a Director of Education made it timely to consider the total needs of continuing education for medical librarianship rather than continuing to sprout programs in a vacuum, without an overall plan. It was hoped that such a plan could utilize data already existing, and extend that data where necessary. The following sources of data were planned to be used:

> (1) "An Investigation of the Education Needs of Health Sciences Library Manpower" (1, 2, 3, 4, 5). This study was limited to non-hospital medical librarians. The kinds of data collected were demographic, education background (including participation in continuing education programs in library science), and employment characteristics. Data were also collected on felt needs for continuing education in librarianship.

(2) American Hospital Association Study (5). Data from
    this study parallels the data described in study 1
    above, but was collected for hospital libraries
    and library personnel.

(3) "Directory of Health Sciences Libraries in the
    United States, 1969" (6). This study, funded by the
    National Library of Medicine, was undertaken by
    the Committee on Surveys and Statistics of the
    Medical Library Association under the auspices of
    the MLA and the American Medical Association (AMA).
    The data collected form part of the data used in
    (1) and (2) above.

(4) The Medical Library Association has information about
    those people who have taken their courses in the past.
    In addition, the MLA courses have been evaluated by
    the participants and this information is also on file.
    These data indicate the attributes and distribution
    of the people motivated to take the courses, and what
    they felt were the strengths and weaknesses of the
    courses.

The data gathered in studies (1), (2), and (3) above are
in machine readable form; thus it was initially expected that
further analysis and manipulation could readily be carried out.

Purposes of this Study

The purposes of this study is to assess the needs for
continuing education for medical librarianship and to design,
implement and evaluate some components of a program which will
be responsive to those needs. The rationale underlying this investi-
gation is that the MLA or other concerned organizations cannot make
rational planning decisions regarding their responsibility to assist
medical library personnel in continuing education without having
first identified the educational needs of those individuals they
are attempting to assist, and determining the forces which act for
and against their participation in continuing education activities.

In order to accomplish these purposes, the specific objectives
of this research are:

1. To identify the needs for continuing education in
   medical librarianship.

2. To establish to what extent these needs are presently
   being met by existing programs.

3. To gain insight into the forces acting for and against
   the development of, and participation in, continuing
   education programs.

4. To develop a plan for continuing education at several
   levels of medical librarianship, giving consideration
   to the best forms of continuing education within
   differing environments.

5. To design, administer and evaluate some sub-set of the
   components of the total plan.

Some Working Definitions

For the purpose of this report, "continuing education" is
the process by which medical library personnel (alone, in groups,
or in institutional settings) purposefully seek to improve them-
selves or their profession by changing their knowledge, attitudes,
or skills; or it is any process by which individuals, groups or
institutions try to help medical library personnel change in
these ways.

"Educational need" is taken to mean a discrepancy between
the present level of competency of medical library personnel and a
higher level required for effective performance as perceived by
the individual-medical library worker.

"Medical librarian" is used in a generic sense and includes
all personnel doing professional work in all types of medical
libraries. It is used interchangeably with "health sciences librarian."

Methods of Procedure

At the time this investigation was undertaken the following
procedures were planned:

1. Identify the needs for continuing education in
    medical librarianship.

    This phase was to have been executed in the following
    manner:

    a. Review the literature on continuing education,
        not only in librarianship but for other professions
        faced with similar problems.

b. Analyze the files and data collected by the
Committee on Continuing Education of the
Medical Library Association to make the fullest
use of experience gained by the Association in
its continuing education activities.

c. Examine the data from the American Hospital
Association Study (5) and the Rees et al.
study (1, 2, 3, 4, 5) in greater detail in order
to:

(a) identify stated needs for continuing education.

(b) specify the educational backgrounds and
experience of the respondents.

(c) identify the tasks they perform.

d. Ascertain the need for additional data to answer
questions that have not been dealt with by the
above sources.

2. Establish to what extent the needs defined in step one
above are presently being met by existing programs.
Information responsive to this phase of the study was
gathered as described below:

a. Survey library schools to gather information
on any continuing education courses or
institutes that they offer.

b. Gather information on the programs being offered
by the Regional Medical Libraries.

c. Obtain information regarding the library continuing
education activities of the Regional Medical Programs.

    d.   Secure information about the programs of the American Hospital Association, Catholic Hospital Association and Veterans Administration.

    e.   Obtain information about the programs of other professional organizations such as the American Library Association and its divisions, the American Society for Information Science, the Catholic Library Association and the Special Libraries Association.

    f.   Obtain information about the institutes and workshops offered by the National Medical Audiovisual Center.

For each of these sources an attempt was made to determine requirements for admission to their programs, levels at which they are aimed, duration, cost, the frequency with which they are given, number of people admitted to the programs, and what they actually give as opposed to what they say they give, e.g. in terms of frequency of offerings.

3.   <u>Develop a plan for continuing education for all levels of medical librarianship</u>.

This plan was to be based on the data collected in steps 1 and 2 above, taking into account the best forms for delivering continuing education, e.g. workshops, institutes, printed material, programmed texts.

4.   <u>Design, administer and evaluate some subset of the plan designed in step 3 above</u>.

Amended Research Plan and Organization of this Report

As the study proceded a variety of information came to light
which made it necessary to revise the methods of procedure outlined
above. The primary reasons for the revisions are:

1. The data from the Kronick, Rees, Rothenberg studies
   (1, 2, 3, 4, 5) were not available in their raw form.

2. The data from the 1969 Directory of Health Sciences
   Libraries was judged to be sufficiently out-of-date to
   preclude its use in this study. Therefore it was decided
   to use the data from the 1973 survey of Health Science
   Libraries as the basis for this study. While some of
   this data has now been made available (7, 8) the raw
   data and tapes were not accessible during the present
   project period so could not be used in this study.

3. The literature of continuing professional education is
   largely descriptive and is referenced primarily by
   individual professions. A comprehensive search of this
   literature did not uncover an adequate methodology for
   assessing the continuing education needs of an entire
   profession nor a viable plan for evaluating the impact of
   a continuing education program on changes in knowledge,
   attitudes and skills of practicing professionals. In
   addition, the few evaluation studies found did not attempt
   to relate changes in knowledge, attitudes or skills to
   impact on practice. However, an extensive review was carried
   out and is reported in Working Paper No. 1 (see Project Bibliography).

4. A search of the literature of education convinced us
that so many variables impact on the best form for
delivering continuing education that to make statements
regarding best form are at best foolhardy.

5. Due to delays in automating the MLA records, quantitative
data from past continuing education courses was unavailable,
although descriptive information was obtained.

For the reasons stated above the methods of procedure for this
study were revised, the following procedures were undertaken and
are described in this report:

1. An extensive review of problems and programs in continuing
professional education, referred to in 3 above, was
undertaken and reported in Working Paper no. 1.

2. The literature of medical librarianship for the years
1970 to 1974 was reviewed, and compared with the literature
of the field in 1961 through 1969. Changes in the field
were documented and their implications for continuing
education were explicated. (Chapter II and Working Paper #4).

3. Two surveys were made to ascertain the subject areas in
which medical library personnel perceive a need for
continuing education. (Chapter III)

4. Organizations which might sponsor continuing education
relevant to health sciences librarianship were determined
and information regarding operating programs was obtained
and analyzed. This information formed the basis for a
Continuing Education Clearinghouse which is being
maintained. (Chapter IV)

5. A survey to ascertain the extent to which the medical
   librarians' place of employment supports or constrain.;
   continuing education was conducted. (Chapter V)

6. Professional and trade associations were surveyed for
   information regarding how they organized and what methods
   and/or devices they utilized in assisting their members
   in continuing learning. (Chapter VI)

7. Data from the above procedures were analyzed and the
   implications for continuing education planning for health
   sciences library personnel were considered. (Chapter VII)

8. A pilot project was undertaken to determine the appropriate-
   ness and ability of an organization such as the Medical
   Library Association to conduct programs in areas identified
   as being desirable but sensitive such as inter-racial
   awareness and inter-personal attitudinal change. This
   resulted in Working Paper No. 3.

·9. A publication was prepared to assist people designing
   and teaching continuing education courses both within the
   Medical Library Association's program and in continuing
   library education programs generally. This publication was
   distributed to all instructors teaching in the MIA program
   at the MIA 1975 annual meeting for comment and evaluation.
   (Discussed in Chapter VIII and appended as Working Paper No. 2)

10. The Medical Library Association's continuing education
   program was restructured to be responsive to information
   obtained and experiences gained during the course of the
   present project. The results of this are evidenced by new

programs that were developed, reorganization of

existing procedures, and changes in staff/committee

responsibilities. (Chapter XIII and Working Paper No. 3)

11. The impact of this grant on continuing medical library

education has been evaluated in addition to an examination

of the directions that future programming is likely to

take, both within the Association and within the profession.

While the conclusions and recommendations derived from this

investigation are based on more subjective data than the original

study design anticipated, they are significant in three additional

areas: 1) they provide documentation of trends in medical library

continuing education, 2) they emphasize the difficulty of conducting

a quantified study of the educational needs of an entire profession,

given the present condition of systematic knowledge in continuing

professional education, and 3) they explicate directions for research

necessary prior to undertaking quantitative studies of continuing

education needs.

Footnotes

1. Kronick, D.A., Rees, A.M., Rothenberg, L. An investigation
    of the educational needs of health sciences library manpower:
    I. Definition of the manpower problems and research design.
    Bull. of Med. Libr. Ass. 58: 7-17 (January) 1970.

2. Rothenberg, L., Rees, A.M., Kronick, D.A. An investigation
    of the educational needs of health sciences library manpower:
    II. Health-related institutions and their library resources.
    Bull. of Med. Libr. Ass. 58: 510-20 (October) 1970.

3. Rothenberg, L., Kronick, D.A., Rees, A.M. An investigation of
    the educational needs of health sciences library manpower:
    III. Manpower supply and demand in health sciences libraries.
    Bull. of Med. Libr. Ass. 59: 21-30 (January) 1971.

4. Rothenberg, L., Rees, A.M., Kronick, D.A. An investigation of
    the educational needs of health sciences library manpower:
    IV. Characteristics of manpower in health sciences libraries.
    Bull. of Med. Libr. Ass. 59: 31-40 (January) 1971.

5. Kronick, D.A., Rees, A.M. An investigation of the educational
    needs of health sciences library manpower: V. Manpower for
    hospital libraries. Bull. of Med. Libr. Ass. 59: 392-403
    (July) 1971.

6. Schick, F. L. ed. Directory of health sciences libraries in
    the United States, 1969. Chicago, American Medical Assoc.,
    Medical Library Association, 1970.

7. Crawford, Susan. Health Sciences Libraries in the United
    States, 1961-1973. Unpublished report to the Committee on
    Surveys and Statistics of the Medical Library Association,
    June, 1974.

8. Crawford, Susan and Dandurand, Gary. Directory of Health
    Sciences Libraries in the United States, 1973. Chicago,
    American Medical Association, 1974.

CHAPTER II

CONTINUING EDUCATION NEEDS AS REFLECTED BY

CHANGES IN THE PUBLISHED LITERATURE

The need for continuing education is a need intuitively felt by most library staffs. However, we wished to document the need in some more objective way than depending solely on the perceived felt needs of individuals. In the absence of task analysis data at different points in time, the approach of analysing the published journal literature at the present time, and comparing it with the published literature five and ten years ago, seemed to be an approach which would document changes in the field in an objective manner. It was realized that the journal literature might lag behind actual practice, but this time lag in the literature would apply to that of ten years ago as well as to today.

A review of the literature was therefore made to assess changes as reflected in the literature covered, and then to relate these changes to specific areas of health sciences librarianship. These areas, in light of the changes that have taken place, reflect some of the needs for continuing education for health sciences library staffs and could be compared with the staffs' perceived needs.

The survey was limited to the literature of the past five years and was the third piece in a set of reviews that began with Pendrill, 1961-65 (1) and was followed by Bishop, 1965-69 (2). As in their efforts, there may be some overlap. In addition, a thorough

treatment of health sciences libraries appeared as the July 1974

issue of Library Trends (3). This last, however, instead of

attempting a comprehensive review as did Pendrill and Bishop, had

as its objective the provision of an "overview of the total impact

that changes have had on the traditional user services, including

a final chapter projecting what the trends of the future will be to

meet the needs of the health science user." (4, p.3)

The author started with the three compilations mentioned

earlier: Pendrill, Bishop and LT. These covered a substantial

portion of the pertinent literature published between 1961 and early

1973, although in the case of LT, earlier references were included.

For the period 1970-74, all issues of the Bulletin of the Medical

Library Association (BMLA) were analyzed and the topics represented

compared with topics discussed in the other three works. In addition,

a broad literature search was conducted (1970-74) in library and

information science literature. From items retrieved, the reviewer

selected a few that were of interest in documenting changes that

have occurred. This selection was highly subjective and the exclusion

of any work from the bibliography does not in any way imply a value

judgement on the merits of the work in question. Rather, it reflects

the constraints of time and the author's own bias. It cannot be

emphasized too strongly that beyond a close analysis of the three

reviews and the last five years of BMLA, inclusion of pertinent

literature was only minimally attempted.

Contrary to the approach adopted by Bishop, the present review

was not restricted to the periodical literature, although it is

principally that. Also, some changes that appear to be important have

not yet received adequate documentation in the literature sources

closely analyzed, so the author included relevant citations from sources

other than "library literature" when such inclusion seemed appropriate.

Only the picture for the United States was examined.

The full results of the review are detailed in Working Paper

No. 4 (252). The major findings are reported in this chapter, and

the full bibliography of papers examined is listed to show the scope

of the review.

RESULTS

The literature was reviewed within the framework of six areas

most frequently mentioned by the directors of medical libraries as

needing attention (30). These six areas, in order of importance, are:

1. Automation/Computer Applications
2. Non-Book Materials/Multi-Media
3. Administration/Management
4. Information Retrieval Systems/Information Science
5. Content/Subject Matter Expertise
6. Reference/Bibliography

1 - Automation/Computer-Applications - For the time covered by

the review, this area has seen the move from experimental batch mode

operations to on-line operational applications, even to the extent

of mini-computer utilization. This is clearly an important subject

area and one in which different levels of sophistication are needed.

It appears that computer applications will continue to progress and

any continuing education program should take this in account and

have a high degree of adaptability built into it.

2 - <u>Non-Book Materials/Multi-Media</u> - This area probably represents
an even more fluid if not chaotic picture than the one above. This
may be due to the fact that we were further behind in this area. There
is some question whether or not we even knew this area existed. How-
ever, despite our slow start, we are closing rapidly. Noticeable
strides are being made in hardware and software control, but the
ideal is far from realized. The biomedical communications network
is functioning and evolving, and the audiovisual component is alive
and well. Computer assisted instruction is making itself felt although
still a toy for many. Again, the variance in sophistication among
health sciences librarians underscores the need for flexibility in
any continuing education approach.

3 - <u>Administration/Management</u> - Some positive things appear to
be happening with regard to this topic; namely, educational programs,
and continuing education opportunities. Judging from the lack of
literature on the topic, awareness of the problems may be lacking.
If such is the case, it is largely a matter of self-definition and
basic education in the areas of human relations and scientific
management. Once these deficiencies are overcome, we may be ready
for the more difficult task of organizational change.

4 - <u>Informational Retrieval Systems/Information Science</u> -
Trying to keep up with the on-line data bases that seem to be
developing daily is a task facing most health sciences librarians.
For the even more important tasks of systems design and evaluation,
we are again faced with different levels of need. The design of
a small manual SDI system for a few well-defined users is not the

same thing as research and design of a national on-line data base, but both are important and both are needed.

5 - Content/Subject Matter Expertise - This may be no more than a bugaboo, or it may be the key ingredient in the survival of the health sciences librarian. However, it will continue to receive attention from within and without the profession. Accordingly, it is felt that a program should be investigated that will provide a symbiotic approach to the subject disciplines represented. For most of those who have a need for improved subject competency, there is not enough time in which to acquire it by traditional methods. Some type of immersion process may be what is called for where the health sciences librarian is totally submerged in a well-balanced biomedical overview. The result is not an expert in any given discipline, but one who understands the terminology of many disciplines and can relate one to another.

6 - Reference/Bibliography - As noted by earlier reviewers, health sciences librarians do not write much about what is undoubtedly their most important function--bringing the user and information together. Some user studies are reported, but one has the impression that more products and services are based on the intuitive approach than on factual data. Library instruction has received attention, but "selling" a product or service to the library's constituency has not. If library services were utilized by all those who have a need for them, could we survive? For application to a continuing education program it appears that here again is an area in which there is a need to define the objectives of

the library before we set about changing the way in which we

attempt to accomplish these objectives. Perhaps many will not

see the need for a theoretical approach to the reference function,

but it is exactly our own lack of understanding of the basic aspects

of the information transfer process that continues to plague us.

The work reported in this chapter has attempted to document

change within the profession in the past fifteen years. It was

initially hypothesized that the half life of most librarians' first

professional degree was shrinking and that this required the

availability of well planned continuing education programming. On

the basis of the results obtained in this review, this hypothesis

has been proven.

Footnotes

1. Pendrill, G.R.. "Medical libraries and medical literature."
    pp.71-109 in Sewell, P.H. Five Years Work in Librarian-
    ship, 1961-65. London: Library Association, 1968.

2. Bishop, David. "Control and dissemination of information
    in medicine." In Voigt, Melvin (ed.) Advances in Librar-
    ianship. 2:45-102, 1971.

3. "Health Sciences Libraries." Adams, J.T. (ed.) Library
    Trends, 23:3-175 (July) 1974.

4. Adams, J.T. "Introduction." Library Trends, 23:3-6 (July)
    1974.

5. Allen, L.A. Continuing Education Needs of Special Libraries.
    New York: Special Libraries Association, 1974. 54pp.

6. Stone, E.W.; Patrick, R.J. and Conroy, Barbara. Continuing
    Library and Information Science Education. Final Report
    to the National Commission on Libraries and Information
    Science. Washington, D.C.: American Society for Infor-
    mation Science, 1974.

7. Stone, E.W. Continuing Library Education as Viewed in Re-
    lation to Other Professional Continuing Education Move-
    ments. (Washington, D.C.: ASIS, 1974.

8. Pendrill, G.R. "The information needs of the medical pro-
    fession and future staff requirements of medical librar-
    ies: implications for the education and training of medi-
    cal librarians." In Proceedings of the Third International
    Congress of Medical Librarianship, Amsterdam, 5-9 May
    1969. Amsterdam: Excerpta Medica, 1970. pp.261-74.

9. Brodman, E. "The Medical Library Association's experience
    with continuing education." In Third Congress, pp.301-7.

10. Felter, J.W. "Continuing education for medical librarians:
    recent United States experience." In Third Congress,
    pp.299-300.

11. Watterson, R.M. "The Medical Library Association's current
    program in continuing education." In Third Congress,
    pp.308-14.

12. Gartland, H.J. "Veterans Administration library service
    education programs, with some additional remarks on the
    programs of the American Hospital Association," In Third
    Congress, pp. 315-26.

13. Rees, A.M. "Modifications of curriculum for biomedical
    libraries in library schools and incorporation of
    instruction in the newer information technology."
    In Third Congress, pp.275-90.

14. Rees, A.M. and Rothenberg, Lesliebeth. "An analysis of the
    demographic, educational, and employment characteris-
    tics of participants in the continuing education pro-
    gram of the Medical Library Association, Denver,
    Colorado, June 1968." Bulletin of the Medical Library
    Association (BMLA), 58:159-62 (April) 1970.

15. Darling, Louise. "Changes in information delivery since
    1960." Library Trends, 23:31-62 (July) 1974.

16. Dryer, B.V. "Lifetime learning for physicians: principles,
    practices, proposals." Journal of Medical Education,
    37:1-134 (June) 1962. Pt.2.

17. Miller, G.E. "Continuing education for what?" Journal of
    Medical Education, 42:324 (April) 1967.

18. Schoolman, H.M. "The future: libraries, librarians and
    users." Library Trends, 23:165-75 (July) 1974.

19. Brandon, A.N. "Academic status for medical school librarians."
    BMLA. 58:1-6 (January) 1970.

20. Kronick, D.A.; Rees, A.M.; and Rothenberg, Lesliebeth.
    "An investigation of the educational needs of health
    sciences library manpower. I. Definition of the man-
    power problem and research design." BMLA, 58:7-17
    (January) 1970.

21. Rothenberg, Lesliebeth; Rees, A.M.; and Kronick, D.A. "An
    investigation of the educational needs of health sciences
    library manpower: II. Health-related institutions and
    their library resources." BMLA, 58:510-20 (October) 1970.

22. Rothenberg, Lesliebeth; Kronick, D.A.; and Rees, A.M. "An
    investigation of the educational needs of health sciences
    library manpower. III. Manpower supply and demand in
    health sciences libraries." BMLA, 59:21-30 (January) 1971.

23. Rothenberg, Lesliebeth; Rees, A.M.; and Kronick, D.A. "An
    investigation of the educational needs of health sciences
    library manpower. IV. Characteristics of manpower in
    health sciences libraries." BMLA, 59:31-40 (January) 1971.

24. Kronick, D.A.; Rees, A.M.; and Rothenberg, Lesliebeth. "An
    investigation of the educational needs of health sciences
    library manpower. V. Manpower for hospital libraries."
    BMLA, 59:392-403 (July) 1971.

25. Rothenberg, L.; Lucianovic, Judith; Kronick, D.A.; and Rees, A.M. "A job-task index for evaluating professional utilization in libraries." Library Quarterly, 41:320-8 (October) 1971.

26. Kronick, D.A.; Rees, A.M.; and Rothenberg, Lesliebeth. "An investigation of the educational needs of health sciences library manpower: VII. Summary and conclusions." BMLA, 60:292-300 (April) 1972.

27. Darling, Louise. "The view behind and ahead: implications of certification." BMLA, 61:375-86 (October) 1973.

28. "Library education and manpower." American Libraries, 1: 341-5 (April) 1970.

29. Asheim, Lester. "The preparation and use of library manpower." BMLA, 60:288-91 (April) 1972.

30. Fink, G.D. A Forecast of Events and Conditions that Might Affect Job and Training Requirements for Medical Librarians, Alexandria, Virginia: Human Resources Research Organization, 1973. Technical Report 73-30, HumRRO-TR-73-30.

31. "Continuing library education." BMLA, 62:70-1 (January) 1974.

32. Baker, D.B. "Communication or chaos?" Science, 169:739-42 (August 21) 1970.

33. Orr, Richard and others. "Communication problems in bio-chemical research: report of a study" Federation Proceedings, 23:1117-76 (September-October) and 23: 1297-1331 (November-December) 1964.

34. Heumann, K.F. "Biomedical literature and information services." Federation Proceedings, 33:1693 (June) 1974.

35. Bottle, R.T. "Biomedical literature and information services." Federation Proceedings, 33:2693-5 (June) 1974.

36. Krudy, E.S. "New approach to dissemination of scientific information." Federation Proceedings, 33:1695-7 (June) 1974.

37. Day, S.B.; Old, Lloyd; and Good, R.A. "Communication of scientific information at a cancer research institute." Federation Proceedings, 33:1699-1701 (June) 1974.

38. Altman, P.L. "Biological handbooks: compilations, processing, and dissemination of data." Federation Proceedings, 33:1701-1711 (June) 1974.

39. Tate, F.A. "Access to the biomedical literature through services produced at Chemical Abstracts Service." Federation Proceedings, 3:1712-14 (June) 1974.

40. Kennedy, H.E. and Fisher, D.A. "Information support for the biomedical sciences." Federation Proceedings, 33:1714-17 (June) 1974.

41. Day, M.S. "Computer-based retrieval services at the National Library of Medicine." Federation Proceedings, 33:1717-8 (June) 1974.

42. Blanken, R.R. and Stern, B.T. "Excerpta Medica's system for the automated storage and retrieval of biomedical information." Federation Proceedings, 33:1719-21 (June) 1974.

43. Flanagan, Dennis. "The future of scientific communication." Federation Proceedings, 33:1721-3 (June) 1974.

44. Cummings, M.M. "Publications: progress or pollution." American Scientist, 61:163-66 (March-April) 1973.

45. Brown, W.S.; Pierce, J.R.; and Traub, J.F. "The future of scientific journals." Science, 158:1153-9 (December) 1967.

46. Brown, W.S. and Traub, J.F. "MERCURI:a system for the computer-aided distribution of technical reports." Journal of the Association of Computing Machinery, 16:13-25 (January) 1969.

47. Lowry, W.K. "Use of computers in information systems." Science, 175:841-6 (February 25) 1972.

48. "Symposium on the primary journal." Journal of Chemical Documentation, 10:26-46 (February) 1970.

49. Herschman, Arthur. "The primary journal: past, present and future." Journal of Chemical Documentation, 10:37-41 (February) 1970.

50. Bush, Vannevar. "As we may think." Atlantic Monthly, 176: 101-8 (July) 1945.

51. Moore, J.A. "An inquiry on new forms of primary publications." Journal of Chemical Documentation, 12:75-8, 1972.

52. Kuney, J.H. "The role of microforms in journal publications." Journal of Chemical Documentation, 12:78-9, 1972.

53. Veaner, A.B. Evaluation of Micropublications. Chicago: American Library Association, 1971. 59pp.

54. Spigai, F.G. "The invisible medium: the state of the art
        of microform and a guide to the literature." Stanford:
        ERIC Clearinghouse on Media and Technology, 1973. 31pp.

55. Adams, Scott. "Foreign users of U.S. bibliographic data
        bases in biology and medicine." Library Trends, 23:
        153-64 (July) 1974.

56. Lorenzi, N.M. and Young, K.P. "New information transfer
        therapies." Library Trends, 23:109-26 (July) 1974.

57. Beatty, W.K. and Beatty, V.L. "Improvements in recordkeeping
        and use." Library Trends, 23:127-52 (July) 1974.

58. Mason, Ellsworth. "'The great gas bubble prick't' or, computers
        revealed--by a gentleman of quality." College and
        Research Libraries, 32:183-96 (May) 1971.

59. Warheit, L.A. "When some library systems fail." Wilson
        Library Bulletin, 46:52-8 (September) 1971.

60. Salton, G. "Computers and libraries--a reply." Library
        Journal, 96:3277-82 (October 15) 1971.

61. Rogers, F.B. "Computerized bibliographic retrieval services."
        Library Trends, 23:73-88 (July) 1974.

62. Beckwith, H.K. "Mechanization of library procedures in the
        medium-sized medical library: IX. Holding statements
        in PHILSOM: A study of their activity." BMLA, 58:
        120-25 (April) 1970.

63. Coe, M.J. "Mechanization of library procedures in the medium-
        sized medical library: X. Uniqueness of compression
        codes for bibliographic retrieval." BMLA, 58:587-97
        (October) 1970.

64. Miller, J.K. "Mechanization of library procedures in the
        medium-sized medical library:XI. Two methods of pro-
        viding selective dissemination of information to medi-
        cal scientists." BMLA, 58:378-97 (July) 1970.

65. Ohta, Miwa and Evans, G.T. "Mechanization of library pro-
        cedures in the medium-sized medical library: XII. An
        information retrieval system: a combination of a manual
        selective dissemination of information, and a personal
        file indexing system by computer." BMLA, 58:112-19
        (April) 1970.

66. Howard, Ellen and Kharibian, Gloria. "Mechanization of library
        procedures in the medium-sized medical library: XIII.
        Computer applications in hospital departmental libraries."
        BMLA, 60:445-57 (July) 1972.

67. Fenske, R.E. "Mechanization of library procedures in the medium-sized medical library: XIV. Correlations between National Library of Medicine classification numbers and MeSH headings." BMLA, 60:319-24 (April) 1972.

68. Lemkau, H.I. and Straub, J.R. "The design of the automated serials accession system at the library of the Mount Sinai School of Medicine of the City University of New York." BMLA, 58:163-72 (April) 1970.

69. Jove, Erika; Butzin, Diane; and Robinson, R.E. III. "Reclassification and documentation in a medium-sized medical center library: the MTST system in the simultaneous production of catalog cards and a computer stored record using natural language data processing techniques." BMLA, 59:41-9 (January) 1971.

70. Koch, M.S. and Kovacs, Helen. "Computer information project for monographs at the Medical Research Library of Brooklyn." BMLA, 61:297-301 (July) 1973.

70a. Kilgour, F.G. "History of library computerization." Journal of Library Automation, 3:218-29 (September) 1970.

71. "Health science library automation." MLA News, No. 60 (November) 1974. p.8.

72. Hopkins, Judith. "The Ohio College Library Center." Library Resources and Technical Services, 17:308-19 (Summer) 1973.

73. Kilgour, F.G. "Standardization for interchange of cataloging records--MARC II." Third Congress, pp. 103-9.

74. Rees, T.H., Jr. "Use of the Library of Congress MARC II format for a union list of serials." Third Congress, pp. 110-13.

75. Divett, R.T.; Jones, W.W.; and Dahl, E.S. "A file structure for an automated library catalog." Third Congress, pp. 114-27.

76. "Williams & Wilkins: the great leap backward." BMLA, 60: 342-6 (April) 1972.

77. "License for photocopy." BMLA, 60:582-3 (October) 1972.

78. "Medical organizations support photocopy practices." BMLA, 60:598 (October) 1972.

79. "Copyright and reproduction." BMLA, 61:344-5 (July) 1973.

80. "Williams & Wilkins capitulates." BMLA, 61:58-60 (January) 1973.

81. "Members vote for clarification of S.1361." MIA News, No. 55
        (June) 1974, p.2.

82. "MIA argues 'fair use' in interpretation." MIA News, No. 59
        (October) 1974, p.2.

83. "Xerox develops technique to prevent copying of documents."
        MIA News, No. 59 (October) 1974, p.7.

84. Prior, J.A. "Plans for new information systems and health
        sciences library at the Ohio State University." Third
        Congress, p.487-93.

85. "UCIA develops on-line serials control system." BMIA, 59:
        524 (July) 1971.

86. Fayollat, James. "On-line serials control at UCIA." Proceed-
        ings of the 1972 Clinic on Library Applications of Data
        Processing. Urbana, Illinois: University of Illinois,
        1972. pp.69-81.

87. Brudvig, G.L. "The development of a minicomputer system
        for the University of Minnesota Bio-Medical Library."
        Proceedings of the 1974 Clinic on Library Applications
        for Data Processing, Urbana: University of Illinois
        (In Press).

88. Grosch, A.H. "Mini-computer-characteristics, economics, and
        selection for an integrated library management system."
        Proceedings of the 1974 Clinic on Library Applications
        of Data Processing. Urbana: University of Illinois
        (In Press).

89. Lowrey, E.D. "Systems design for a mini-computer based library
        data management system." Proceedings of the 1974 Clinic
        on Library Applications of Data Processing, Urbana:
        University of Illinois (In Press).

90. Lieberman, James. "The videorecord: new mode for learning."
        BMIA, 60:22-5 (January) 1972.

91. Closurdo, J.S. and Pehkonen, C.A. "PAIR: a cooperative
        effort to meet informational needs." BMIA, 61:201-4
        (April) 1973.

92. Crawford, Susan. "Audiovisual materials." In Annan, G.L.
        and Felter, J.W. (eds.) Handbook of Medical Library
        Practice, 3rd ed. Chicago: Medical Library Association,
        1970. pp.222-40.

93. Meiboom, Esther. "A film program in a teaching hospital."
        BMIA, 61:416-21 (October) 1973.

94. Kronick, D.A. "Nonprint media as information resources: software and hardware." BMIA, 62:19-24 (January) 1974.

95. "Microfilm forum: experiences, problems, and plans of microfilm users." Journal of Chemical Documentation, 10: 3-25 (February) 1970.

96. Sullivan, R.C. "Microform developments related to acquisitions." College and Research Libraries, 34:16-28 (January) 1973.

97. Hawken, W.R. "Systems instead of standards." Library Journal, 98:2515-25 (September 15) 1973.

98. Smith, L.C. "The medical librarian and computer-assisted instruction." BMIA, 62:6-18 (January) 1974.

99. "NLM experiments with computer assisted instruction." BMIA, 61:360 (July) 1973.

100. "Ohio to distribute independent study materials." BMIA, 61:76-7 (January) 1973.

101. "NLM funds CAI materials." BMIA, 61:78 (January) 1973.

102. "Illinois installs CAI facility." BMIA, 60:602-3 (October) 1972.

103. Brigham, C.R. and Kamp, Martin. "The current status of computer-assisted instruction in the health sciences." Journal of Medical Education, 49:278-9 (March) 1974.

104. "Educational technology for medicine: roles for the Lister Hill Center." Journal of Medicine Education, 46: Supp.: 1-97 (July) 1971.

105. "Biomedical communications network 70's--analysis of the AAMC report." Smythe, C.M. In Media 70's National Conference on Multimedia in the Health Sciences, Proceedings, Fairfax, Virginia: Educational Communications Foundation, 1971. pp.104-9.

106. "Lister Hill Center continues satellite communications experiments." NLM News, 25:3 (June) 1970.

107. "Medical instruction via satellite saves two lives." NLM News, 26:3-4 (September-October) 1971.

108. "MEDLINE queried via satellite." NLM News, 27:3 (May) 1972.

109. "Medical instruction via satellite saves life." NLM News, 27:3-4 (July) 1972.

110. "New satellite experiments planned." *NLM News*, 27:1-2
     (September) 1972.

111. "The Lister Hill Center and telecommunications networks."
     NLM News, 28:2-4 (January-February) 1973.

112. McCarn, D.B. "Planning for on-line bibliographic access by
     the Lister Hill National Center for Biomedical Communica-
     tions." *BMLA*, 58:303-10 (July) 1970.

113. Lancaster, F.W. "Evaluation of on-line searching in MEDLARS
     (AIM-TWX) by biomedical practitioners." *University
     of Illinois Graduate School of Library Science*, No. 101
     (February) 1972. 20pp.

114. Davis, Ruth. "The national biomedical communications network
     as a developing structure." *BMLA*, 59:1-20 (January) 1971.

115. Schoolman, H.M. "NLM regional medical library program."
     BMLA, 60:284-5 (April) 1972.

116. Pings, V.M. "Regional medical library program development."
     BMLA, 60:274-83 (April) 1972.

117. Fink, W.R.; Bloomquist, Harold; and Allen, R.G. "The place
     of the hospital library consortium in the national
     biomedical communications network." *BMLA*, 62:258-65
     (July) 1974.

118. Darling, Louise. "Personal views on personnel administration."
     BMLA, 58:346-9 (July) 1970.

119. McGregor, D.M. "The human side of enterprise." In McGregor,
     D.M. *Leadership and Motivation*, Cambridge: MIT Press,
     1966. pp.3-20. Reprinted in Wasserman, Paul and Bundy,
     M.L. *Reader in Library Administration*, Washington, D.C.:
     Microcard Editions, 1968. pp.210-6.

120. Carroll, S.J., Jr.; and Tose, H.L., Jr. *Management by
     Objectives, Applications and Research*, New York: Mac-
     Millan, 1973. 216pp.

121. "Management education: implications for libraries and
     library schools." *Library Quarterly*, 43:281-393 (October)
     1973.

122. Johnson, E.R. "Applying 'management by objectives' to the
     university library." *College and Research Libraries*,
     34:436-9 (November) 1973.

123. Kipp, L.J. "Management literature for librarians." Library
     Journal, 97:158-60 (January 15) 1972.

124. Stone, E.W. (ed.) "Personnel development and continuing
     education in libraries." Library Trends, 20:3-183
     (July) 1971.

125. Stone, E.W. (ed.) New Directions in Staff Development,
     Chicago: American Library Association, 1971. 66pp.

126. Myers, M.S. Every Employee a Manager. New York: McGraw-
     Hill, 1970. 233pp.

127. Renfro, K.R. "Raters and Rating." Mountain-Plains Library
     Quarterly, 16:3-32 (November) 1971.

128. Johnson, Marjorie. "Performance appraisal of librarians--
     a survey." College and Research Libraries, 33:359-67
     (September) 1972.

129. Peele, David. "Evaluating library employees." Library
     Journal, 97:2803-7 (September 15) 1972.

130. Yeh, T.Y. "Library peer evaluation for promotion and merit
     increase: how it works." College and Research Libraries,
     34:270-4 (July) 1973.

131. Levinson, Harry. "Management by whose objectives." Harvard
     Business Review, 48:125-34 (July-August) 1970.

132. Merchant, M.P. "Participative management as related to
     personnel development." Library Trends, 20:48-59 (July)
     1971.

133. Kaplan, Louis. "Participation: some basic considerations
     on the theme of academe." College and Research Libraries,
     34:235-41 (September) 1973.

134. Howard, E.N. "The orbital organization." Library Journal,
     95:1712-5 (May 1) 1970.

135. Heinritz, Fr. "Quantitative management in libraries."
     College and Research Libraries, 31:232-8 (July) 1970.

136. DeProspo, E.R. and Altman, Ellen. "Library measurement,
     a management-tool." Library Journal, 98:3605-7 (December
     15) 1973.

137. Smith, Eldred. "Do libraries need managers?" Library Journal,
     94:502-6 (February 1) 1969.

138. Summer, Williams. "A change in budgetary thinking." American
      Libraries, 2:1174-80 (December) 1971.

139. Jenkins, H.R. "The ABC's of PPB." Library Journal, 96:
      3089-93 (October 1) 1971.

140. Fazar, Willard. "Program planning and budgeting theory."
      Special Libraries, 60:423-33 (September) 1969.

141. Howard, E.N. "Toward PPBS in the public library." American
      Libraries, 2:386-93 (April) 1971.

142. Tudor, Dean. "The special library budget." Special Libraries,
      63:517-27 (November) 1972.

143. McInnis, R.M. "The formula approach to library size: an
      empirical study of its efficacy in evaluating research
      libraries." College and Research Libraries, 33:190-98
      (May) 1972.

144. Koenig, E.D. and others. "SCOPE: a cost analysis of an
      automated serials record system." Journal of Library
      Automation, 4:129-40 (September) 1971.

145. Burgess, T.K. "A cost effectiveness model for comparing
      various circulation systems." Journal of Library Auto-
      mation, 6:75-86 (June) 1973.

146. Mount, Ellis and Fasana, Paul. "An approach to the measure-
      ment of use and cost of a large academic research library
      system: a report of a study done at Columbia University
      libraries." College and Research Libraries, 33:199-211
      (May) 1972.

147. Bommer, Michael and Ford, Bernard. "A cost-benefit analysis
      for determining the value of an electronic security
      system." College and Research Libraries, 35:270-9
      (July) 1974.

148. Slater, Frank (ed.) Cost Reduction for Special Libraries
      and Information Centers. Washington, D.C.: ASIS, 1973.
      187pp.

149. Wilson, J.H. "Costing for libraries: a summary review of
      the recent literature." In Slater, Frank (ed.) Cost
      Reduction for Special Libraries and Information Cen-
      ters. Washington, D.C.: ASIS, 1974. pp.2-21.

150. Bookstein, Abraham, and Swanson, D.R. "Introduction."
      Library Quarterly, 42:1-5 (January) 1972.

151. Morse, Philip. Library Effectiveness, a systems approach. Cambridge: MIT Press, 1968. 207pp.

152. "Operations Research: implications for libraries." Library Quarterly, 42:1-158 (January) 1972.

153. Evans, Edward; Borko, Harold; and Ferguson, Patricia. "Review of criteria used to measure library effectiveness." BMLA, 60:102-110 (January) 1972.

154. "Library effectiveness." BMLA, 60:584 (October) 1972.

155. Orr, R.H. "Development of methodologic tools for planning and managing library services: IV. Bibliography of studies selected for methods and data useful to biomedical libraries." BMLA, 58:350-77 (July) 1970.

156. Orr, R.H. and Schless, A.P. "Document delivery capabilities of major biomedical libraries in 1968: results of a national survey employing standardized tests." BMLA, 60:382-422 (July) 1972.

157. Huntley, J.L. and Orrok, P.A. "The hospital library profile as an evaluation mechanism." BMLA, 58:403-14 (July) 1970.

158. Waller, S.B. "Thoughts on cataloging and classification in a small medical library." BMLA, 58:51-7 (January) 1970.

159. Frohlich, Jean. "Budgeting for hospital libraries." BMLA, 62:34-6 (January) 1974.

160. Brodman, Estelle. "Confrontation and the medical library." BMLA, 62:87-91 (April) 1974.

161. Brodman, Estelle. "The delivery of medical information in the 1970s." BMLA, 59:579-84 (October) 1971.

162. Lutz, R.P. "Costing information services." BMLA, 59:254-61, (April) 1971.

163. Cheshier, R.B. "Fees for service in medical library networks." BMLA, 60:325-32 (April) 1972.

164. Braude, R.M. and Holt, Nancy. "Cost-performance analysis of TWX-mediated inter-library loans in a medium-sized medical center library." BMLA, 59:65-70 (January) 1971.

165. Spencer, C.C. "Unit costs of interlibrary loans and photocopies at a regional medical library: preliminary report." BMLA, 58:189-90 (April) 1970.

166. Kountz, John. "Library cost analysis: a recipe." _Library Journal_, 97:459-64 (February 1) 1972.

167. "New library management program available at Case Western Reserve." _BMLA_, 62:162 (April) 1974.

168. "MLA sponsoring management institute for health sciences librarians." _MLA News_, No. 55 (June) 1974. p.3.

169. "Management institute to be held in Norfolk, Virginia." _MLA News_, No. 61 (December) 1974. p.3.

170. Jenkins, G.T. "The MEDLARS demand search quality control program." _BMLA_, 60:423-6 (July) 1972.

171. Leiter, J. "The work of MEDLARS." _Third Congress_, pp.155-65.

172. Gomes, S.S. "The nature of the use and users of the Midwest Regional Medical Library." _BMLA_, 58:559-77 (October) 1970.

173. Goode, D.J.; Penry, J.K.; and Caponio, J.F. "Comparative analysis of _Epilepsy Abstracts_ and a MEDLARS bibliography." _BMLA_, 58:44-50 (January) 1970.

174. McCarn, D.B. "Planning for on-line bibliographic access by the Lister Hill National Center for Biomedical Communications." _BMLA_, 58:303-10 (July) 1970. (same as citation number 112).

175. McCarn, D.B. "Networks with emphasis on planning an on-line bibliographic access system." _Information Storage and Retrieval_, 7:271-9 (No.6) 1971.

176. Lancaster, F.W. "The evaluation of published indexes and abstract journals: criteria and possible procedures." _BMLA_, 59:479-94 (July) 1971.

177. Moll, Wilhelm. "AIM-TWX service at the University of Virginia: a review and evaluation." _BMLA_, 59:458-62 (July) 1971.

178. Moll, Wilhelm. "Observations on the AIM-TWX service at the University of Virginia Medical Library." _BMLA_, 60:571-4 (October) 1972.

179. Blase, N.G. and Stock, C.J. "An experimental cancer information service using AIM-TWX." _BMLA_, 60:115-20 (January) 1972.

180. Spiegel, Isabel, and Crager, Janet. "Comparison of SUNY and MEDLINE searches." BMLA, 61:205-9 (April) 1973.

181. Moll, Wilhelm, "MEDLINE evaluation study." BMLA, 62:1-5 (January) 1974.

182. McCarthy, S.E.; Maccabee, S.E.; and Feng, C.H. "Evaluation of MEDLINE service by user survey." BMLA, 62:367-73 (October) 1974.

183. Berk, R.A. An Experimental Case Study of the Diffusion of an Information Innovation in a Scientific Community. Unpublished Ph.D. Dissertation. Urbana: University of Illinois, 1974. 332pp.

184. Foreman, Gertrude; Allen, Margaret; and Johnson, Donna. "A user study of manual and MEDLINE literature searches in the hospital library." BMLA, 62:385-7 (October) 1974.

185. Sober, Phyllis, and Tidball, C.S. "***MEDLEARN***: an orientation to MEDLINE." BMLA, 62:92-4 (April) 1974.

186. Williams, M.E. "Computer searching of multiple-machine readable data bases." Mn U Bulletin, 2:45-55 (July) 1971.

187. "National Library Week Symposium II: Information for the seventies - meeting a need." Mn U Bulletin, 2:25-52 (July) 1971.

188. Sodergren, Linnea. "MEDIARS II: a review." BMLA, 61:400-7 (October) 1973.

189. Gillespie, C.J. "Computerized systems for indexing and retrieving information in psychology journals." Physiologist, 1971. pp. 289-98.

190. Garfield, E. "Citation indexing, historio-bibliography, and the sociology of science." Third Congress, pp. 187-204.

191. Caponio, J.F.; Penry, J.K.; and Goode, D.T. "Epilepsy Abstracts: its role in disseminating scientific information." BMLA, 58:37-43 (January) 1970.

192. Porter, R.J.; Penry, J.K.; and Caponio, J.F. "Epilepsy Abstracts Retrieval System (EARS): a new concept for medical literature storage and retrieval." BMLA, 59: 430-32 (July) 1971.

193. Maxson, Elizabeth, and Sprinkle, M.D. "Extending library
     services by using a new technology." BMLA, 60:310-14
     (April) 1972.

194. Windsor, D.A. "Publications on a drug before the first
     report of its administration to man." BMLA, 59:433-37,
     (July) 1971.

195. Wilkinson, Doris and Hollander, Stephen. "A comparison
     of drug literature covered by Index Medicus and Drug
     Literature Index." BMLA, 61:431-2 (October) 1973.

196. Montgomery, R.R. "An indexing coverage study of toxicologi-
     cal literature." Journal of Chemical Documentation,
     13:41-7 (No. 1) 1973.

197. Starker, L.N. "Pharmaceutical industry viewpoint of wordage
     problems--amounts, languages, and access." Journal
     of Chemical Documentation, 12:88-93 (No. 2) 1972.

198. "TOXLINE expands data base." BMLA, 61:465-6 (October) 1973.

199. "American Academy of Clinical Toxicology literature citation
     and abstracting program." Clinical Toxicology, 4:477-90
     (September) 1971.

200. Eichhorn, M.M. and Reinecke, R.D. "Development and imple-
     mentation of a thesaurus for the visual sciences."
     BMLA, 58:23-9 (January) 1970.

201. Eichhorn, M.M. and Reinecke, R.D. "Vision Information Cen-
     ter: a user-oriented data base." Science, 169:29-31
     (July 3) 1970.

202. Minter, M.E. "This is where it's at." BMLA, 61:314-8 (July)
     1973.

203. Lancaster, F.W. "Systems design and analysis for libraries."
     Library Trends, 21:463:603 (April) 1973.

204. Liston, D.M. "A systems approach to the design of information
     systems." Journal of the American Society for Information
     Science, 22:115-22 (March-April) 1971.

205. Swanson, D.R. "Selective dissemination of biomedical infor-
     mation: a series of studies and a model system." Library
     Quarterly, 44:189-205 (July) 1974.

206. Matheson, Nina. "User reactions to Current Contents: behavioral,
     social and management sciences." BMLA, 59:304-21 (April)
     1971.

207. Matheson, N.W. and Sundland, D.M. "Objectives of the SDI system for mental hospital personnel in Missouri." Third Congress, pp. 399-409.

208. Yunis, S.S. "The implementation, evaluation, and refinement of a manual SDI service." BMLA, 61:4-14 (January) 1973.

209. Lodico, N.J. "Physician's referral letter bibliographic service: a new method of disseminating medical information." BMLA, 61:422-5 (October) 1973.

210. Wood, M.S. and Seeds, R.S. "Development of SDI services from a manual current awareness service to SDILINE." BMLA, 62:374-84 (October) 1974.

211. Orr, R.H.; Bloomquist, Harold; Cruzat, G.S.; and Schless, A.P. "User services offered by medical school libraries in 1968: results of a national survey employing new methodology." BMLA, 58:455-92 (October) 1970.

212. Flores de Hartmann, E. "The M.D. and the reference librarian: a breakdown in communication." Third Congress, pp. 19-23.

213. Adkins, E.F. "Syndromes difficult to find in the medical literature: a suggested project for biomedical librarians." Third Congress, p. 247-51.

214. Algermissen, Virginia. "Biomedical librarians in a patient care setting at the University of Missouri-Kansas City School of Medicine." BMLA, 62:354-8 (October) 1974.

215. "Librarian's role in patient education." MLA News, No. 55 (June) 1974. p.7.

216. "LATCH - literature attached to charts." MLA News, No. 56 (July) 1974. p.7.

217. "New roles for medical librarians - 3." MLA News, No. 59 (October) 1974. p.6.

218. "Community outreach program." MLA News, No. 61 (December) 1974. p.13.

219. "New roles for health sciences librarians - 4." MLA News, No. 60 (November) p.5.

220. Olson, E.E. "User population characteristics related to library utilization." Third Congress, pp. 16-8.

221. Williams, J.F., II and Pings, V.M. "A study of the access to the scholarly record from a hospital health science core collection." BMIA, 61:408-15 (October) 1973.

222. Pings, V.M. and Malin, J.E. "Access to the scholarly record of medicine by the Osteopathic physicians of South-eastern Michigan." BMIA, 58:18-22 (January) 1970.

223. Gillette, V.L.; Van Camp, Ann; Campbell, N.S.; and Laatz, M.J. "The Indiana biomedical information program." BMIA, 58:60-4 (January) 1970.

224. Oseasohn, Robert. "Borrower use of a modern medical library by practicing physicians." BMIA, 58:58-9 (January) 1970.

225. Ash, Joan. "Library use of public health materials: description and analysis." BMIA, 62:95-104 (April) 1974.

226. Tibbetts, Pamela. "A method for estimating the in-house use of the periodical collection in the University of Minnesota Bio-Medical Library." BMIA, 62:37-48 (January) 1974.

227. Piternick, A.B. "Measurement of journal availability in a biomedical library." BMIA, 60:534-42 (October) 1972.

228. Smith, J.M.B. "A periodical use study at Children's Hospital of Michigan." BMIA, 58:65-7 (January) 1970.

229. Meakin, F.A. and Lewis, R.F. "Bibliographic fugitives: papers presented at meetings." Third Congress, pp. 239-46.

230. Yokote, Gail and Utterback, R.A. "Time lapses in information dissemination: research laboratory to physician's office." BMIA, 62:251-7 (July) 1974.

231. Titley, J. "The medical librarian as a medical educator: the description of a course." Third Congress, pp. 327-32.

232. Dannenberg, Dena. "A course in information techniques for dental students." BMIA, 60:111-4 (January) 1972.

233. Eaton, E.S. "Library orientation." BMIA, 60:133-7 (January) 1972.

234. Borda, Eva and Murray, M.E. "Introduction to library services for allied health personnel." BMIA, 62:363-66 (October) 1974.

235. Lunin, L.F. and Catlin, F.I. "Teaching information and communication in a medical center." Journal of Medical Education, 47:658-660 (August) 1972.

236. Bell, JoAnn and Davis, J. "Sex, SIN, and dirty books." BMIA, 62:55-7 (January) 1974.

237. "RMP's funded." MIA News, No. 60 (November) 1974. p.6.

238. "Medical libraries and 'a national program for library and information services.'" MIA News, No. 61 (December) p.4-5.

239. Becker, Joseph (ed.) Proceedings of the Conference on Inter-library Communications and Informatic Networks. Chicago: American Library Association, 1971. 347pp.

240. UNESCO and the International Council of Scientific Unions. UNISIST: Synopsis of the Feasibility Study on a World Science Information System. Paris: UNESCO, 1971. 92pp.

241. "Assistance programs extended." NIM News, 29:1 (September) 1974.

242. Oatfield, H. "Standardization in relation to medical librar-ianship: a survey." Third Congress, pp. 59-79.

243. Pizer, I.H. "Medical subject headings for small medical libraries." Third Congress, p.80-91.

244. Porter, K.I. "Standardization of serial title abbreviations." Third Congress, pp. 92-102.

245. Darling, Louise. "Integrating information services for dental schools into a health sciences library." BMIA, 58:177-85 (April) 1970.

246. Hodges, T.M. "NERMIS and the community hospital: service, education and advice." BMIA, 58:320-4 (July) 1970.

247. Cowgill, L.O. and Havlik, R.J. "Standards for special libraries." Library Trends, 21:249-60 (October) 1972.

248. Orne, Jerrold. "Standards in library technology." Library Trends, 21:286-97 (October) 1972.

249. Yast, Helen. "Standards of library service in institutions: B. In the health care setting." Library Trends, 21: 267-85 (October) 1972. See also MIA News, No. 62:7-9 (January) 1975 - "JCAH Library Standards."

250. Oatfield, Harold. "Standards." BMIA, 61:348-50 (July) 1973.

251. "NIM, NAL, and LC continue serial cooperation." BMIA, 62: 161 (April) 1974.

252. Berk, Robert, Continuing Education Needs of Health Sciences Librarians Based on the Literature. Working Paper No. 4. Continuing Education Needs of Health Sciences Librarians Grant No. NLM 01857-02. 126 p. 1975.

CHAPTER III

CONTINUING EDUCATION NEEDS SURVEY

In order to obtain as broad a perspective as possible on the current perceived continuing education needs of health sciences library personnel, a survey questionnaire was developed and distributed to two groups. The first survey audience consisted of participants at various regional Medical Library Association meetings. This target audience was chosen since it was thought to be the most representative of the grassroots level of medical librarianship. Many people attending the regional meetings are not members of the Medical Library Association, nor do they have formal academic training in librarianship. The second group was a randomly chosen set of MLA members to whom a survey of employment inducements or constraints to continuing education was also distributed. (See Chapter V, page 196)

The needs survey solicited opinion as to those areas of library practice which individual library personnel felt were important to their professional development and which they would like to see included in an MLA continuing education progra. While the Association had gathered suggestions for additional new courses from participants in the continuing education courses at the national meeting, a more systematic feedback from "grassroots" library personnel was desired. It was reasoned that the two groups chosen would provide a cross section of practicing librarians in a variety of geographic and specialty areas.

Question 1 (presented to the regional groups only) was a list of ten general areas of library practice (see Appendix A, p.156).

Respondents were asked to number the items in the list in the order

of importance to them in terms of the areas the respondents felt to

be most needed for their future professional development. Question 2

contained a list of fifty-seven hypothetical course titles and asked

respondents to mark those courses they would be interested in attending.

Regional group members were asked to indicate the desired course level

as Beginning, Intermediate or Advanced. The MIA sample was asked

only to check up to ten courses they would be interested in attending

within the next three years. This was done because it was apparent

from the regional responses that the respondents did not share a

common understanding of what the different levels meant. Space was

provided at the end of the questionnaire for suggestion of other

courses and for comments. (See Appendix A, Continuing Education Needs

Questionnaire - Regional Groups, and Appendix B, Continuing Education

Needs Questionnaire - MIA member sample.)

The following seven Regional Medical Library Groups distributed

the questionnaire at their Fall, 1973 meetings:

1) Mid-Atlantic

2) Mid-Continental

3) Mid-West

4) New York

5) Pacific Northwest

6) South Central

7) Southern

Response data were also obtained from the

8) Joint Meeting of the Northern California Medical Library

Group and the Medical Library Group of Southern
California in the Winter of 1974.

Distribution of the questionnaire was in general handled by
the chairperson in the local group. Each chairperson was contacted
by telephone from the MLA Division of Education and briefed as to
the purpose and content of the questionnaire. Each was asked to
make certain that the participants knew the purpose of the questionnaire,
to give instruction in filling out the questionnaires and to mail completed
questionnaires back to the Division. No one from the Division oversaw the
actual presentation of the questionnaires to the individual respondents.
Thus, although a total of some 1100 questionnaires were mailed out,
no accurate counts are available as to how many of these were actually
distributed. The total number of returned questionnaires (317) has
been estimated by the individual chairpersons as representing an
approximate fifty percent return based on estimated meeting attendance.

In July, 1974, question two of the Continuing Education Needs
Questionnaire was distributed to a sample of MLA members as an addition
to the survey on organizational inducements to continuing education
(See Chapter V). The C. E. Needs Inventory was included there as an
opportunity to obtain response data from librarians known to be MLA
members along with information on the type and size of the library
in which they worked. It provided greater precision in the data on
the distribution and return of the questionnaires.

Five additional course titles were added to the original list
based on comments made by the regional group respondents. The

new titles were : 1) consortium development and operation,
2) extension librarianship, 3) biomedical networking, 4) biomedical
communications, and 5) library automation - cataloging.

Questionnaires were sent to both individual and institutional
members; their being addressed in the latter case to the person designated
as institutional representative. A total of 289 questionnaires were
sent in the MIA sample and 213 returned, for a response rate of 75%.

Returned questionnaires from both groups showed many "errors"
in completion. Typical of these was the mere checking of items in
question 1 rather than the requested numbering, and a simple checking
in question 2 rather than the "B", "I", and "A" (Beginning, Intermediate,
and Advanced) requested of the regional groups.

Preliminary analysis of data showed that "correctly" filled out
questionnaires did not display significantly different data patterns
from those "incorrectly" filled out, thus the entire group of returned
questionnaires was used for analysis, with the following category
reductions: 1) In Appendix A, question 2 totals represent all
occurrences of items labeled B, I, or A, and all occurences of items
simply checked.

Table 1 shows the ranking of the items in question 1 by the
regional group members. (MIA sample did not receive question 1.)
Primary interest is centered on innovative services and new approaches
in medical librarianship, on administrative and supervisory skills and
on audio-visual materials and services. These areas reflect current
interest in, and concern with, expanding roles for medical libraries
and increased realization of the importance of administrative skills
in libraries.

TABLF 1

AREAS FELT MOST NEEDED FOR FUTURE
PROFESSIONAL DEVELOPMENT

Area	Count	Percent of Total Responses
Innovative Services and New Approaches in Medical Librarianship	213	18%
Administrative and Supervisory Skills	160	13
Library Management	147	12
Audiovisual Materials and Services	134	11
Long Range Planning and Budgeting	132	11
Computer Applications to Library Operations	106	9
Computerized Information Retrieval	85	7
Public Service and Reference	81	7
Human Relations	79	7
Technical Services	54	5
TOTAL	1191*	100%

N = 329

* total differs from N due to multiple checking

Table 2 shows the counts and ranking for the course titles listed in questionnaire order for the regional groups, the MIA sample, and for the two combined.

Table 3 lists in rank order the fifteen courses receiving the highest overall counts for the two groups surveyed. Here, as in Appendix A, question 1, respondents expressed interest in the areas of new service roles, administrative aspects of planning, budgeting and evaluation, and A-V methods and services. Again, areas expressing newly expanded roles, responsibilities, or skills were those selected most often.

A separate listing of the top ranking titles for MIA members employed in hospital libraries is given in Table 4. Table 5 lists the top ranking titles for the MIA sample in medical school or medical center libraries. Rankings for other types of libraries were not treated separately. (For a complete analysis of the size and types of libraries in the MIA member sample, see Chapter V. For the responses by type of library for the MIA sample, see Appendix C. For the complete ranking of all courses by the MIA sample see Appendix D.)

Courses appearing in the hospital librarians' top ten choices but not in the medical school and medical center librarians list included more courses in the technical aspects of library service, in the newer areas of A-V materials, MEDLINE, and preparation of patient oriented information packets for patient education.

The medical center and medical school library top ranking includes administrative suggestions such as staff development, networking activities, and community health care projects that do not appear in the hospital librarians' top choices. Yet there is not an

TABLE 2

CONTINUING EDUCATION NEEDS QUESTIONNAIRE
REGIONAL GROUPS AND MIA SAMPLE
COURSES INTERESTED IN ATTENDING

Course	Regional Group Count	Regional Group Rank	MIA Count	MIA Rank	Total	Overall Rank
	N=317		N=213		N=530	
Reference tools	145	4	41	12	186	6
Reference services	138	6	46	10	184	7
Nursing literature	65	47	15	49	80	46
Pharmacy literature	58	52	7	60	65	53
Dental literature	49	57	4	61	53	56
Environmental literature	52	54	14	51	66	52
History of medicine literature	80	38	12	54	92	42
Selective dissemination of information	114	13	39	21	153	12
Abstracting and indexing	88	29	28	31	116	28
Inter-library loan	68	45	10	58	78	47
Bibliographic verification	53	53	8	59	61	55
Computerized information retrieval systems	96	19	40	15	136	19
MEDLINE for health sciences librarians	113	14	40	5	153	10
MEDLINE for library administration	71	42	18	47	89	43
Descriptive cataloging	68	45	25	34	93	41
Subject classification	87	30	31	30	118	27
Serials	76	40	20	42	96	37
Binding	51	55	11	57	62	54

TABLE 2 - (Cont.)

Course	Regional Group Count	Regional Group Rank	MLA Count	MLA Rank	Total	Overall Rank
	N=317		N=213		N=530	
Circulation techniques and procedures	64	48	20	42	84	45
Acquisitions	83	34	22	39	105	33
Collection development &	106	16	40	15	146	15
Weeding	106	16	41	12	147	14
Archives	50	56	21	41	71	51
Rare books	60	51	12	54	72	50
Book preservation	64	48	14	51	78	47
History of medicine	71	42	15	49	86	44
Place of the library in a medical setting	90	25	33	25	123	24
Consortium development and operation	-	-	57	6	-	-
Extension librarianship	-	-	18	47	-	-
Biomedical networking	-	-	44	11	-	-
Biomedical communication	-	-	40	15	-	-
A-V materials - selection	143	5	52	8	195	3
A-V materials - production	94	22	33	25	127	23
A-V materials - processing and storage	124	8	63	3	187	5
A-V services	125	7	63	3	188	4
Medical terminology	102	18	37	24	139	18

TABLE 2 - (Cont.)

Course	Regional Group Count	Regional Group Rank	MIA Count	MIA Rank	Total	Overall Rank
	N=317		N=213		N=530	
Systems analysis	83	34	33	25	116	28
Library automation - circulation systems	75	41	20	42	95	39
Library automation - serials	92	24	22	39	114	30
Library automation - acquisitions	81	37	20	42	101	36
Library automation - cataloging	-	-	24	37	-	-
Budget preparation	148	3	- *	-	-	-
Budget administration	116	12	62	5	178	8
Measurement & evaluation of library services	168	2	88	2	256	2
Hospital administration	61	50	12	54	73	49
Library planning - building	82	36	14	51	96	37
Library planning - space allocation and equipment	119	11	37	23	156	11
Library planning - remodelling	93	23	27	32	120	26
Grant application and management	122	9	38	22	160	10
Inter-library cooperation	86	31	19	46	105	33
Public relations	84	33	27	32	111	31
Employee selection	86	31	25	34	111	31

TABLE 2 - (Cont.)

Course	Regional Group Count	Regional Group Rank	MIA Count	MIA Rank	Total	Overall Rank
	N=317		N=213		N=530	
Staff development	108	15	32	29	140	17
Leadership training	90	25	41	12	131	21
Dynamics of effective group work	70	44	25	34	95	39
Human relations training	79	39	24	37	103	35
Social responsibilities of medical librarians	90	25	33	25	123	24
Medical education: implications for library service	121	10	55	7	176	9
New Roles: In the institution's continuing education and inservice training programs	169	1	111	1	280	1
New Roles: As a medical team member on patient rounds	95	21	51	9	146	15
New Roles: Preparing packages of information for patient education	90	25	40	15	130	22
New Roles: Participating in community health care projects	96	19	4^	15	136	19

* Budget preparation was not a separate category in the MIA Sample.

TABLE 3

CONTINUING EDUCATION NEEDS QUESTIONNAIRE
REGIONAL GROUPS AND MIA SAMPLE
RANKED LIST OF TOP FIFTEEN COURSES

Course	Total Count
New Roles: in the institution's continuing education and inservice training program	280
Measurement & evaluation of library services	256
A-V materials - selection	195
A-V services	188
A-V materials - processing and storage	187
Reference tools	186
Reference services	184
Budget administration	178
Medical education - its implications for library service	176
Grant application and management	160
Library planning - space allocation and equipment	156
Selective dissemination of information	153
MEDLINE for health sciences librarians	153
Weeding	147
Collection development	146

N=530

TABLE 4

MIA SAMPLE IN HOSPITAL LIBRARIES
RANKED LIST OF TOP TEN COURSES

Course	Count
New Roles: In the institution's continuing education and inservice training program	49
A-V materials - processing & storage	41
A-V materials - selection	30
A-V services	28
Measurement & evaluation of library services	28
Consortium development and operation	25
Medical education: implications for library service	25
New Roles: Preparing packages of information for patient education	20
MEDLINE for health sciences librarians	19
Budget administration	19

N=75

TABLE 5

MIA SAMPLE IN MEDICAL SCHOOL AND MEDICAL CENTER LIBRARIES
RANKED LIST OF TOP TEN COURSES

Course	Count
New Roles: In the institution's continuing education and inservice training programs	37
Measurement & evaluation of library services	30
Budget administration	24
Medical education: implications for library service	22
New Roles: As a medical team member on patient rounds	21
Consortium development and operation	21
Biomedical networking	20
A-V services	20
Biomedical communication	19
Staff development	18
New Roles: Participating in community health care projects	18

N=72

absolute difference between the two groups' choices.

The hospital libraries, in general, represent much smaller

libraries with 73 of the 75 reporting 500 or fewer current journal

subscriptions and one reporting between 500 and 1000 subscriptions.

(One did not give a response.) The medical school and medical center

libraries on the other hand, range in size from one with fewer than

100 subscriptions to two with over 5,000, with 37 of the 62 in the

1,000 to 3,000 journal subscription range. (See Chapter V, Table

for a complete analysis of the MIA member sample by type and size of

library.)

Summary

Responses to the continuing education needs questionnaire in

general reflect those areas of current interest and concern to the

health sciences library personnel. These include training in areas

relatively new to library science curricula such as A-V production

and services, in areas reflecting career progress, such as administra-

tive responsibility and library evaluation, and in the area of

reference and reader services. As might be expected, expressed

interest in administrative and supervisory skills appears from those

with responsibility for the larger libraries. With the current emphasis

on the utilization of the resources of the libraries at the hospital

level, efficient and effective means of designing and implementing

reference service appear as the areas of prime concern to this group

of respondents. Thus, while both groups were interested in budget

and evaluation, and both felt that they could benefit from consortium

development, it is in the larger libraries that staff development

and networking issues become more relevant, and at the smaller

institutions that provision of patient information and MEDLINE access

were of more immediate concern.

APPENDIX A

Continuing Education Needs Questionnaire - Regional Groups

Medical Library Association
919 North Michigan Avenue
Chicago, Illinois 60611

CONTINUING EDUCATION NEEDS
QUESTIONNAIRE

We need to know which areas of medical library practice you would
like to see included in our continuing education program. You
can help us by filling out the following questionnaire. Thank
you!

1. Please indicate which of the following areas you feel are
    most needed for your future professional development. Num-
    ber the areas in order of their importance to you.

    ___Public Service and
       Reference
    ___Technical Services
    ___Audiovisual Materials
       and Services
    ___Administrative and
       Supervisory Skills
    ___Long Range Planning
       and Budgeting

    ___Computerized Informa-
       tion Retrieval
    ___Computer Applications
       to Library Operations
    ___Library Management
    ___Human Relations
    ___Innovative Services and
       New Approaches in Medi-
       cal Librarianship

2. Which of the following courses would you be interested in
    attending? For each item you choose please indicate the level -
    "B" for beginning, "I" for intermediate or "A" for advanced.

    ___Reference tools
    ___Reference services
    ___Nursing literature
    ___Pharmacy literature
    ___Dental literature
    ___Environmental litera-
       ture
    ___History of medicine
       literature
    ___Selective dissemina-
       tion of information
    ___Abstracting and index-
       ing
    ___Inter-library loan
    ___Bibliographic verifi-
       cation
    ___Computerized informa-
       tion retrieval systems

    ___A-V materials - selection
    ___A-V materials - production
    ___A-V materials - processing
       & storage
    ___A-V services
    ___Medical terminology
    ___Systems analysis
    ___Library automation - cir-
       culation systems
    ___Library automation -
       serials
    ___Library automation - ac-
       quisitions
    ___Budget preparation
    ___Budget administration
    ___Measurement & evaluation
       of library services

___MEDLINE for health sciences librarians
___MEDLINE for library administrators
___Descriptive cataloging
___Subject classification
___Serials
___Binding
___Circulation techniques and procedures
___Acquisitions
___Collection development
___Weeding
___Archives
___Rare books
___Book preservation
___History of medicine
___Place of the library in a medical setting

___Hospital administration
___Library planning - building
___Library planning - space allocation and equipment
___Library planning - re-modelling
___Grant applications and management
___Inter-library cooperation
___Public Relations
___Employee Selection
___Staff development
___Leadership training
___Dynamics of effective group work
___Human relations training
___Social responsibilities of medical librarians
___Medical education: implications for library service

New Roles for the Librarian
___In the institution's continuing education and inservice training programs
___As a medical team member on patient rounds
___Preparing packages of information for patient education
___Participating in community health care projects
___Other new roles: (Please specify)_____

Other courses?_____

Comments?_____

Your assistance is greatly appreciated. If there is anything we can do to assist in your continuing education plans please do not hesitate to write.

                                        Sincerely,

                                        Julie A. Virgo, Director of
                                        Medical Library Education

September, 1973

APPENDIX B

Continuing Education Needs Questionnaire
MIA Member Sample

We need to know which areas of medical library practice you would
like to see included in our continuing education program. Which
of the courses on the following page (check up to ten) would you
be interested in attending within the next three years?

___ Reference tools
___ Reference services
___ Nursing literature
___ Pharmacy literature
___ Dental literature
___ Environmental literature
___ History of medicine literature
___ Selective dissemination of
    information
___ Abstracting and indexing
___ Inter-library loan
___ Bibliographic verification
___ Computerized information re-
    trieval systems
___ MEDLINE for health sciences
    librarians
___ MEDLINE for library adminis-
    tration
___ Descriptive cataloging
___ Subject classification
___ Serials
___ Binding
___ Circulation techniques and
    procedures
___ Acquisitions
___ Collection development
___ Weeding
___ Archives
___ Rare books
___ Book preservation
___ History of Medicine
___ Place of the library in a
    medical setting
___ Consortium development and
    operation
___ Extension librarianship
___ Biomedical networking
___ Biomedical communication

___ A-V materials - selection
___ A-V materials - produc-
    tion
___ A-V materials - processing
    and storage
___ A-V services
___ Medical terminology
___ Systems analysis
___ Library automation -
    circulation systems
___ Library automation -
    serials
___ Library automation -
    acquisitons
___ Library automation -
    cataloging
___ Budget administration
___ Measurement & evaluation
    of library services
___ Hospital administration
___ Library planning - building
___ Library planning - space
    allocation and equipment
___ Library planning - re-
    modelling
___ Grant applications and
    management
___ Inter-library cooperation
___ Public relations
___ Employee selection
___ Staff development
___ Leadership training
___ Dynamics of effective
    group work
___ Human relations training
___ Social responsibilities
    of medical librarians
___ Medical education: impli-
    cations for library service

New roles for the libraria.. in the following situations:

___ In the institution's continuing education and inservice
    training programs
___ As a medical team member on patient rounds
___ Preparing packages of information for patient education
___ Participating in community health care projects
___ Other new roles: (please specify)_____ _____

_____

Please return your completed questionnaire in the enclosed
self-addressed envelope to:
                        Division of Education
                        Medical Library Association
                        919 North Michigan Avenue, Suite 3208
                        Chicago, Illinois 60611

Thank you!

APPENDIX C

CONTINUING EDUCATION NEEDS QUESTIONNAIRE
MLA SAMPLE BY TYPE OF LIBRARY

Courses	Type of Library									
	Medical Centers	Medical Schools	Single-User Group Schools	Multi-User Group Schools	Hospitals	Commercial Firms	Government	University	Other	Total
Reference tools	6	3	6	3	18	1	1	0	3	41
Reference services	9	7	5	1	13	1	3	2	5	46
Nursing literature	2	1	3	1	5	0	0	2	1	15
Pharmacy literature	2	1	1	0	3	0	0	0	0	7
Dental literature	1	0	0	0	2	0	0	1	0	4
Environmental literature	2	4	3	0	1	0	1	0	3	14
History of medicine literature	4	2	1	1	4	0	0	0	0	12
Selective dissemination of information	5	5	4	1	11	2	4	2	5	39
Abstracting and indexing	5	5	0	1	11	1	1	0	4	28
Inter-library loan	1	0	1	2	3	0	2	0	1	10
Bibliographic verification	2	1	0	0	3	1	0	0	1	8
Computerized information retrieval systems	7	10	6	1	6	2	1	0	7	40
MEDLINE for health sciences librarians	5	3	4	0	19	2	2	0	5	40

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Courses	Type of Library									
	Medical Centers	Medical Schools	Single-User Group Schools	Multi-User Group Schools	Hospitals	Commercial Firms	Government	University	Other	Total
MEDLINE for library administration	6	2	0	0	5	1	1	0	3	18
Descriptive cataloging	5	1	3	1	9	1	3	0	2	25
Subject classification	6	4	4	0	12	1	2	0	2	31
Serials	4	5	3	1	3	2	1	0	1	20
Binding	3	2	1	1	3	0	1	0	0	11
Circulation techniques and procedures	7	3	2	0	8	0	0	0	0	20
Acquisitions	3	1	2	3	9	2	0	0	2	22
Collection development	10	4	2	4	12	0	4	1	3	40
Weeding	6	4	4	1	18	2	4	1	1	41
Archives	3	3	1	2	7	0	1	1	3	21
Rare books	2	1	1	2	5	0	0	0	1	12
Book preservation	3	0	1	3	4	0	3	0	0	14

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APPENDIX C - (Cont.)

Courses	Medical Centers	Medical Schools	Single-User Group Schools	Multi-User Group Schools	Hospitals	Commercial Firms	Government	University	Other	Total
					Type of Library					
History of medicine	2	2	1	2	4	0	1	1	2	15
Place of the library in a medical setting	7	3	1	1	18	3	0	1	1	33
Consortium development and operation	13	8	3	4	25	0	0	2	2	57
Extension librarianship	4	4	1	1	5	0	1	1	1	18
Biomedical networking	13	7	2	4	9	3	3	1	2	44
Biomedical communication	11	8	3	3	9	1	2	1	2	40
A-V materials - selection	12	4	3	0	30	0	0	0	3	52
A-V materials - production	9	3	2	1	13	0	0	0	5	33
A-V materials - processing and storage	9	6	3	1	41	0	0	0	3	63
A-V services	16	4	4	2	28	1	2	0	6	63
Medical terminology	6	6	1	1	17	1	1	0	4	37

Courses	Medical Centers	Medical Schools	Single-User Group Schools	Multi-User Group Schools	Hospitals	Commercial Firms	Government	University	Other	Total
Systems analysis	5	5	2	3	5	2	5	2	4	33
Library automation - circulation systems	2	5	3	1	1	1	2	1	4	20
Library automation - serials	4	8	0	0	3	2	3	0	2	22
Library automation - acquisitions	4	5	0	2	3	2	2	0	2	20
Library automation - cataloging	?	5	0	0	6	1	1	0	2	24
Budget administration	13	8	4	3	19	1	1	1	9	62
Measurement & evaluation of library services		9	6	3	28	1	9	2	9	88
Hospital administration	4	1	0	0	6	0	0	0	1	12
Library planning - building	5	0	1	1	4	0	1	0	2	14
Library planning - space allocation and equipment	8	1	4	1	17	0	1	0	5	37

Type of Library

60

	Type of Library									
Courses	Medical Centers	Medical Schools	Single-User Group Schools	Multi-User Group Schools	Hospitals	Commercial Firms	Government	University	Other	Total
Library planning - remodelling	3	2	4	0	15	0	0	0	3	27
Grant application and management	6	6	4	1	16	0	0	1	4	38
Inter-library cooperation	3	2	2	1	6	2	1	1	1	19
Public relations	5	2	4	2	8	0	1	1	4	27
Employee selection	9	4	0	1	3	2	2	1	3	25
Staff development	11	7	1	0	4	2	2	2	3	32
Leadership training	11	3	2	3	8	2	4	1	7	41
Dynamics of effective group work	7	4	2	2	5	2	0	1	2	25
Human relations training	5	3	0	3	5	0	2	2	4	24
Social responsibilities of medical librarians	12	5	1	1	13	0	0	1	0	33

62

Courses	Type of Library									
	Medical Centers	Medical Schools	Single-User Group Schools	Multi-User Group Schools	Hospitals	Commercial Firms	Government	University	Other	Total
Medical education: implications for library service	17	5	0	2	25	0	2	2	2	55
New Roles: In the institution's continuing education and inservice training programs	24	13	4	6	49	1	5	1	8	111
New Roles: As a medical team member on patient rounds	10	11	1	4	17	0	2	2	4	51
New Roles: Preparing packages of information for patient education	8	2	1	1	20	0	1	2	5	40
New Roles: Participating in community health care projects	12	6	2	4	11	0	1	1	3	40
Other new roles	8	0	1	0	3	0	1	1	3	17
N.A.	3	1	0	2	5	1	0	0	1	13

APPENDIX D

CONTINUING EDUCATION NEEDS QUESTIONNAIRE
MLA SAMPLE
RANKED LIST OF ALL COURSES

Course	Count	Rank
New Roles: In the institution's continuing education and inservice training programs	111	1
Measurement & evaluation of library services	88	2
A-V materials - processing and storage	63	3
A-V services	63	3
Budget administration	62	5
Consortium development and operation	57	6
Medical education: implications for library service	55	7
A-V materials - selection	52	8.
New Roles: As a medical team member on patient rounds	51	9
Reference services	46	10
Biomedical networking	44	11
MEDLINE for health sciences librarians	42	12
Reference tools	41	13
Weeding	41	13
Leadership training	41	13
Computerized information retrieval systems	40	16
Collection development	40	16
Biomedical communication	40	16

Course	Count	Rank
New Roles: Preparing packages of information for patient education	40	16
New Roles: Participating in community health care projects	40	16
Selective dissemination of information	39	21
Library planning - space allocation and equipment	38	22
Grant applications and management	38	22
Medical terminology	37	24
Social responsibilities of medical librarians	34	25
Systems analysis	33	26
A-V materials - production	33	26
Place of the library in a medical setting	33	26
Staff development	32	29
Subject classification	31	30
Abstracting and indexing	28	31
Library planning - remodelling	27	32
Public relations	27	32
Employee selection	25	34
Dynamics of effective group work	25	34
Descriptive cataloging	25	34
Human relations training	24	37
Library automation cataloging	24	37
Acquisitions	22	39

Course	Count	Rank
Library automation - serials	22	39
Archives	21	41
Library automation - acquisitions	20	42
Serials	20	42
Circulation techniques and procedures	20	42
Library automation - circulation systems	20	42
Inter-library cooperation	19	46
New Roles: Other new roles	18	47
MEDLINE for library administration	18	47
Extension librarianship	18	47
Nursing literature	15	50
History of medicine	15	50
Environmental literature	14	52
Book preservation	14	52
Library planning - building	14	52
History of medicine literature	12	55
Rare books	12	55
Hospital administration	12	55
Binding	11	58
Inter-library loan	10	59
Bibliographic verification	8	60
Pharmacy literature	7	61
Dental literature	4	62

CHAPTER IV

CONTINUING EDUCATION OPPORTUNITIES

At the time this study was undertaken no clear picture of the
opportunities available for the continuing education of medical li-
brary personnel existed. Thus, an attempt was made to explicate these
opportunities and to collect data with regard to their geographic
location, subject matter, cost, length, target population, and type
of sponsoring organization. The purpose of this chapter is to re-
port the results of this undertaking. The methods of data collection
and analysis are described, followed by a discussion of the findings.
The final section of this chapter includes summary statements and
conclusions.

The term, continuing education opportunities, as used in this
chapter, refers to educational activities of a collective nature such
as short courses, library school courses open to non-degree students,
workshops, institutes and the like. It does not include opportunities
for individual, tutorial or informal group study.

Data Collection and Analysis

A listing of organizations that could be expected to sponsor
continuing education opportunities was compiled from a variety of
sources. Table 1 displays the sources consulted, the types of
organizations and the number of organizations extracted from each
source.

TABLE 1

SOURCES CONSULTED, TYPES OF ORGANIZATIONS AND NUMBER
OF ORGANIZATIONS TO WHICH THE REQUEST FOR
INFORMATION ON CONTINUING EDUCATION
OPPORTUNITIES WAS MAILED

Source	Type of Organization	Number of Organizations
North American Library Education Directory and Statistics 1969-1971. Chicago: American Library Association, 1972.	Institutions of higher education known to offer programs or courses in library education.	500
1971 Directory of Institutions Offering or Planning Programs for the Training of Library Technical Assistants. Chicago: Council on Library Technology, 1971.	Institutions of higher education offering or planning programs for the training of library technical assistants.	54*
The Bowker Annual of Library & Book Trade Information. New York: R.R. Bowker Company, 1973.	National and state library associations, and state library agencies.	141**
News·Information·Data, Vol. VI, N. 11S. Rockville, Md.: RMP Service, U.S. Dept. of HEW, Public Health Service, Health Services and Mental Health Administration, July 19, 1972.	Coordinators and directors of Regional Medical Programs.	75
National Library of Medicine, Office of Public Information. Rockville, Md., July, 1971.	Regional Medical Libraries	11
Regional Medical Libraries	Resource Libraries	85

TABLE 1 - (Cont.)

Source	Type of Organization	Number of Organizations
United States Office of Education	Regional library services programs	10
National University Extension Association	Institutions of higher education having extension programs	98
American Hospital Association	State, regional and metropolitan hospital associations	116
Total	. . . .	1090

* Includes organizations not listed in North American Library Education Directory 1969-1971.

** Includes 32 national library association, 53 state library associations and 56 state library agencies.

A letter was mailed to 1090 organizations extracted from the above sources requesting ". . . information on short courses, workshops, institutes and other continuing education activities . . . on any aspects of either general or medical librarianship." The letter also requested notification of future continuing education activities. A copy of this letter may be found in Appendix A, at the end of this chapter.

One-hundred-ninety-two organizations responded with information about continuing education opportunities. In addition to these 192 organizations, 13 other organizations sent information regarding their programs. Thus, the continuing education opportunities sponsored by 205 organizations are included in the data analyzed in this chapter. It should be noted that the vast majority of the responding organiza-

tions sent copies of promotional material and in no instance were course

syllabi, lesson plans or other detailed descriptions received.

The variability in the amount and nature of the information

received from the 205 organizations was great. Nevertheless,

promotional brochures, catalogs and other accounts of continuing

education opportunities were examined first for their relevance to

medical library personnel, and secondly for content, location, cost,

length, target population and type of sponsoring organization.

With regard to relevance, two members of the project staff,

both medical librarians, reached agreement on the judgements that the

opportunities included in this report are germane to medical library

personnel.

While the program titles found in the promotional materials

were generally indicative of course content or subject matter, most

were not meaningful when separated from other information provided

in the announcement. In addition, it seemed not only meaningless,

but misleading to report course titles developed for promotional

purposes or to quantify such diverse elements. Therefore, the con-

tents of each announcement was examined and a brief statement

describing the subject matter covered was prepared.

Initially, the Library of Congress and Dewey Decimal Classifi-

cation schemes were employed in an attempt to find a meaningful

framework for organizing these subject matter descriptive statements.

Because over 50 percent of the statements could not be classified

using either system, and since over 80 percent of the opportunities

could be classified using the organizing principle of the Handbook

of Medical Library Practice[1], the descriptive statements are presented

using that classification scheme.

Nine general areas of medical librarianship were thus developed. These covered (1) the emergence of the modern medical library, (2) administration, (3) technical processing, (4) readers services, (5) automation, (6) audiovisual aids, (7) planning (facilities, furniture and equipment), (8) research and (9) the library and its (users). Further breakdown was necessary in the areas of administration, technical processing and readers services. A more thorough explanation of the classification system is given in Appendix B.

Findings

Information regarding 264 continuing education opportunities relevant to medical library personnel during the period September 1, 1973, to August 30, 1974, was received and is included in this report. This time period was selected because it was thought that by September 1, most organizations sponsoring such opportunities had been provided sufficient time to respond to the request for information. The number of continuing education opportunities in each subject matter category and their geographic location by National Library of Medicine region is shown in Table 2. The list of states within each region is given in Table 3.

The subject matter area in which the greatest number of opportunities exist is "Staffing" (45) followed by "Methods of Medical Reference Work" (34). No opportunities were available in "Identification of the Bibliographic Unit," "Rebinding," and "Circulation." The greatest number of opportunities are reported in Region 2 (New York and Northern New Jersey) and the fewest in Region 10 (Alaska, Idaho, Montana, Oregon, Washington).

TABLE 2 .

SUBJECT-CONTENT OF CONTINUING EDUCATION OPPORTUNITIES
BY NATIONAL LIBRARY OF MEDICINE REGION

Subject-Content	National Library of Medicine Region											
	1	2	3	4	5	6	7	8	9	10	11	Total
The Emergence of the Modern Medical Library	-	2	1	1	1	2	1	-	1	1	1	11
Administration												
General	-	-	-	1	2	-	1	2	-	-	1	7
The role of the library and its administrator in the institution	-	7	-	1	1	2	3	2	-	-	5	21
Planning	-	5	-	-	-	-	2	1	-	-	-	8
Organization	-	-	-	-	-	2	-	-	1	-	-	3
Staffing	1	6	-	2	3	6	7	4	7	-	9	45
Financial controls	1	2	-	3	-	2	2	-	3	-	-	13
Specifically for hospital libraries	-	1	-	-	-	1	1	-	4	-	9	16

TABLE 2 - (Cont.)

Subject-Content	National Library of Medicine Region											
	1	2	3	4	5	6	7	8	9	10	11	Total
Technical Processing												
Selection, acquisition and weeding	-	1	-	-	1	-	2	-	1	-	-	5
Cataloging and classification	-	-	-	-	1	-	-	1	-	-	-	2
Identification of the bibliographic unit	-	-	-	-	-	-	-	-	-	-	-	0
Serial literature	1	-	-	1	1	-	-	-	1	-	-	4
Preservation of material	2	-	1	-	2	1	-	-	2	-	2	11
Rebinding	-	-	-	-	-	-	-	-	-	-	-	0
Reader Services												
Reference (general)	-	-	-	-	1	-	-	-	-	-	5	6
Levels of reference service	-	1	-	-	-	-	-	-	-	-	-	1
Methods of medical reference work	1	7	2	1	1	1	10	2	9	-	-	34
Circulation;Document reproduction	-	-	-	-	-	-	-	-	-	-	-	0

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TABLE 2 - (Cont.)

Subject-Content.	National Library of Medicine Region											
	1	2	3	4	5	6	7	8	9	10	11	Total
Automation												
When to automate	2	3	1	3^*	-	-	-	1	1	-	-	11
How to automate	-	3	-	8^{**}	-	1	4	-	3	-	1	20
Automating specific services	-	1	-	10^*	-	-	-	1	1	-	-	13
Audio-Visual Aids	2	10	1	2	-	3	2	3	1	-	3	27
Planning (Facilities, Furniture and Equipment	-	1	-	-	-	1	-	-	1	-	-	3
Research	-	1	-	-	-	-	-	-	-	-	-	1
Library and its Public	-	-	-	1	-	-	1	-	-	-	-	2
Totals	11	51	6	34	14	22	36	17	36	1	36	264

* One of the courses of the total was open to governmental librarians only
** Five of the courses of the total were open to governmental librarians only

TABLE 3

LIST OF STATES WITHIN EACH REGION

Region 1
    Connecticut   New Hampshire
    Massachusetts   Rhode Island
    Maine   Vermont

Region 2
    New York   11 Northern New Jersey counties

Region 3
    Delaware   10 Southern New Jersey counties
    Philadelphia

Region 4
    District of Columbia   Virginia
    Maryland   West Virginia
    North Carolina

Region 5
    Kentucky   Michigan
    Ohio

Region 6
    Atlanta   South Carolina
    Florida   Tennessee
    Georgia   Puerto Rico
    Mississippi

Region 7
    Iowa   Minnesota
    Illinois   North Dakota
    Indiana   Wisconsin

Region 8
    Colorado   South Dakota
    Kansas   Utah
    Missouri   Wyoming
    Nebraska

Region 9
    Arkansas   Oklahoma
    Louisiana   Texas
    New Mexico

Region 10
    Alaska   Oregon
    Idaho   Washington
    Montana

Region 11
    Arizona   Hawaii
    California   Nevada

TABLE 4

LENGTH OF CONTINUING EDUCATION OPPORTUNITIES

Type	Length	Number of Opportunities	Percent
Degree courses open to non-degree students	1 semester or 1 quarter	30	100
Telelecture	less than 1 day	6	86
	1 day	1 7	14 100
Short courses	less than 1 day	14	6
	1 day	105	46
	2 days	43	19
	3 days	31	14
	4 days	12	5
	5 days	11	5
	7 days to 1 month*	11 227	5 100
Total		264	...

* 3 x 7 days, 6 x 11-14 days, 2 x 1 month

Of the 264 courses offered, seven were by telelecture, 30 were graduate library school degree courses open to non-degree students and 227 were short courses, 155 were designed specifically for library personnel and 72 were designed for a more heterogeneous audience. Of the 155 designed specifically for library personnel, 12 were restricted to governmental employees only; the remaining 143 were open to all library personnel.

Table 4 summarizes the short courses by length. The most common length was one day (46%), followed by two and three day courses (19% and 14% respectively). Longer and shorter courses were equally distributed.

Tuition for these courses varied by length or number of days and is summarized in Table 5. Fees ranged from free to $395. One-day courses, the most commonly offered, ranged from $0.00 to $109.99, with a mean tuition of $19.05. The mode tuition for these 105 offerings was $25.00 - $29.99 differing upward from the mean due to 22 tuition free courses.

Tuition for courses of less than one day's duration averaged $4.00 with a range from $0.00 to $44.99, and mode of $0.00.

The mean tuition for two-day courses was $66.20, ranging from $0.00 to $355.00. The distribution of these fees was tri-model, with eight courses having no tuition, eight having tuition of $60.00 - $64.99, and eight having tuition of $95.99 - $99.99.

Courses of more than two days duration show tuition ranging from $75.00 to $395.00.

While the above data support the obvious premise that tuition fees for the shorter courses are less than for the longer ones, it is interesting to note that of the 227 courses with quoted tuition fees, 38, or 17%, were available without cost to the participant, providing at least some opportunity for free continuing education.

The sponsoring organizations were grouped according to affiliation: institutions of higher education, governmental agencies, professional associations and commercial organizations. Of the 264 courses offered, sponsorship was seen mostly in the institutions of higher education (103) with graduate library schools supplying the largest number (57). Associations offered a total of 74 courses; sponsorship by MLA represented 51 percent (38) of these.

TABLE 5

LENGTH OF COURSE BY FEE

Tuition Fee	Length of Course						
	Less than 1 day	1 day	2 days	3 days	4 days	5 days*	7 days to 1 month
Free	8	22	8				
$ 1.00- 4.99	2	-	1				
5.00- 9.99	3	6					
10.00- 14.99	-	7					
15.00- 19.99	-	1					
20.00- 24.99	-	1					
2 .00- 29.99	-	42	1				
30.00- 34.99	-	1					
35.00- 39.99	-	4					
40.00- 44.99	1	1					
45.00- 49.99		-	2				
50.00- 54.99		-	1				
55.00- 59.99		-					
60.00- 64.99		-	8				
65.00- 69.99		-					
70.00- 74.99		2					

TABLE 5 (Cont.)

LENGTH OF COURSE BY FEE

Tuition Fee	Length of Course						
	Less than 1 day	1 day	2 days	3 days	4 days	5 days	7 days to 1 month
$ 75.00- 79.99					2		
80.00- 84.99				1			
85.00- 89.99							
90.00- 94.99				3			
95.00- 99.99			8		2		
100.00-109.99	1				2		1
110.00-119.99			1				
120.00-129.99							
130.00-139.99							
140.00-149.99				3			
150.00-159.99				1			
160.00-169.99			1				
170.00-179.99			1	2			
180.00-189.99							
190.00-199.99							
200.00-209.99						2	

TABLE 5 (Cont.)

LENGTH OF COURSE BY FEE

Tuition Fee	Length of Course						
	Less than 1 day	1 day	2 days	3 days	4 days	5 days	7 days to 1 month
$230.00-239.99							1
240.00-249.99				12			
250.00-259.99						3	
270.00-279.99							1
350.00-359.99			1	2		2	
390.00-399.99				2			
Fee not given	-	17	10	5	6	4	8
Total	14	105	43	31	12	11	11
Average Cost	$ 4.00	19.05	66.20	165.00	51.00	242.00	

Governmental agencies offered a total of 62 courses; sponsorship of the
regional medical libraries represented approximately half (33) of these.
Sixteen courses were under the auspices of commercial organizations.
Sponsorship was indeterminable for 9 courses. (Table 6)

Summary

The location, subject matter, cost, length, target population and
type of sponsoring organization for 264 continuing education opportunities

TABLE 6

SPONSORING ORGANIZATIONS

Type	Number	Total	Percent
Associations			
MLA	38		
Other	36		
		74	28%
Governmental Agencies			
R.M.L.'s	33		
Other	29		
		62	23
Institution of Higher Education			
Graduate library schools	57		
Medical libraries	1		
Medical schools	1		
Other administrative units	44		
		103	39
Commercial Organizations	16	16	6
Sponsorship Unknown	9	9	4
Total		264	100%

of a collective nature for the period September 1, 1973 to August

30, 1974 have been reported in this chapter.

Because the data presented represent a cross section of the

opportunities available, they are not noteworthy for determining

specifically the extent to which the need for continuing education

for medical library personnel is being met. They do however reflect

some patterns in the supply of collective learning opportunities.

Collective learning activities were available in all NLM

regions, however, the number of opportunities varied considerably

by region from 1 in Region 10 to 51 in Region 2. While it appears

that the number of opportunities is related to the number of li-

braries in the region and thus to the number of potential students,

the data analyzed in this chapter does not conclusively support

this conclusion.

The majority of opportunities (46%) were one day in length,

followed by two and three day courses (19% and 14% respectively).

Tuition fees vary considerably ranging from $0.00 to

$395.99, supporting the obvious conclusion that fees were lower

for shorter courses, however 38 courses or 17% were tuition free

suggesting that at least some opportunity exists for free partici-

pation.

The majority of the short courses (68%) were directed to

library personnel while 32% were directed to a more heterogeneous

audience.

The subject matter in which the most opportunities were

offered was Administration, with Staffing showing the greatest

number within this general category. Automation accounted for

the next greatest number, followed by Readers Services and Audic-

visual Aids. Fewer offerings were reported in Research and The

Library and its Users.

A variety of organizations sponsored continuing education

opportunities for medical library personnel. Professional associa-

tions, governmental agencies, institutions of higher education

and commercial organizations all provided collective learning opportunities.

Because many of the Regional Medical Libraries have extension programs to assist the various units in their area, further information was sought regarding the specific services offered in each region. In December, 1973 a letter (see Appendix C) was sent to the individual responsible in each of 11 RML's to determine whether the following services were being offered: 1) individual consultation in connection with grant applications, 2) individual consultation with hospital personnel responsible for the library, 3) workshops for individuals responsible for the library, 4) basic materials for use in establishing, organizing and administering a library, 5) whether RML personnel go to hospitals for consultation, and 6) whether individuals who request assistance must go to the RML.

The information from this survey is summarized by state rather than by NLM region because: 1) some regions are decentralized, thus services available among states within these regions vary, and 2) others had not been funded as of December, 1973.

As of December, 1973 basic materials to aid in establishing and administering libraries were available in all states except New York, Northern New Jersey, Delaware, Maryland, Virginia, West Virginia, North Carolina, District of Columbia, Illinois, Northern Michigan and Ohio. The consistency of the materials

varied widely in content and in depth from state to state. In
some instances only bibliographies were provided; in others
packets of information developed specifically for the situation,
of the requesting library were provided.

The remainder of the information is summarized in Figure
1, and Table 7 . In 13 and one quarter of the 50 states consult-
ing services were available; in one and one-half states work-
shops were available, in 29 and three quarter states both consul-
tation at the hospital library and workshops are available. Five
and one-half states plus the District of Columbia provide neither
service.

It must be remembered that the service offered by the
regional medical libraries and resource libraries have changed
in the period since the survey was undertaken (December, 1973).

FIGURE 1
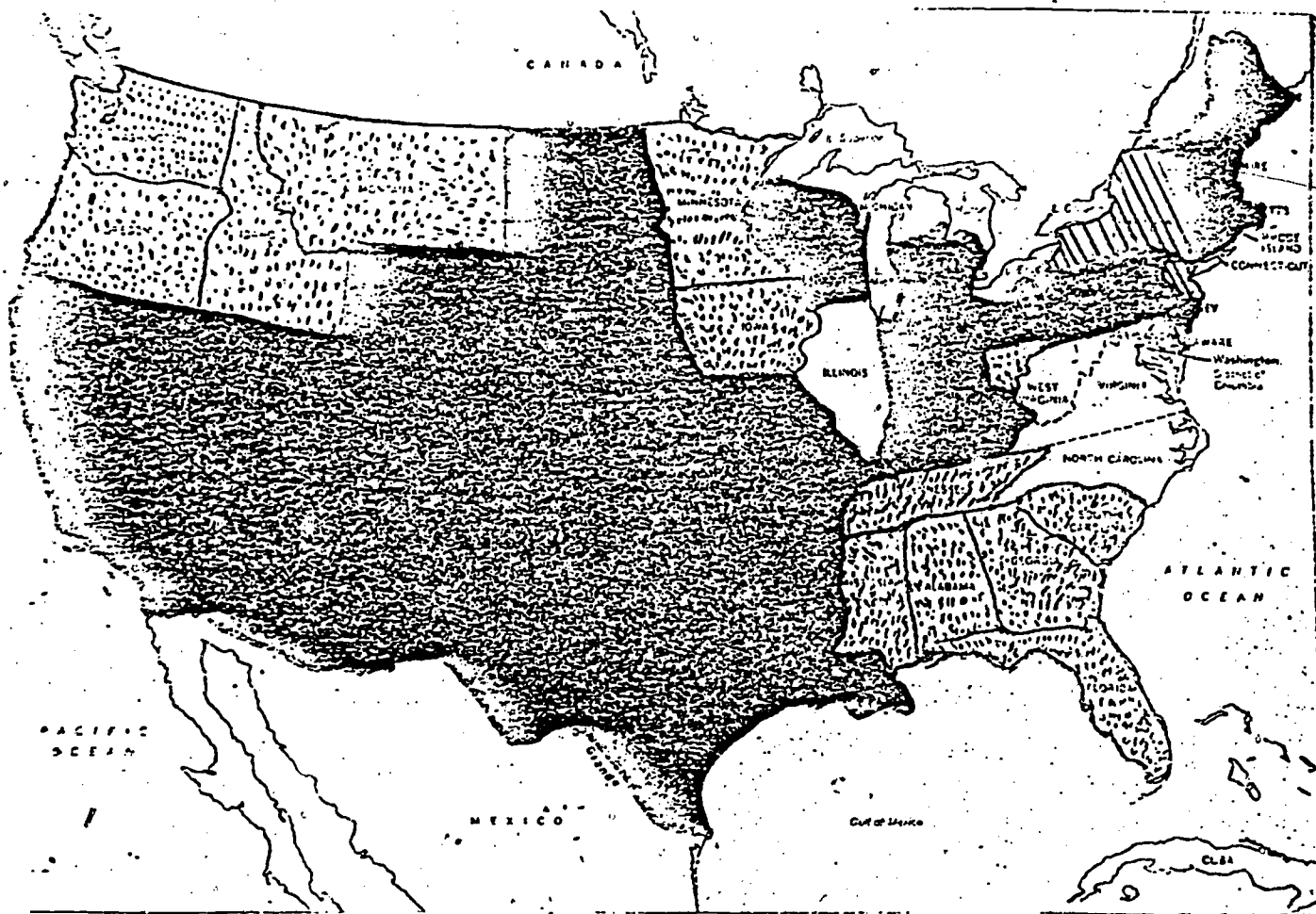
KEY

Provide consultations only..........

Provide workshops only............

Provide consultations, workshops
  and go to the hospital............

Provide none of the above----------- (no markings)
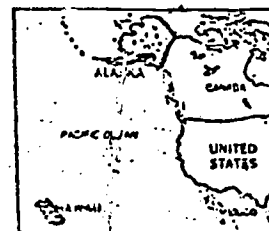
3/27/74

TABLE 7

SERVICES PROVIDED BY STATE

Provide consultations only: 13¼ states + Puerto Rico

    Washington
    Oregon
    Montana
    Idaho
    Alaska
    Minnesota
    Iowa
    Alabama
    Florida
    Georgia
    Mississippi
    Puerto Rico
    South Carolina
    Tennessee
    ¼ Ohio

Provide workshops only: 1½ states

    New York
    upper New Jersey

Provide consultations, workshops and go to the hospital: 29 3/4 states

Connecticut	Arkansas
Maine	Louisiana
Massachusetts	New Mexico
Vermont	Oklahoma
New Hampshire	Texas
Rhode Island	Arizona
Delaware	California
lower New Jersey	Hawaii
Pennsylvania	Nevada
Indiana	Kentucky
North Dakota	3/4 Ohio
Wisconsin	½ Michigan
Colorado	
Kansas	
Missouri	
Nebraska	
South Dakota	
Utah	
Wyoming	

TABLE 7 (Cont.)

SERVICES PROVIDED BY STATE

No Basic Materials - $9\frac{1}{4}$ + D.

    New York
    $\frac{1}{2}$ New Jersey
    Delaware
    Maryland
    Virginia
    North Carolina
    West Virginia
    District of Columbia
    $\frac{1}{4}$ Ohio
    $\frac{1}{2}$ Michigan
    Illinois

Provide none of the above: $6\frac{1}{2}$ states including D.C.

    Illinois
    Maryland
    North Carolina
    Virginia
    Washington D.C.
    West Virginia
    $\frac{1}{2}$ Michigan

APPENDIX A

MLA ▭

MEDICAL LIBRARY ASSOCIATION, INC.

ᐟ May, 1973
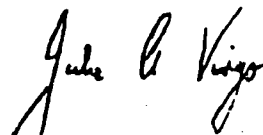
Dear Colleague:

The Office of the Director of Medical Library Education
at the Medical Library Association is establishing a
cle ringhouse for information on short courses, workshops,
institutes, and other continuing education activities in
general and medical librarianship.

We are requesting your assistance by asking that you let
us know of any continuing education courses, workshops,
insitutes, or programs on any aspects of either general
or medical librarianship which you have developed or are
planning to schedule. Would you please place us on your
mailing list to receive notifications and descriptions of
any future workshops, institutes, or any other programs
that you offer? In addition, we would appreciate it if
you could direct us to other sources of information.

Thank you very much for your help. We would be glad to
answer any inquiries about continuing education activities
that you may wish to direct to us.

Yours sincerely,

Julie A. Virgo
Director of Medical
Library Education
312-642-3757

APPENDIX B

CLASSIFICATION SCHEME USED FOR CATEGORIZING
SUBJECT CONTENT OF CONTINUING EDUCATION OPPORTUNITIES

Subject matter description statements supplied by promotional

materials advertising continuing education opportunities were

categorized according to their mention of the following

subject criteria.

1. The Emergence of the Modern
   Medical Library

   --Inter-library Cooperation
     --Biomedical networking
     --Consortium development
     and operation

   --Extension librarianship

   --New roles:
     --in the institutions'
       continuing education and
       inservice training programs
     --as a medical team member on
       patient rounds
     --preparing packages of in-
       formation for patient ed-
       ucation
     --participating in community
       health care projects.

2. Administration
   -The role of the library
   and its administrator in
   the institution.

   --Place of the library in a
     medical setting

   --Medical education: impli-
     cations for library service.
   --Social responsibilities of
     medical librarians
   --Hospital administration

   -Planning
   -Organization

   --Measurement and evaluation of
     library services

   --MEDLINE for library adminis-
     trators

   -Staffing

   --Employee selection
   --Staff development
   --Dynamics of effective group
     work
   --Leadership training
   --Human relations training

   -Financial controls

   --Budget administration
   --Grant applications and management

APPENDIX B (Cont.)

CLASSIFICATION SCHEME USED FOR CATEGORIZING
SUBJECT CONTENT OF CONTINUING EDUCATION OPPORTUNITIES

3. Technical Processing

Part 1. Selection, Acquisition and Weeding	--Collection development
	  --Acquisitions
	  --Weeding

Part 2. Cataloging and Classification	--Descriptive cataloging --Subject classification
- Identification of biblio-graphic unit	--Bibliographic verification
- Serial Literature	--Serials
Part 3. Preservation of Library Materials	--Book preservation
- Rebinding	--Binding

4. Readers' Services

Part 1. Reference - Levels of Reference Service	--Reference Services

- Methods of Medical Reference Work	--Reference Tools
	  --Medical terminology
	  --Abstracting and Indexing
	  --History of Medicine Literature
	  --Pharmacy literature
	  --Nursing literature
	  --Environmental literature
	  --Dental literature

	--MEDLINE for health sciences librarians
	--Selective Dissemination of Information
Part 2. Circulation; Document Reproduction	--Circulation techniques and procedures
	--Inter-library loan

5. Automation in Medical Libraries
  When . . .   --Systems analysis
  How . . . .

APPENDIX B (Cont.)

CLASSIFICATION SCHEME USED FOR CATEGORIZING
SUBJECT CONTENT OF CONTINUING EDUCATION OPPORTUNITIES

- Library Services for which   --Library Automation-
Automation has been Success-   acquisitions
fully used.

         --Library Automation-
         cataloging

         --Library Automation-
         serials
     --Library Automation-cir-
         culation

         --Computerized information
         systems

6. Audiovisual Materials   --A-V services

         --A-V materials-selection
         --A-V materials-processing
         and storage

         --A-V materials-production

7. Research

8. Rare Books, Archives, and   --Rare Books
the History of Medicine

         --Archives

         --History of Medicine

9. Library Planning, Furniture   --Library planning-building
and Equipment

         --Library planning-remodeling

         --Library planning-space
         allocation and equipment

10. The Library and Its Public: --Public Relations
Identification and Communication

         --Biomedical Communication.

APPENDIX C

Mailed to all Regional and Resource Medical Libraries

From time to time the Medical Library Association receives requests
from hospital personnel for assistance in establishing or improving a
hospital library's collection and service. What they are requesting is
very basic information; the service they require is often that of
consultation.

While many of the Regional Medical Libraries have extension programs
which provide consultation services, workshops, etc. we have no record
of the types of service available in each region. It would be useful
to use in referring inquirers to know exactly what services are available
from each RML.

Could you let me know if you provide the following services.

_____individual consultations in connection with grant applications;

_____individual consultations with hospital administrators,
         secretaries, medical records personnel, etc. who have been
         assigned responsibility for the library and who need help;

_____workshops or institutes for people responsible for the
         library; How often?

         Where are these located?

_____basic materials to aid in establishing, organizing or
         running a library;

Please specify bibliographic information and prices.

1 1 1

Regional Medical Library
December 11, 1973
Page - two -

Do you go to the hospital? Yes_____   No_____

Do individuals have to come to the RML? Yes_____   No_____

Other services (please specify).

Specifically, to whom should we direct inquirers in your library
(position, title)?

Enclosed please find two copies of this questionnaire. One is for
your files, and the other can be returned to the Medical Library
Association at the above address.

Thank you for your help. The information you send will enable
us to more appropriately refer inquirers to you.

                                    Yours sincerely,

                                    Julie A. Virgo
                                    Director of Education
                                    Telephone: 312/266-2456

JAV/pf
encl.

CHAPTER V

ORGANIZATIONAL SUPPORTS FOR CONTINUING EDUCATION

The literature of various professional groups suggests that
practitioners' actual involvement in life long learning is pro-
foundly influenced by at least three dimensions of their work en-
vironment: 1) superiors' attitude toward continuing education,
2) organizational policies regarding continuing education, and
3) the presence of on-the-job problem situations or challenges
(1-3). Thus, before developing a plan for continuing education
for medical library personnel, it seemed prudent to determine the
extent to which their work environment supported or constrained
their involvement.

The purpose of this chapter is to describe this phase of
the investigation. A description of the method of data collection
and analysis is followed by a discussion of the findings. The
final section of this chapter includes a summary and conclusions.

Methodology

A simple random sample of 289 individuals was drawn from
the roster of 2400 personal and 600 institutional members of the
Medical Library Association. The sample size was calculated to
yield a .95 confidence interval. Stratification by type of library,
size of library, or position held was not possible, because at the
time of this investigation this type of information was not in-
cluded in the MLA files.

A questionnaire was designed to assess the organizational supports for and constraints against continuous learning as perceived by individual medical library personnel. In addition to questions about the type and size of library, and position in the formal organization structure, the questionnaire requested information regarding the respondent's perception of his/her immediate superior's behavior in creating or locating opportunities for continuing education, in assisting in the identification of continuing education needs, and in encouraging participation in professional meetings. Information regarding organizational policies affecting financial support for continuing education and for determining whether on-the-job challenge was present was also requested. The final question (number 1C) was included in an attempt to ascertain the type of learning experience the respondent found most meaningful. A copy of the questionnaire along with the covering letter may be found in Appendix A at the end of this chapter.

On July 11, 1974, 289 questionnaires were mailed of which 154 or 53 percent were returned. A second mailing to the 135 individuals whose questionnaires had not been returned was made on August 13 and increased the response rate to 74 percent. On October 1, those individuals within the continental United States and Canada were contacted by phone and urged to respond. As a result of this follow-up, 11 additional questionnaires were returned. Altogether 230 responses were received giving a response rate of 80 percent.

An analysis of the 59 non-responses indicated that 10

(17 percent) had mailing addresses out of the country, and 8 (14

percent) were retired or not employed in a medical library. The

remaining 41 (70 percent) of the non-respondents could not be

categorized. Thus, it seems fair to assume that the non-respon-

dents did not bias the sample with regard to MLA members living

within the continental limits of the United States and Canada.

Of the 230 responses received 17 were considered invalid,

1 because the addressee was deceased, 5 each because the addressee

had changed place of employment and a new address was not available.

Thus it was concluded that the 213 questionnaires included in the

following analysis represent an unbiased sample of the employed

members of the Medical Library Association living within the

continental limits of the United States and Canada.

Data Analysis

Questions 1 through 4 of the "Survey of Organizational

Inducements" were developed to elicit information that might

allow for categorization of the responses to questions 5 through 10.

Table 1 summarizes the response to item, "Type of Library -

check only 1."

The largest number of respondents (35 percent) were

employed in hospital libraries, followed by medical center

and medical school libraries, 21 and 13 percent respectively.

Twenty-three percent of the respondents checked "other," while

8 percent were distributed over the other five categories.

TABLE 1

NUMBER OF RESPONSES BY TYPE OF LIBRARY

Type of Library	Number Responding N=213	Percent Responding %=100
Medical Center	45	21.13
Medical School	27	12.68
Dental School	2	.93
Nursing School	5	2.35
Pharmacy School	2	.93
Hospital	75	35.21
Medical Society	3	1.41
Commercial Firm	5	2.35
Other	49	23.01

Because the second greatest number of responses was in
the "other" category, further analysis of these 49 questionnaires
was performed. This examination revealed that 2 respondents
specified chiropractic school, 1 specified veterinary school, 11
specified a variety of multiple user schools such as nursing,
dentistry, pharmacy, 5 specified university and 11 specified
government. The remaining 19 defied categorization. This analysis
suggests that the forced choices utilized in this questionnaire
are not discrete categories nor do they reflect the respondents'
perceptions of type of library.

TABLE 2

NUMBER OF RESPONSES BY RECLASSIFIED TYPE OF LIBRARY

Type of Library	Number Responding N=213	Percent Responding %=100
Medical Center	45	21.13
Medical School	27	12.68
Single-User Group Schools	12	5.63
Multi-User Group Schools	11	5.16
Hospital	75	35.21
Government	11	5.16
Commercial Firm	5	2.35
University	5	2.35
Other	22	10.33

In an effort to group responses in a more meaningful way, the 2 chiropractic school and the one veterinary school libraries were combined with the nursing, dental and pharmacy school libraries to form a new category, Single-User Group Schools. The 11 libraries associated with multi-user groups formed a new category Multi-User Group Schools. The 11 government libraries became a new category as did the 5 university libraries. The 3 medical society libraries were combined with the 19 libraries that remained uncategorized to form the classification "Other." Table 2 depicts the new "Type of Library" classification, the one to used in this analysis.

Questions 2 and 3 were designed to obtain information re-
garding the respondent's position in the formal authority structure
of the employing organization, based on the assumption that the
higher the level, the greater his possible influence on policy
regarding continuing education. It was hoped that responses to
question 2 would provide comparable data and that answers to ques-
tion 3 would serve to verify the validity of the responses to
question 2.

Of the 213 responses included in this analysis, 16 did
not answer questions 2 and 3, 28 clearly misunderstood the in-
structions for question 2, and 12 probably misunderstood the
instructions. Because 56 or 26.29 percent of the responses
were considered invalid this information was not analyzed further.

Question 4 asked for the number of current journal titles
to which the respondent's institution subscribed. Table 3
summarizes the responses to this question.

One hundred eighteen or 57.84 percent of the 204 respondents
to this question are employed in libraries subscribing to under
500 current journal titles. Fifteen or 7.35 percent are employed
in libraries subscribing to from 500 to 999 titles, 23 or 11.27
percent are employed in libraries subscribing to from 1,000 to 1,999
titles, 26 or 12.74 percent in libraries of from 2,000 to 2,999
titles, 10 or 4.90 percent in libraries from 3,000 to 3,999 titles and
2.95 percent in libraries from 4,000 to 4,999 or over 5,000 titles.

The number of current journal titles to which the respondents'
library subscribes displayed by type of library comprises Table 4.

TABLE 3

NUMBER OF RESPONSES BY NUMBER OF CURRENT
JOURNAL TITLES TO WHICH
INSTITUTION SUBSCRIBES

Number of Current Journal Titles	Number Responding N=213	Percent Responding %=100
Less than 100	22	10.33
100-199	55	25.82
200-299	17	7.98
300-399	16	7.51
400-499	8	3.76
500-999	15	7.04
1000-1499	11	5.16
1500-1999	12	5.63
2000-2499	10	4.69
2500-2999	16	7.51
3000-3499	7	3.29
3500-3999	3	1.41
4000-4999	6	2.82
Over 5000	6	2.82
No answer	9	4.23

The majority of the hospital libraries, those serving one user group and those categorized as other, subscribe to less than 500 current journals: 97.33 percent, 83.33 percent and 68.18 percent respectively. Over one-half of the libraries serving schools of multi-users (63.63 percent) and medical centers (57.77 percent) subscribe to from 1,000 to 2,999 current journals, while 48.14

TABLE 4

NUMBER OF CURRENT JOURNAL TITLES BY TYPE OF LIBRARY

Type of Library	Less than 100	100 to 199	200 to 299	300 to 399	400 to 499	500 to 999	1000 to 1499	1500 to 1999	2000 to 2499	2500 to 2999	3000 to 3499	3500 to 3999	4000 to 4999	Over 5000	NA	TOTAL N=213
Medical Center	0	5	2	1	1	2	5	8	3	8	4	1	2	2	1	45
Medical School	1	1	0	1	1	3	5	4	2	2	2	1	1	0	3	27
Single-User Group Schools	4	3	1	1	1	1	0	0	0	1	0	0	0	0	0	12
Multi-User Group School	0	1	0	0	0	0	1	0	3	3	0	0	2	0	1	11
University	0	0	0	0	1	0	0	0	0	1	0	1	1	1	0	5
Hospital	13	38	11	11	0	1	0	0	0	0	0	0	0	0	1	75
Government	0	1	1	0	2	4	0	0	2	0	0	0	0	1	0	11
Commercial Firms	0	0	0	0	1	2	0	0	0	0	0	0	0	0	2	5
Other	4	6	2	2	1	2	0	0	0	1	1	0	0	2	1	22
TOTAL	22	55	17	16	8	15	11	12	10	16	7	3	6	6	9	213

percent of the medical school libraries report subscriptions within this range.

In an effort to ascertain whether different types of libraries or different sizes of libraries as measured by the number of current journal subscriptions provide significantly different levels of support for continuing education, the responses to questions 5 through 8 were weighted and a mean score was derived for each type and for each size. An analysis of variance was then computed. No significant difference in support for continuing professional education as measured by this instrument was found either by type of library (F=5.20) or by size of library (F=4.85). Therefore the responses to the items in the questionnaire will be reported across both type and size.

Item 5 in the questionnaire requested the respondent's perceptions of his immediate superior's behavior regarding continuing education opportunities. Table 5 summarizes the responses to this question.

Of the 199 who answered this question, the majority report that their immediate superior encourages them to take advantage of existing services and activities, nevertheless 18 percent of these 199 report that their immediate superior shows little interest in their continuing education.

Table 6 summarizes the responses to question 6, "Check the one statement below which best describes your immediate superior's behavior regarding the definition of your continuing professional education needs."

TABLE 5

RESPONSES TO ITEM 5, "CHECK THE ONE STATEMENT BELOW WHICH
BEST DESCRIBES YOUR IMMEDIATE SUPERIOR'S BEHAVIOR
REGARDING YOUR CONTINUING PROFESSIONAL EDUCATION."

Response	Number Responding N=213	Percent Responding %=100
Tries to create new opportunities for my c.e.	14	6.57
Encourages me to take advantage of existing c.e. activities and resources	114	53.52
If I express my interest in c.e., assists me in locating resources and activities	35	16.43
Shows little interest in my c.e. activities	36	16.91
No answer	14	6.57

TABLE 6

RESPONSES TO ITEM 6, "CHECK THE ONE STATEMENT BELOW WHICH
BEST DESCRIBES YOUR IMMEDIATE SUPERIOR'S BEHAVIOR
REGARDING THE DEFINITION OF YOUR CONTINUING
PROFESSIONAL EDUCATION NEEDS."

Response	Number Responding N=213	Percent Responding %=100
Works with me to assist in defining my c.e. needs	32	15.02
Accepts my decisions with regard to my c.e. needs	151	70.89
Shows little interest in my c.e. needs	23	10.80
No answer	7	3.29

The majority of respondents perceive their immediate
superior as accepting their (the respondent's) decision about
the definition of continuing education needs. A small minority,
11 percent report that their immediate superior shows little
interest in their need for continuing education.

Responses to parts A., B., and C. of question 8 relating
to organizational fiscal policies regarding continuing professional
education are summarized in Table 7. The majority of libraries
provide fiscal support for continuing education. Although a rela-
tively small percentage of the respondents answer no to these
questions, it was assumed that those answering "no" to two or more
would feel constrained in participating in continuing professional

TABLE 7

RESPONSES TO QUESTIONS 8A, B, AND C, ORGANIZATIONAL FISCAL
POLICIES REGARDING CONTINUING PROFESSIONAL EDUCATION

Item	Number of Responses			Percentage of Responses		
	Yes	No	NA	Yes	No	NA
Does your organization: A. Have a tuition reimbursement policy for which you qualify?	116	80	17	54.46	37.56	7.89
B. Pay all or a part of your travel expenses to take advantage of continuing education activities?	156	48	9	73.23	22.54	4.23
C. Give you paid time-off to attend continuing education activities?	181	23	9	84.97	10.80	4.23

education activities of a collective nature, thus a further analysis
of the "no" answers was conducted.

Table 8 summarizes the responses of those individuals an-
swering "no" to 2 of the 3 questions regarding organizational
fiscal support for continuing education. Twelve respondents or 6
percent perceive a total lack of financial support from their place
of employment for continuing education as measured by the instrument
used in this investigation. Thirty-five or 16 percent receive only
two of the three types of financial assistance listed in the ques-
tionnaire (tuition reimbursement, travel expenses, paid time-off).

Item 7 asked the question, "How does your immediate superior

TABLE 8

RESPONSES OF INDIVIDUALS ANSWERING "NO" TO TWO OR MORE
QUESTIONS REGARDING ORGANIZATIONAL FINANCIAL SUPPORT
OF CONTINUING PROFESSIONAL EDUCATION

Organization Does Not	Number Responding N=35	Percentage of Total Response(213)
Have tuition reimbursement policy or reimburse for any or part of travel expenses for continuing education	14	6.47
Have tuition reimbursement policy or give paid time-off to attend continuing education	5	2.34
Reimburse for travel expenses or give paid time-off to attend continuing education	4	1.87
Have tuition reimbursement policy, reimburse for any or part of travel expenses, or give paid time-off for continuing education	12	5.63

behave about your participation in professional meetings?." Table 9 summarizes the responses to this question. The vast majority of the respondents, 89 percent, perceive their immediate superior as either very encouraging or somewhat encouraging regarding their participation in professional meetings.

If the respondents' superiors encourage participation in professional society meetings, does the employing organization contribute financial support for this activity? Items 8 D and E of the survey instrument sought answers to this question by

TABLE 9

RESPONSES TO ITEM 7, "HOW DOES YOUR IMMEDIATE SUPERIOR BEHAVE
ABOUT YOUR PARTICIPATION IN PROFESSIONAL MEETINGS?"

Response	Number Responding N=213	Percent Responding %=100
Very encouraging	121	56.81
Somewhat encouraging	68	31.92
Not encouraging at all	12	5.63
Discouraging	4	1.88
No answer	8	3.76

asking whether travel expenses are paid to professional meetings
and whether paid time-off is allowed. Table 10 summarizes these
responses. Clearly organizational financial support for partici-
pation in professional meetings as measured by the instrument
used in this study is congruent with superiors' behavior regarding
participation, indicating that for the majority of the respondents
the work environment encourages this type of activity.

In addition to participation in courses and professional
meetings, the presence or absence of a formalized staff devolop-
ment or in-service training program could fulfill some of the con-
tinuing education needs of medical library personnel, thus item
8F, "Does your organization have a staff development or in-service
training program for which you are eligible?" was included in the

TABLE 10

RESPONSES TO QUESTIONS 8D AND 8E ORGANIZATIONAL FINANCIAL
POLICIES RECARDING PARTICIPATION IN PROFESSIONAL MEETINGS

Item	Number of Responses			Percentage of Responses		
	Yes	No	NA	Yes	No	NA
Does your organization pay all or part of your travel expenses to attend professional meetings?	173	30	10	81.22	14.09	4.69
Does your organization give you paid time-off to attend professional meetings?	191	15	7	89.67	7.04	3.29

questionnaire. Table 11 displays the responses to this item. The
majority of employing organizations, 59 percent, do not have staff
development or in-service training programs for which medical library
personnel are eligible. This may be explained in part by the fact
that many of the employing libraries were small in staff size.

Item 9 requested the respondents to estimate the number of
times they had participated in five types of continuing education
activities in the last year. Respondents interpreted the type
of estimate in a variety of ways, as might have been expected,
thus 62 percent of the responses are not comparable. Therefore
data derived from this item is not analyzed further.

TABLE 11

RESPONSES TO QUESTION 8F, " DOES YOUR ORGANIZATION HAVE A STAFF
DEVELOPMENT OR IN-SERVICE TRAINING PROGRAM FOR WHICH
YOU ARE ELIGIBLE?"

Response	Number Responding N=213	Percent Responding %=100
Yes	72	33.80
No	125	58.69
No answer	16	7.51

Item 10 asked the respondents to briefly describe the most

meaningful professional learning experience of any kind they had

had in the last year. Examples of various types of learning ex-

periences, i.e., an on-the-job challenge or problem solving ex-

perience, a professional meeting, a discussion with a colleague,

an individually planned or group learning experience, were

stated. It was hoped that by categorizing the descriptions,

some inference might be made as to the type of experience medical

library personnel perceive as most instrumental in their continuing

education. Two members of the project staff read the descriptions

and reached agreement on the categorizations as summarized in Table 12.

An on-the-job challenge or problem solving encounter was described

as the most meaningful professional learning experience of the last year

by 31.45 percent of the respondents (more than twice the number choosing

any other response). The second most often described experience was courses

or seminars taken for credit from an institution of higher education

TABLE 12

RESPONSES TO ITEM 10, "BRIEFLY DESCRIBE THE MOST MEANINGFUL
PROFESSIONAL LEARNING EXPERIENCE...YOU HAVE HAD IN THE
LAST YEAR." BY CATEGORY OF RESPONSE

Response Category	Number Responding N=213	Percent Responding %=100
On-the-job challenge or problem solving experience	67	31.45
Professional meeting	23	10.80
Discussion with colleague	15	7.04
[1]Individual learning experience	29	13.62
[2]Group learning experience	33	15.49
[3]Group learning experience	23	10.80
No answer	23	10.80

[1]Includes writing papers or articles, preparation and teaching a credit course, developing a workshop or c.e. course, planning and pursuing a sequence of activities for self-instruction.

[2]Includes attending classes, seminars, practicum for higher education credit.

[3]Includes attending classes, seminars, discussion groups, practicum not for credit.

---

followed by individually planned learning sequences, 15.49 percent

and 13.62 percent respectively. Professional meetings and not-for-

credit group learning experiences each with a 10.80 response rate

ranked fourth and a discussion with a colleague ranked fifth with

a 7.04 response rate.

While the instrument used in this phase of the investigation was not designed to explain the respondents' choices an interesting question arises: Why did short, not-for-credit courses, those usually thought to be synonymous with continuing professional education, rate beneath three other types of continuing education opportunities? In an effort to at least ascertain whether the respondents had attended short, not-for-credit courses, answers to question 9 were carefully scrutinized. Eighty-two percent of the respondents indicated that they had participated in such an activity which does not explain the low ranking. Other possible explanations are that medical librarians actually prefer continuing education through practical experience, an assumption common in other areas of adult education or that they find something lacking in the short not-for-credit courses they attended.

Summary

A ten-item questionnaire designed to assess the extent to which the work environment supports or constrains medical library personnel in participating in continuing education activities was mailed to a random sample of 289 of the 3,000 members of the Medical Library Association. As a result of the mailing and two follow-ups on 80 percent response rate was obtained. An analysis of non-respondents indicated that the responses constitute an unbiased sample of those members of the Medical Library Association employed in medical library work within the continental United States and Canada.

The employing organizations of the membership of the
Medical Library Association support continuing education at a
relatively high level. While only seven percent of the respon-
dents perceived that their immediate superior tried to create
new opportunities for their continuing education, 54 percent
felt that their immediate superior encouraged taking advantage
of existing activities and resources. Similarly, only 15 percent
reported that their immediate superior worked with them in de-
fining educational needs, however 71 percent perceived that their
immediate superior accepted their decisions regarding continuing
education needs. While these responses regarding superiors' be-
havior in support of continuing education are heartening, it must
be emphasized that a small, but significant number, 18 and 11 percent
respectively, indicated that their immediate superiors showed little
interest in the respondents' continuing education activities or needs.

In addition to supportive behavior on the part of superiors,
employing organizations provide a relatively high level of financial
support for employees' continuing education. Fifty-four percent
have tuition reimbursement policies, 73 percent pay all or part of
the travel expenses incurred for continuing education and 85
percent give paid time off to attend continuing education activities.
Nevertheless, 6 percent provide none of these financial supports,
while 11 percent provide only one, indicating that approximately
17 percent of the members of the Medical Library Association ex-
perience financial constraints to taking advantage of continuing
education activities.

Fifty-nine percent of the members work for organizations
that do not have in-service training or staff development programs
for which they are eligible indicating that the provision of con-
tinuing education within the employing libraries is at best informal
and probably marked by a lack of systematic planning.

Work environment support for participation in professional
meetings appears to be slightly greater than support for con-
tinuing education per se. Fifty-seven percent of the MLA membership
perceive their immediate superior as very encouraging in this area
and 32 percent feel their immediate superior is somewhat encouraging.
Financial support for attendance at professional meetings is also
slightly greater: 8 percent higher than for participation in continu-
ing education.

An attempt to discover the extent to which the work environ-
ment of medical library personnel provides challenges and/or
problem-solving opportunities generated such variable data that
analysis was not possible.

When asked to describe their most meaningful professional
learning experience in the last year, more (31 percent) reported
an on-the-job problem solving experience than any other type.
Not-for-credit short courses, often considered synonymous with
continuing education, ranked a close fourth to the second and
third choices.

The results obtained from this study agree with those
obtained in a study of college and university library policies
on staff development (4).

FOOTNOTES

1. Renck, R., Kahn, E. L., and Gardner, B. B., Continuing Education
   for R & D. Careers, <u>National Science Foundation</u> 69-20, 1969.

2. Campbell, J. P. and Beatty, E. E., Paper presented at American
   Psychological Association Meeting, Washington D.C., 1971.

3. Dubin, S. S. and Marlow, H. L., A Survey of Continuing Professional
   Education for Engineers in Pennsylvania, Department of Planning
   Studies. The Pennsylvania State University, University Park,
   PA., 1965.

4. Breiting, A., Dorey, M., and Sockbeson, D. Staff development in
   college and university libraries. <u>Special Libraries</u> 67:
   305-10 (july) 1976.

APPENDIX A

SURVEY OF ORGANIZATIONAL INDUCEMENTS
TO CONTINUING EDUCATION

July 11, 1974

Dear Member:

We are making a study under a grant from the National Library of Medicine
to determine the continuing education needs of Health Sciences Librarians.
Your name has been selected at random from our membership files to assist
in one phase of the study by completing the enclosed questionnaire.

The questionnaire has two purposes:

1. To assess your perceptions of the climate in your place of
   employment that influence your participation in continuing
   education activities;

2. To document your perceptions of the subject matter you feel are
   important to your performance as a health sciences librarian.

Your response will remain strictly confidential, so please feel free to
complete the questionnaire according to your perceptions of your work
situation.

Because the survey is being sent to a sample of 300 MLA members, and
not to the entire membership, your individual response is extremely
important to the success of the study and to the continuing education
program that will ensue.

Please complete the questionnaire and mail it in the enclosed envelope to:

       Division of Education
       Medical Library Association
       919 North Michigan Avenue, Suite 3208
       Chicago, Illinois 60611

Thank-you for your assistance.

Yours sincerely,

Julie A. Virgo
Director of Education

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11.

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SURVEY OF ORGANIZATIONAL INDUCEMENTS

TO

CONTINUING EDUCATION

If the information on the label
is incorrect, please enter
corrections below.

_____

_____

_____

_____

1. Type of library – check only 1

____Medical Center   ____Hospital

____Medical School   ____Medical Society

____Dental School   ____Commercial Firm

____Nursing School   ____Other, please specify

____Pharmacy School   _____

Please try to answer questions 2, 3, and 4. If you do not have access to
information to allow you to answer, please proceed to question 5.

2. Your level in the formal organization structure. Organization refers
   to the box you checked in question 1.

   If you can picture a chain of responsibility between yourself and the
   number 1 person (president of medical center or hospital administrator)
   how many people are in the chain, including yourself?

   Number of people in the chain_____.

3. Your title _____.

Your immediate superior's title _____.

The title of the individual to whom your immediate superior reports

_____.

4. Number of current journal titles to which your institution subscribes

_____.

For the purposes of answering questions 5 through 10, would you please read the following definitions of Continuing Professional Education and Professional Meetings.

* Continuing professional education - an activity designed to change professionally related knowledge, attitudes or skills. It may oe an activity engaged in on an individual basis such as reading journals or taking a correspondence course; it may be tutorial, on-the-job training or participation in a group learning experience such as a short course or a discussion group; or it may be a not-for-credit course given by a college or university.

* Professional meetings - meetings with colleagues (librarians or others) which are deemed necessary for the advancement of the profession or the employing organization but not aimed specifically at changing knowledge, attitudes or skills.

5. Check the one statement below which best describes your immediate superior's behavior regarding your continuing professional education.

_____ Tries to create new opportunities for my continuing education.

_____ Encourages me to take advantage of existing continuing education activities and resources.

_____ If I express my interest in continuing education, assists me in locating resources and/or activities.

_____ Shows little interest in my continuing education activities.

6. Check the one statement below which best describes your immediate superior's behavior regarding the definition of your <u>continuing professional education</u> needs.

_____Works with me to assist in defining my continuing education needs.

_____Accepts my decisions with regard to my continuing education needs.

_____Shows little interest in my continuing education needs.

7. How does your immediate superior behave about your participation in professional meetings?

_____Very encouraging

_____Somewhat encouraging

_____Not encouraging at all

_____Discouraging

8. Does your organization:

		Yes	No
A.	Have a tuition reimbursement policy for which you qualify?	___	___
B.	Pay all or part of your travel expenses to take advantage of continuing education activities?	___	___
C.	Give you paid time-off to attend continuing education activities?	___	___
D.	Pay all or part of your travel expenses to professional meetings?	___	___
E.	Give you paid time-off to attend professional meetings?	___	___
F.	Have a staff development or in-service training program for which you are eligible?	___	___

9. Attempt to estimate the number of times you participated in each of the following <u>Continuing Professional Education</u> activities in the last year.

_____ An on-the-job challenge or problem solving experience

_____ An exchange of information about a library problem or new technique with a colleague in another library.

_____ A learning experience you planned for yourself

_____ A short course, workshop, seminar or institute

_____ A for-credit course sponsored by an educational institution

10. Briefly describe the most meaningful professional learning experience of any kind you have had in the last year. It may have been an on-the-job challenge or problem solving experience, a professional meeting, a discussion with a colleague or it may relate to an individual or group learning experience. Please try to be as specific as possible.

_____

_____

_____

_____

_____

11. We need to know which areas of medical library practice you would like to see included in our continuing education program. Which of the <u>courses</u> on the following page (check up to <u>ten</u>) would you be interested in <u>attending</u> within the next three years?

_____ Reference tools
_____ Reference services
_____ Nursing literature
_____ Pharmacy literature
_____ Dental literature
_____ Environmental literature
_____ History of medicine literature
_____ Selective dissemination of information
_____ Abstracting and indexing
_____ Inter-library loan
_____ Bibliographic verification
_____ Computerized information retrieval systems
_____ MEDLINE for health sciences librarians
_____ MEDLINE for library administration
_____ Descriptive cataloging
_____ Subject classification
_____ Serials
_____ Binding
_____ Circulation techniques and procedures
_____ Acquisitions
_____ Collection development
_____ Weeding
_____ Archives
_____ Rare books
_____ Book preservation
_____ History of Medicine
_____ Place of the library in a medical setting
_____ Consortium development and operation
_____ Extension librarianship
_____ Biomedical networking
_____ Biomedical communication

_____ A-V materials - selection
_____ A-V materials - production
_____ A-V materials - processing and storage
_____ A-V services
_____ Medical terminology
_____ Systems analysis
_____ Library automation - circulation systems
_____ Library automation - serials
_____ Library automation - acquisitions
_____ Library automation - cataloging
_____ Budget administration
_____ Measurement & evaluation of library services
_____ Hospital administration
_____ Library planning - building
_____ Library planning - space allocation and equipment
_____ Library planning - remodelling.
_____ Grant applications and management
_____ Inter-library cooperation
_____ Public relations
_____ Employee selection
_____ Staff development
_____ Leadership training
_____ Dynamics of effective group work
_____ Human relations training
_____ Social responsibilities of medical librarians,
_____ Medical education: implications for library service

<u>New roles for the librarian in the following situations:</u>

_____ In the institution's continuing education and inservice training programs
_____ As a medical team member on patient rounds
_____ Preparing packages of information for patient education
_____ Participating in community health care projects
_____ Other new roles: (please specify)_____

Please return your completed questionnaire in the enclosed self-addressed envelope to:
Division of Education
Medical Library Association
919 North Michigan Avenue, Suite 3208
Chicago, Illinois 60611

Thank you!

CHAPTER VI

CONTINUING EDUCATION PROGRAMS OF OTHER ASSOCIATIONS AND PROFESSIONS

In reviewing the continuing education literature of other

associations and professions it became apparent that much of what

was actually being done was not described in the published litera-

ture. Therefore, it was decided to survey professional associations

encompassing a broad range of occupations to obtain information

about their current continuing education activities and on the extent

of their programs, methods of program support, types of program

delivery mechanisms and level of audiences served. (See Appendix A

at the end of this chapter for a copy of the survey questionnaire.)

As a result of a literature review (see Working Paper No. 1),

certain fields were identified in which continuing education pro-

grams were in progress. These fields were placed in five main groups:

1. health professions
2. non-health professions
3. national library associations
4. state, regional, territorial and provincial library associations
5. state and territory library agencies

(See Appendix B for a listing of associations within each field.)

The non-library professional associations (1 and 2) surveyed

were selected from the <u>Encyclopedia of Associations</u> (1) on the

basis of our own knowledge that the general field was concerned

with the availability of continuing education opportunities for its

members.

The library associations (3, 4, and 5) were selected from

120

111

the association listings in the 1973 Bowker Annual (2). All
national professional library associations listed there were
included except those dealing solely with school or childrens'
libraries. All state, regional, provincial and territorial li-
brary associations were surveyed, as were all state and territory
library agencies.

A total of 353 associations were thus identified and
questionnaires were sent to them in August, 1973. Twelve of
these were returned by the post office as non-forwardable. A
total of 265 associations responded giving an overall response
rate of 78%. Of the 265 responses, 29 were letters or printed
materials not completed questionnaires; they were, therefore,
not included in the analysis. Of these 29, 8 reported some type
of continuing education program. Results as reported here reflect
the remaining 236 completed questionnaire responses only.

Of these 236 associations, 150 (64 percent) reported
sponsorship of some type of continuing education program for their
membership. As can be seen from Table 1, the non-library associa-
tions reported a higher percentage of continuing education programs
for their members than did library associations. This, however,
was to be expected as the non-library survey groups had been
chosen to cover associations in fields known to be involved in
continuing education. The 67 percent program sponsorship by the
library agencies is believed to reflect state funding available
at that time for continuing education. The lowest percentage re-
ported overall is the sponsorship of continuing education by only

TABLE 1

ASSOCIATIONS SPONSORING CONTINUING EDUCATION
PROGRAMS FOR THEIR MEMBERS

Type of Association	Percentage Reporting Sponsorship of Continuing Education Programs for their Members	N
Health Professions	71%(57)	80
Non-Health Professions	77 (46)	60
National Library Associations	46 (13)	28
State Library Associations	37 (14)	38
State Library Agencies	67 (20)	30
All Groups	64%(150)	236

37 percent of the state library associations.

Of the 86 organizations r porting no current continuing education program, 21 (24 percent) indicated plans to sponsor programs within the next two years (See Table 2).

TABLE 2

ASSOCIATIONS NOT CURRENTLY OFFERING CONTINUING
EDUCATION PROGRAMS FOR THEIR MEMBERS
BUT INDICATING PLANS TO DO SO
WITHIN THE NEXT TWO YEARS

Type of Association	Percentage Planning to Sponsor Programs	N
Health Professions	26% (6)	23
Non-Health Professions	36 (5)	14
National Library Associations	13 (2)	15
State Library Associations	25 (6)	24
State Library Agencies	20 (2)	10
All Groups	24%	86

Of even greater interest is the breakdown of the reasons given for not offering a continuing education program. (See Table 3) Absence of program development capability (20 percent) and budgetary constraints (28 percent) represent the primary reasons given. Only

TABLE 3

REASONS FOR NOT SPONSORING CONTINUING EDUCATION PROGRAMS FOR MEMBERS[*]

Type of Association	Percentage Responding							N
	Lack of Member Interest	Incompati-bility with Goals of Association	Absence of Program Development Capability	Absence of Marketing Capability	Budgetary Constraints	Other	No Response	
Health Professions	0% (0)	35% (8)	4% (1)	0% (0)	13% (3)	17% (4)	30% (7)	23
Non-Health Professions	7 (1)	21 (3)	7 (1)	0 (0)	21 (3)	14 (2)	36 (5)	14
National Library Associations	13 (2)	7 (1)	40 (6)	13 (2)	33 (5)	20 (3)	33 (5)	15
State Library Associations	4 (1)	8 (2)	25 (6)	0 (0)	46 (11)	17 (4)	29 (7)	24
State Library Agencies	0 (0)	0 (0)	20 (2)	0 (0)	20 (2)	10 (1)	60 (6)	10
All Groups	5%	16%	20%	2%	28%	16%	35%	86

* It was possible to check more than one category

5 percent reported lack of member interest as a reason, although
13 percent of the national library associations reported lack of
member interest. Thus, it appears that the associations queried
who do not sponsor continuing education programs do not do so pri-
marily because of general lack of development capability or
budgetary constraints, not through any lack of interest on the
part of the membership.

Eighty-one percent of those 150 associations sponsoring
programs reported having a specific person or group responsible for
continuing education. (See Table 4) It can be seen that where
associations do have continuing education programs, there is usually
some person or group specifically designated with responsiblity for
them.

Table 5 shows the breakdown by time worked and salary status
for the 91 of the 15C associations with continuing education pro-
grams reporting individuals responsible for continuing education.
The non-health professions reported the largest percentage (61
percent) of full time positions, while in the library associations
only the state library agencies reported any person with full time
responsibility and this 33 percent represented only three people.

Table 6 summarizes the time and salary status data reported
by the associations indicating a group responsible for the con-
tinuing education program. Of the 83 associations, only 24 percent
reported "full time" groups, (this is defined as groups responsible
for continuing education programming only, not necessarily a full
time work week). The small numbers of salaried groups seem to

TABLE 4

ASSOCIATIONS REPORTING PERSON OR GROUP
WITH RESPONSIBILITY FOR CONTINUING
EDUCATION PROGRAMS

Type of Association	Percentage Reporting Person or Group		N
Health Professions	86%	(49)	57
Non-Health Professions	85	(39)	46
National Library Associations	77	(10)	13
State Library Associations	79	(11)	14
State Library Agencies	65	(13)	20
All Groups	81%		150

TABLE 5

ASSOCIATIONS REPORTING FULL OR PART TIME, SALARIED OR VOLUNTEER,
PERSON(S) RESPONSIBLE FOR CONTINUING EDUCATION

| Type of Association | Percentage Reporting Person | | | | | | N |
| | Full or Part Time | | | Salary Status | | | |
	Full Time	Part Time	No Response	Salaried	Volunteer	No Response	
Health Professions	28% (12)	37% (16)	35% (15)	44% (19)	30% (13)	26% (11)	43
Non-Health Professions	61 (17)	25 (7)	14 (4)	64 (18)	14 (4)	21 (6)	28
National Library Associations	0 (0)	43 (3)	57 (4)	43 (3)	57 (4)	0 (0)	7
State Library Associations	0 (0)	25 (1)	75 (3)	0 (0)	100 (4)	0 (0)	
State Library Agencies	33 (3)	67 (6)	0 (0)	56 (5)	0 (0)	44 (4)	9
All Groups	35%	36%	29%	49%	27%	23%	91

TABLE 6

ASSOCIATIONS REPORTING FULL OR PART TIME, SALARIED OR VOLUNTEER,
GROUPS RESPONSIBLE FOR CONTINUING EDUCATION

Type of Association	Percentage Reporting Group						N
	Full or Part Time			Salary Status			
	Full Time	Part Time	No Response	Salaried	Volunteer	No Response	
Health Professions	22% (7)	25% (8)	53% (17)	6% (2)	75% (24)	19% (6)	32
Non-Health Professions	31 (8)	15 (4)	54 (14)	19 (5)	62 (16)	19 (5)	26
National Library Associations	22 (2)	22 (2)	56 (5)	0 (0)	89 (8)	11 (1)	9
State Library Associations	18 (2)	0 (0)	82 (9)	0 (0)	82 (9)	18 (2)	11
State Library Agencies	20 (1)	80 (4)	0 (0)	80 (4)	0 (0)	20 (1)	5
All Groups	24%	22%	54%	13%	68%	18%	83

reflect traditional association structure, that is, many duties
are performed by committee groups without renumeration.

Table 7 shows the percentage of associations with licensure
or certification programs and the extent to which continuing edu-
cation is counted toward licensure or certification within the
responding professional association. In the health related pro-
fessions, of the 67 percent of associations reporting administering
certification programs, 32 percent report participation in their
continuing education program as being counted toward licensure or
certification. Of the responding state library agencies 5 (25
percent) report using continuing education for this purpose while
the library groups in general report lower utilization of continu-
ing education--it must also be remembered that in many instances
they do not have licensure or certification programs (e.g. 10 of the
13 national library associations (77 percent) report no such pro-
grams.) In addition, the non-library groups were chosen partially
on the basis of a known interest in continuing education fields,
and continuing education program development has traditionally
been closely linked to preparation for licensure or certification
programs.

Respondents were asked to distinguish those levels within
the profession which the association felt responsible for serving
and those which the association's continuing education program was
currently designed to serve. (See Tables 8 and 9)

Comparison of Tables 8 and 9 reveals that these groups do
not provide continuing education programs to membership levels for
which they otherwise feel responsible. For example, while 93% of

TABLE 7

ASSOCIATIONS REPORTING PARTICIPATION IN CONTINUING EDUCATION
PROGRAMS AS COUNTED TOWARD METHODS OF LICENSURE OR
CERTIFICATION IN THE PROFESSION

Type of Association	Percentage Responding				Total	N
	Have no Licensure	C.E. Counts Toward Licensure or Certif.		No Response		
		Yes	No			
Health Professions	23% (13)	32% (18)	35% (20)	10% (6)	100%	57
Non-Health Professions	39 (18)	17 (8)	35 (16)	9 (4)	100	46
National Library Associations	77 (10)	7 (1)	15 (2)	0 (0)	99*	13
State Library Associations	21 (3)	14 (2)	57 (8)	7 (1)	99*	14
State Library Agencies	45 (9)	25 (5)	20 (4)	10 (2)	100	20
All Groups	35%	23%	33%	9%	100%	150

* Total differs from 100% due to rounding.

TABLE 8

LEVELS WITHIN THE PROFESSION WHICH THE ASSOCIATION
CONSIDERS ITSELF RESPONSIBLE FOR SERVING*

Type of Association	Percentage Serving Level						
	Professional		Sub-Professional				
	Experienced	Beginning	Experienced	Beginning	Tech-nician	Other	N
Health Professions	96% (55)	70% (40)	31% (18)	19% (11)	23% (13)	12% (7)	57
Non-Health Professions	93 (43)	91 (42)	54 (25)	33 (15)	28 (13)	17 (8)	46
National Library Associations	77 (10)	77 (10)	38 (5)	38 (5)	15 (2)	31 (4)	13
State Library Associations	86 (12)	86 (12)	79 (11)	79 (11)	71 (10)	64 (9)	14
State Library Agencies	95 (19)	95 (19)	90 (18)	85 (17)	70 (14)	40 (8)	20
All Groups	93%	82%	51 %	39%	35 %	24 %	150

* Respondents could check more than one category

TABLE 9

LEVELS WITHIN THE PROFESSION WHICH THE ASSOCIATION'S
CONTINUING EDUCATION PROGRAM IS DESIGNED TO SERVE*

Type of Association	Percentage Serving Level						
	Professional		Sub-Professional				
	Experienced	Beginning	Experienced	Beginning	Technician	Other	N
Health Professions	79% (45)	60% (34)	23% (13)	17% (10)	16% (9)	26% (15)	57
Non-Health Professions	67 (31)	63 (29)	26 (12)	22 (10)	22 (10)	24 (11)	46
National Library Associations	77 (10)	77 (10)	38 (5)	31 (4)	23 (3)	15 (2)	13
State Library Associations	57 (8)	57 (8)	50 (7)	50 (7)	35 (5)	57 (8)	14
State Library Agencies	70 (14)	70 (14)	65 (13)	65 (13)	55 (11)	25 (5)	20
All Groups	72%	63%	33%	29%	25%	27%	150

* Respondents could check more than one category

all groups feel association responsibility to serve experienced professionals, only 72% provide continuing education at this level. National library associations seem to be the group with the closest relationship between perceived levels of responsibility and actual continuing education programming, although the extent of their programming was not evaluated.

One hundred thirty-five of the 150 associations (90%) reporting continuing education programs also reported having made some attempt to identify the continuing education needs of their audiences. Surveys and questionnaires of members taking continuing education courses, and interviews or consultation with members of the profession were the methods most often cited. Very few groups reported more sophisticated programs of research behind program planning.

Table 10 indicates that financial support for research and development of new continuing education programs is primarily (67 percent) drawn from dues income. Similarly, ongoing programs are financed through dues income (51 percent) and service or tuition fees (57 percent)-- see Table 11. As we are dealing here largely with non-profit professional societies who are in general dependent on dues income for their financial base, this is to be expected. State library agencies were the only group reporting substantial income from grant sources reflecting available state fund allocations.

Short courses, seminars, workshops and lecture series were by far the most utilized form of delivery mechanism reported for continuing education programs, with 93 percent of all groups

TABLE 10

METHODS OF FINANCING RESEARCH AND DEVELOPMENT
OF NEW CONTINUING EDUCATION PROGRAMS

Type of Association	Funding Source							N
	Dues Income	Contributions	Endowments	Income From Foundations	Grants From Foundations	Grants From State, Local, Federal Agency	Other	
Health Pro-fessions	86% (49)	30% (17)	5% (3)	14% (8)	11% (6)	16% (9)	40% (23)	57
Non-Health Professions	59 (27)	9 (4)	2 (1)	9 (4)	6 (3)	4 (2)	63 (29)	46
National Library Associations	77 (10)	8 (1)	8 (1)	0 (0)	15 (2)	15 (2)	8 (1)	13
State Library Associations	100 (14)	7 (1)	0 (0)	0 (0)	0 (0)	36 (5)	14 (2)	14
State Library Agencies	0 (0)	0 (0)	0 (0)	0 (0)	5 (1)	55 (11)	50 (10)	20
All Groups	67%	15%	3%	8%	8 %	19%	43%	150

* Respondents could check more than one category

TABLE 11

PRIMARY SOURCE OF FINANCIAL SUPPORT OF ONGOING
CONTINUING EDUCATION PROGRAMS[*]

Type of Association	Funding Source								N
	Service or Tuition Fees	Dues Income	Contributions	Endowments	Income From Investments	Grants From Foundations	Grants From Local, State Agency	Other	
Health Professions	68% (39)	60% (34)	17% (10)	7% (4)	5% (3)	4% (2)	14% (8)	14% (8)	57
Non-Health Professions	74 (34)	46 (21)	4 (2)	2 (1)	7 (3)	4 (2)	4 (2)	19 (9)	46
National Library Associations	45 (6)	69 (9)	8 (1)	0 (0)	0 (0)	8 (1)	0 (0)	8 (1)	13
State Library Associations	29 (4)	86 (12)	0 (0)	0 (0)	0 (0)	0 (0)	21 (3)	21 (3)	14
State Library Agencies	10 (2)	0 (0)	0 (0)	0 (0)	0 (0)	5 (1)	55 (11)	55 (11)	20
All Groups	57%	51%	9%	3%	4%	4%	16%	21%	150

* Respondents could check more than one category

reporting use of these techniques, (See Table 12). Journals and
other publications were reported in use by 65 percent of the asso-
ciations.

Audio tapes were reported in use by 29 percent of the associa-
tions, 20 percent report use of university or college conducted
courses, with 15 percent (2) of the national library associations re-
porting use of such courses.

Library associations in all three library groups reported
use of fewer different types of delivery mechanisms than did the
non-library professions. The library groups appear to rely pri-
marily on short courses and journal publications, while the
non-library groups use audio tapes, television, programmed
instruction and correspondence courses as well. Short courses
appear as the most used form, with 93 percent of the
associations in all groups reporting their use of this form.

Other types of continuing education activities (Table 13) include
the operations of clearinghouse activities for information on
various continuing education programs of interest to members, reported
by 54 percent of the associations and publication of directories of
continuing education opportunities for members (25 percent).

Summary and Conclusions

Among the associations surveyed, the non-library professions
appear to be more actively involved in providing continuing education
for their members than are the library groups. However, such factors
as continuing education credit for certification or licensure and a

TABLE 12

DELIVERY MECHANISMS UTILIZED IN
CONTINUING EDUCATION PROGRAMS*

Type of Association	Delivery Mechanism								N
	Short Courses...	Journals....	Television	Audio Tapes	Programmed Instruction	Correspondence Courses	University or College Courses	Other	
Health Professions	91% (52)	68% (39)	26% (15)	39% (22)	17% (10)	12% (7)	21% (12)	23% (13)	57
Non-Health Professions	96 (44)	67 (31)	11 (5)	33 (15)	20 (9)	30 (14)	22 (10)	13 (6)	46
National Library Associations	100 (13)	61 (8)	0 (0)	31 (4)	0 (0)	0 (0)	15 (2)	31 (4)	13
State Library Associations	86 (12)	71 (10)	7 (1)	7 (1)	0 (0)	0 (0)	1ʰ (2)	7 (1)	14
State Library Agencies	95 (19)	50 (10)	10 (2)	5 (1)	5 (1)	15 (3)	20 (4)	20 (4)	20
All Groups	93%	65%	15%	29%	13 %	16%	20%	19 %	150

*Respondents could check more than one category.

TABLE 13

ACTIVITIES INCLUDED IN CONTINUING EDUCATION PROGRAMS*

Type of Association	Activity								N
	Clearinghouse	Publish C.E. Directory	Organize Pre-prints	Organize Information Exchange Grp	Develop Tutorial Centers	Sponsor Book Clubs	Sponsor Current Awareness Service	Other	
Health Professions	46% (26)	32% (18)	3% (2)	14% (8)	5% (3)	0% (0)	2% (1)	9% (5)	57
Non-Health Professions	57 (26)	30 (14)	11 (5)	11 (5)	2 (1)	4 (2)	7 (3)	9 (4)	46
National Library Associations	69 (9)	8 (1)	0 (0)	15 (2)	0 (0)	0 (0)	8 (1)	15 (2)	13
State Library Associations	50 (7)	14 (2)	21 (3)	21 (3)	0 (0)	0 (0)	0 (0)	7 (1)	14
State Library Agencies	65 (13)	10 (2)	0 (0)	10 (2)	5 (1)	5 (1)	25 (5)	10 (2)	20
All Groups	54%	25%	7%	13%	3%	2 %	7%	9%	150

* Respondents could check more than one category

broader range and level of funding probably contribute heavily
to this phenomenon. Absence of program development capability
and budgetary constraints are evidenced by all groups, resulting
in a low incidence of salaried staff and restrictions on program
format. Sixty-four percent of the groups provide continuing
education opportunities for their membership, and another 8 percent
are planning to do so within the next two years. Only 6 percent
reported that sponsorship of continuing education is incompatible
with the goals of the association (only three library associations
reported continuing education as incompatible). The nationally
based organizations reported a greater responsibility for providing
services to members, particularly those at the professional level.
State associations and agencies indicate greater responsibility
for those at the subprofessional and technical levels both in terms
of general services as well as continuing education. Associations
operating at the state level were, however, the ones reporting the
lowest proportion of continuing education programs.

Dues income appears to be the greatest source of financial
support for continuing education programs. Service or tuition
fees, although reported by most as being an important source of
funds do not appear to in any way replace the basic dues support.
Indeed, library groups report a higher incidence of dues support.
Only the health professions report any substantial support from
grants and endowments.

Delivery mechanisms showed greater variety within the non-
library groups although the tradional forms of short courses and

seminars and the publication of journals are the principal methods

in use for all groups.

FOOTNOTES

1. Gale Research Company. Encyclopedia of Associations; 7th
Edition. Vol. 1; National Organizations of the U.S. Detroit,
Michigan, Gale Research Company, 1972.

2. R.R. Bowker Company. The Bowker Annual of Library & Book
Trade Information. 18th Ed. 1973. New York, R.R. Bowker, 1973.
pp. 121-186

APPENDIX A

Questionnaire on Continuing Education

1. Association Name:
   Address:

2. Number of members _____   _____ Individual   _____ Institu-
                                                            tional

3. Is membership -- _____ National   _____ Regional
                    _____ State   _____ Local (metropolitan)

4. Does your Association sponsor a program of continuing education
   for members? _____ Yes   _____ No

   If your answer to question 4 is Yes, please proceed directly
   to question 8.

   If your answer to question 4 is No, proceed with questions
   5, 6, and 7.

5. Do you have plans to sponsor education programs for your
   members within the next two years? _____ Yes   _____ No

6. If not, is this policy due to
   _____ Lack of member interest
   _____ Incompatibility with expressed goals of the Association
   _____ Absence of program development capability
   _____ Absence of marketing capability
   _____ Budgetary constraints
   _____ Other (please explain)

7. Please add any other comments you may wish to make.

   Thank you - Please return this questionnaire to --
                        Julie A. Virgo
                        Director of Medical Library Education
                        Medical Library Association
                        919 N. Michigan Avenue - Suite 3208
                        Chicago, Illinois 60611

----

8. What are the goals or objectives of your continuing education
   program?

9. Does your Association have a specific person and/or group
    that has special responsibility for continuing education?
    _____Yes   _____No

    If Yes, please indicate which of the following apply to your
    organization. (If you have a written job description please
    attach a copy.)
    _____Person, title_____
            _____Full time on continuing education
            _____Part-time on continuing education (% time_____).
            _____Salaried
            _____Volunteer

    _____Group, title_____
            _____Full time on continuing education
            _____Part-time on continuing education (% time_____)
            _____Salaried
            _____Volunteer

10. Is participation in your continuing education program counted
    toward the methods of licensure or certification prevailing
    in your profession?
    _____Yes   _____No   _____We do not have licensure or
                                           certification

11. Which of the following levels of activity in your profession
    do you consider your Association responsible for serving?
    _____Experienced, qualified professionals
    _____Beginning, qualified professionals
    _____Experienced sub-professionals (Experienced persons employed
          in professional level positions who do not possess pro-
          fessional credentials)
    _____Beginning sub-professionals (Persons employed in profes-
          sional level positions who possess neither professional
          credentials nor experience)
    _____Technician level assistants
    _____Other (please describe)

12. Which of these levels of activity is your program currently
    designed to serve?

13. How have you identified the continuing education needs of
    your audience?

14. How do you intend to assess future needs?

15. How do you finance the research and development of new continuing education programs?

_____ Dues income _____ Income from investments
_____ Contributions _____ Grants from foundations
_____ Endowments _____ Grants from local, state or federal governmental agencies
_____ Other (please describe)

16. Do you evaluate your programs? _____ Yes _____ No
If Yes, how? (please describe)

17. Please indicate the primary source of financial support of ongoing continuing education programs.

_____ Service or tuition fees _____ Endowments
_____ Contributions _____ Grants from foundations
_____ Income from investments _____ Grants from local, state
_____ Dues income or federal agencies
_____ Other (please describe)

18. Please indicate the delivery mechanisms utilized in your Association's continuing education program.

_____ Short courses, seminars, workshops, lecture series
_____ Journals and/or other publications
_____ Closed circuit or educational television
_____ Audio tapes
_____ Programmed instruction
_____ Correspondence courses
_____ University or college conducted courses
_____ Other (please describe)

19. Does your continuing education program include any of the following activities?

_____ Serving as a clearinghouse for information on various continuing education programs of interest to your members
_____ Publishing a directory of continuing education opportunities
_____ Organizing preprint circles
_____ Organizing information exchange groups
_____ Developing tutorial centers
_____ Sponsoring book clubs
_____ Sponsoring current awareness services
_____ Other: Please specify

20. Please add any other comments you may wish to make.

Thank you - Please return this questionnaire to --
                        Julie A. Virgo
                        Director of Medical Library Education
                        Medical Library Association
                        919 N. Michigan Avenue - Suite 3208
                        Chicago, Illinois 60611

APPENDIX B

Listing of Fields By Group

Fields Surveyed	Number of Respondents
1. Health Science Professions	
Allied Health	4
Dentistry	6
Health Services Institutions	3
Legal Medicine	1
Medical Boards	5
Medical Education	2
Medical/Hospital Administration	3
Medical Specialists	16
Nursing	4
Optometry	3
Osteopathy/Homeopathy	3
Pharmacy	3
Physicians - general	4
Physicians - by type	4
Psychiatry	3
Research and Information Institutions	10
Surgeons	6
Veterinary Medicine	1
TOTAL	80
2. Non-Health Professions	
Accounting	4
Administration	5
Agriculture	2
Architecture	2
Banking	5
Business	4
Clergy	2
Education	7
Engineering	16
Finance	1
Insurance	7
Law	5
Social Work	0
TOTAL	60

3. National Library Associations

Administration	0
Church	5
Information Science	2
Library Education	2
Medical	3
National *	3
Non-Print	1
Research	3
Special	6
Technical Services - Public	3
TOTAL	28

4. State Library Associations

State	31
Regional	3
Territorial	1
Provincial	3
TOTAL	38

5. Library Agencies

State	30
Territorial	0
TOTAL	30

TOTAL	236

* Unless more specific

CHAPTER VII

A MODEL CONTINUING EDUCATION PROGRAM FOR

HEALTH SCIENCES LIBRARY PERSONNEL

The ideas presented in this model were synthesized from
numerous sources studied during this project. While attempting to be
responsive to the environmental constraints in which health sciences
library personnel function, the model is not limited to only that
which can be expected to be accomplished in the most immediate future.
The next chapter will detail the extent to which the model has been
developed to date.

This chapter is divided into eight sections. Within each section
there may be models presented which form components of the overall
model.

1. Optimal Use of Available Resources

While this attitude pervades the entire model, it is deemed
sufficiently important to discuss first separately, and again where
it is appropriate throughout the model.

In a volunteer organization a variety of resources may be
available, to some extent or another. These resources may include
money, volunteer members working or teaching in the field, and paid
staff with educational expertise. Even given all the monetary support
desired, the members of the organization can contribute to the program
in ways which no paid staff can. The members working in the field,

at the cutting edge of the profession, are those who are most in
touch with new trends or gaps. They are in a position to identify
potential course designers or instructors who demonstrate superior
knowledge or job performance.

In addition, when financial resources are limited, volunteer
committees can effectively accomplish and coordinate many aspects of
even a large continuing education program.

2. The Target Audience

Data from the present and related studies (1-8) indicate that
personnel working in health sciences libraries may usefully be
categorized in the following unconventional way.

FIGURE I

CATEGORIZATION OF LIBRARY PERSONNEL

	Professional (MLS or equivalent)	Technician	Clerical Support Staff
Jack-of-all-trades			
Specialist e.g. reference, serials.			
Middle Management/ Administrator			

Each cell in this figure calls for relatively unique continuing education
programs as they relate to that cell. There will of course be some

overlap, particularly as individuals wish to move from one kind of

position to another, or up or down the hierarchy within each column.

In the future, as some academic requirements are replaced by experience

or demonstrated competency requirements, we may see some movement from

the right hand columns to the left.

3. Needs Assessment

What kinds of continuing education needs do each of these cells

represent?

It is in the area of needs assessment that continuing education

programming is most vulnerable. While it is possible for a group

of knowledgeable practitioners to identify rapidly moving areas

within medical librarianship it is difficult for the individual to

plug into a system, articulating exactly what it is he needs, and

at what level.

It may convincingly be argued that to acquire skills or knowledge

is but one goal of continuing education (as juxtaposed to the

reinforcement of feelings of self as a professional or technician)

yet it is critical to be able to identify just what that skill or

goal is. The development of individual self-assessment instruments for

each class of position in Figure I is critical to the design and

implementation of an accountable continuing education program. In

order to develop such tests some form of task inventory must be

compiled for each cell.

Some further inferences can be drawn from Figure I. Persons

working in the "jack-of-all-trades" category often have sole respon-

sibility for the library's services. It is these people who need the

broadest range of skills and knowledge yet have the least
opportunity of obtaining guidance or training in-house.

There may be considerable overlap between the "technician"
and "clerical support staff" except in large libraries. This model
limits itself to the profess al and technician, except where the
clerical support staff acts in a technician capacity.

A living model would hope to include regularly updated demo-
graphics about its potential target audience. Such demographics would
include type of position, academic background, previous experience,
and other continuing education activities.

A needs assessment model must incorporate two very different
components. The first embraces the identification of the continuing
education needs of a profession so that programs can be developed to
meet those needs. This model proposes the identification of needs
based on the following recurring approaches.

1. Identification of changes in the field by consensus of
   an informed group of practitioners (a task force, committee,
   or special interest group) using group methods such as
   nominal group technique or a delphi approach.

2. Identification of changes in the field as evidenced by
   changes in the published literature of the field (a more
   dated but objective and unobtrusive measure of change).

3. Sample survey of practitioners in the field on their
   perceived needs.

4. Periodic examination of library practice itself, through
   task analysis or other form of task identification.

5. Interviews with selected key people in the profession.

6. Collection of demographic data from health sciences library staffs.

All of these methods would not need to be followed every year. A sample questionnaire survey plus informed group consensus annually, might be validated periodically by one or two of the other approaches.

Once needs have been identified, decisions have been made as to which needs are amenable to being met through continuing education, and continuing education programs have been developed on different topics and aimed at different audiences (differentiated by academic qualifications, experience, and abilities) we then confront the second component of a needs assessment model -- the individual's own needs assessment. This component has rarely been made explicit in the literature of needs assessment.

How can the individual tap into the system, at the appropriate level and for the specific content need? Self-assessment tests, as described earlier, provide one approach. Other alternatives can be specific course descriptions, pre-requisites and their equivalencies spelled out for courses, counselling opportunities, the development or identification of recommended course sequences, and the development or identification of courses on very specific topics. A clearinghouse of information on continuing education activities can bring to the individual's attention the opportunities that do exist.

4. Formats for Delivering Continuing Education

Once a continuing education need has been established, consideration must be given to the best way in which to meet the need. Not all needs

can be filled through training, under some circumstances the most

that can be hoped for is "to increase awareness" -- that is

particularly true in areas that are conceptual or attitudinal e.g.

new roles for health sciences libraries, human relations.

The choice of format will also be governed by the resources

available, and the environment in which library staffs work.

We know that health sciences library staffs receive more

support to attend professional meetings than independent continuing

education courses (Chapter V), that persons who receive no paid

release time nor financial support to attend meetings or courses

will attend few of them, and that people working in situations

where no one can cover their jobs are going to have difficulty

obtaining release time. We also know that the salaries received

by the large majority of health sciences library staffs are not

sufficient to support expensive continuing education activities when

such activities are not supported by the employing institution.

Furthermore, we know that most well planned formal continuing

education activities providing feedback to participants are expensive.

Taking into account these characteristics and other data

reported in this study and in Chen's (9), Stone's (10) and Breiting's

(11) studies, the following programs and formats are proposed:

Increasing Professional Awareness

- Provide a clearinghouse of continuing education activities.

- Provide a review of publications and packaged programs.

    relevant to professional development for library staffs.

- Stress the variety and availability of continuing education

    experiences.

- Stimulate the formation of journal clubs or study groups.

- Make audiocasettes available from the annual meeting,
  especially the contributed papers.

- Provide half-day sessions immediately prior to the annual
  meeting (and in conjunction with it) on administrative
  topics aimed at administrators of large libraries.

- Write news items or series on new roles for health
  sciences librari-s.

Formal Courses

- Provide planned sequences of short (1-2 day) formal
  courses to be held in conjunction with the annual meeting --
  when many people get their expenses paid or release time.

- Provide the same courses at the local level, in cooperation
  with regional groups of the organization, library schools,
  local groups, or related organizations -- for people who
  cannot attend the annual meeting but may attend programs
  in closer geographic proximity.

- Provide intensive residential courses on specific topics.
  Because of the longer period of time required for partic-
  ipants to be away from their jobs and the proportionately
  higher expenses involved, these programs have less wide an
  appeal. For this reason it may be best to join forces
  with a related organization give as large a base of
  potential participants as possible.

Home Study Programs

This class of continuing education activity describes those
programs where participants alone, or in groups, work through a
prescribed plan of study and receive feedback and evaluation.

Programs included in this model are:

- Syllabi v' '.i self-assessment instruments

- Cassette/workbook packages

- Correspondence courses

Support Materials

Materials aimed at assisting local groups within the
organization to develop and upgrade their own continuing
education program activiti:s are needed. The materials would
be of two kinds:

- subject content modules

- procedures, and guidelines for continuing education
  programming

The modules are self-contained building blocks which can be used
by local groups, universities, or other organizations as parts
of a continuing education program. Examples of the procedures
and guidelines will be described in the remaining sections of
the model plan.

Counselling/Advising Service

This component is similar to Knox's "linkage agent" concept
(12). Individual members of the organization can call or write,
describing a particular continuing education need or career
goal. A qualified person would work with the inquirer to
identify sources of continuing education experiences to fit that
need. Similarly, a librarian could call for information on
programs available for staff development to use in his/her own
library.

An extension of this idea is the provision of a <u>consulting</u>

<u>service</u> for specific library problems. The individual could be

directed to likely sources of assistance, or an independent

study program could be mapped out to assist in the problem

solving. Similarly a consulting service could be provided

to local groups wishing to develop their own continuing

education programs.

5. <u>Methods for Developing Programs</u>

This section of the model outlines procedures for developing

quality formal continuing education courses, workshops, and

institutes. The procedures can readily be adapted to the develop-

ment of other kinds of continuing education programs.

Most organizations do not have unlimited resources in

developing continuing education programs. With limited resources

it becomes even more important to be as cost/effective as possible

and to be cost/effective requires the maintenance of quality control

in the design of programs.

Quality control in professional continuing education is

obtained when it is systematically built into the entire educational

experience -- from the specification of objectives to the develop-

ment of the program, the choice of instructor, the physical

surroundings, the screening of participants, the evaluation of

the experience both short and long-term, and the feedback which

is then incorporated in the program the next time it is offered.

Once a topic for a course has been decided on from the needs

assessment, one or two people who are considered among the most

capable in the country to design that particular course, are

selected. A Continuing Education Committee can play a valuable

role in the selection process. Depending on the nature of the

course, library school faculty or practicing librarians may be used.

Some librarians are very knowledgeable in their field but have had

little or no experience in designing courses. Several procedures

may assist them in this phase of the work.

Each course designer may be assigned a specific person, either

on staff or from a Continuing Education Committee. That person acts

as a liaison between the course designer and the organization. The

continuing education liaison person assists the designer in the

mechanics of the course design.

A "letter of agreement" can be used between the course

designer and the organization to spell out both the end product

that is expected from the course designer and what the course

designer can expect of the organization. It is desirable for the

end product to include

1. An indication of the target audience for whom the program is being designed.

2. Any pre-requisites for course registrants.

3. A statement of course objectives in terms of the skills or knowledge that a participant may expect to have at the completion of the course.

4. A pre-test that potential registrants may take to determine if they already know the subject matter of the course.

5. A syllabus or workbook to be used by the participant during the course and to be retained for future reference. The syllabus also would include a bibliography and suggested time schedule for the various elements or segments of the course.

6. The over-all length of the course.

7. Reading lists or other materials which are to be sent to
the participant in advance of the course, and any materials
which are to be distributed as handouts during the course.

8. A summary of suggestions for instructors if the course is
to be taught by other instructors. Such suggestions might
include whether the syllabus should be mailed in advance,
any special classroom arrangements or facilities, models
to be used, and copies of slides or overhead transparencies.

The "letter of agreement" may also spell out honoraria, time

schedules for the review and completion of various stages of the

product, and other paperwork requirements. The course liaison

person's name, address and telephone number should be included with

a reminder that that individual will handle any questions, monitor

the progress of the work, and keep in touch. The course designer

may also be guided to texts which deal with designing continuing

education courses, testing and writing objectives. The course

liaison people should be encouraged to consult with educational

consultants and subject content people in order to provide feedback

to the designers and in the evaluation of the final product. Evaluation

procedures are discussed in section 7 of this chapter.

6. Identifying, Training and Evaluating Instructors

As with course designers, instructors may or may not be people

with previous teaching experience. They may be chosen on the basis of

being among the most capable in the subject area of the program. Informed

colleagues are usually the best sources for suggestions on potential

instructors. A person's speaking and teaching ability should be

investigated before the person is invited to instruct. Often the

course designer will also be the instructor.

The instructor should receive the course package in advance of the course, not only to prepare for it, but also to determine:

1. Whether the materials should be sent to participants in advance of the course.

2. Any additional materials he/she may wish to add.

3. The type of classroom arrangement and any special equipment needed.

4. The maximum class size.

If an instructor has not taught that course before, he/she should be encouraged to speak with others who have. Instructors may be sent information on "effective teaching" prior to teaching the course.

Where possible, participants' backgrounds and own personal objectives for taking the course should be obtained and forwarded to the instructor. At the conclusion of each course it is helpful for instructors to receive tabulations and comments from the participants' evaluations.

A file on each instructor's performance can be helpful in deciding whether or not to invite that person to teach again.

7. The Mechanics of Conducting Programs

Having assessed the needs, developed a quality program, and assigned the instructor, what arrangements should be taken into account in presenting a program?

The location may be decided upon by the organization, or may be predetermined by a local group who has requested the course. No matter which way it is decided, a designated person must assume responsibility

for publicity, registration, room arrangements, availability of equipment in the classroom if necessary, distribution of materials, collection of evaluation forms, distribution of certificates (if given), and coffee breaks!

Evaluation procedures should provide for the evaluation of the student, the instructor, the course content, and the physical arrangements.

If the organization records continuing education attendance, then files will need to be maintained in a central location. In the recent N.C.L.I.S. study (10) the maintenance of central record keeping for continuing education activities was listed as very important to study participants.

Quality Control in Continuing Education

A reliable and excellent continuing education plan must incorporate quality controls at each step. The model proposed in this paper incorporates the same characteristics of quality control that are found in industrial models. These characteristics are illustrated in Figure 2 on the next page.

Summary

This chapter has presented a model continuing education program for health sciences library personnel. The model addresses the following areas

1. Optimal use of available resources

2. The target audience

FIGURE 2

QUALITY CONTROL IN INDUSTRY AND CONTINUING EDUCATION

INDUSTRY	CONTINUING LIBRARY EDUCATION
Market Research to Identify Marketability	Assess Needs -Survey; informed committee consensus
Product Design	Decide on Subject Content and Objectives -Planning committee and subject 'experts'
Manufacture Product -Inspect during manufacture	Develop Package -Objectives approved by liaison -Drafts of materials approved for content and readability
-Inspect after manufacture -Against performance specifications	-Evaluate against package specifications -Letter of Agreement -Objectives
Evaluation in the Field After the Product Has Been Sold	Evaluation in the Field -Participants' ability to accomplish course objectives -Evaluation of optimal use of course time -Instructor evaluation -Follow-up evaluations
Feedback from Field Experience to Product Design	Feedback -To planning committee -To course designer -To instructor

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1 &3

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3. Needs assessment

    - the profession

    - the individual

4. Formats for delivering continuing education

    - increasing professional awareness

    - formal courses, institutes, and workshops

    - home study programs

    - support materials

    - counselling/advisory/consulting services

5. Methods for developing programs

6. Identifying, training, and evaluating instructors

7. The mechanics of conducting programs

8. Quality control in continuing education.

Footnotes

1. Kronick, D.A., Rees, A.M., Rothenberg, L. An investigation
      of the educational needs of health sciences library manpower:
      I. Definition of the manpower problems and research design.
      Bulletin of Medical Library Association. 58:7-17 (January)
      1970.

2. Rothenberg, L., Rees, A.M., Kronick, D.A. An investigation
      of the educational needs of health sciences library manpower:
      II. Health-related institutions and their library resources.
      Bulletin of Medical Library Association. 58:510-20 (October)
      1970.

3. Rothenberg, L., Kronick, D.A., Rees, A.M. An investigation of
      the educational needs of health sciences library manpower:
      III. Manpower supply and demand in health sciences libraries.
      Bulletin of Medical Library Association. 59:21-30 (January)
      1971.

4. Rothenberg, L., Rees, A.M., Kronick, D.A. An investigation of
      the educational needs of health sciences library manpower:
      IV. Characteristics of manpower in health sciences libraries.
      Bulletin of Medical Library Association. 59:31-40 (January)
      1971.

5. Kronick, D.A., Rees, A.M. An investigation of the educational
      needs of health sciences library manpower: V. Manpower for
      hospital libraries. Bulletin of Medical Library Association.
      59:392-403 (July) 1971.

6. Schick, F.L. ed. Directory of health sciences libraries in the
      United States, 1969. Chicago, American Medical Association,
      Medical Library Association, 1970.

7. Crawford, Susan. Health Sciences Libraries in the United
      States, 1961-1973. Unpublished report to the Committee on
      Surveys and Statistics of the Medical Library Association,
      June, 1974.

8. Crawford, Susan and Dandurand, Gary. Directory of Health
      Sciences Libraries in the United States, 1973. Chicago,
      American Medical Association, 1974.

9. Chen, C.C. "An investigation of the continuing education needs
      of New England health sciences librarians." Bulletin of Medical
      Library Association. 64:322-24 (July) 1976.

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10. Stone, E.W., Patrick, R. and Conroy, B. Continuing Library and
    Information Science Education. Final Report to the National
    Commission on Libraries and Information Science. Washington,
    D.C.: American Society for Information Science, 1974.

11. Breiting, A., Dorey, M. and Sockbeson, D. "Staff development in
    college and university libraries." Special Libraries 7:305-10
    (July) 1976.

12. Knox, Alan. Helping Adults to Learn. Washington, D.C.: CLENE,
    1976. Concept paper no. 4.

CHAPTER VIII

THE MEDICAL LIBRARY ASSOCIATION'S CONTINUING

EDUCATION PROGRAM 1973-1975.

This chapter describes the Medical Library Association's

continuing education program:

1. as it was at the beginning of the grant period
(1973), where relevant, and

2. as it had developed by the end of 1975, the year
in which the project period concluded.

Progress towards the model described in the preceding chapter can be

measured by a comparison of the model with the actual program at these

two points in time. Each component of the model is discussed in the

same order as before. The chapter concludes with a recapping of

subsets of the model yet to be achieved.

1. Optimal Use of Available Resources

At the time the project began, the Medical Library Association

had recently appointed a paid staff member to work in the area of the

Association's education activities. Since 1958 the Association had

offered formal continuing education courses at its Annual meetings

and from 1965 at some of its larger regional meetings. These courses

had been developed and administered by a \ ᴵ· ᵃᵘᵉ ry Continuing

Education Committee. As the program grew in size the Continuing

Education Committee looked to the newly created position of Director

of Education for assistance. However, neither the Committee nor the
Director of Education were sure what their relationship to each other
should be, nor the most effective role each could play.

To develop a _modus operandi_ for working together effectively
and harmoniously the Committee and the project staff held a two-day
meeting in Chicago. Working under the guidance of a facilitator
(proveded by grant funds) who also had experience consulting with
education staffs and committees in volunteer organizations, the
group focused on the following topics:

1) The purpose of the Medical Library Association
2) Which of these purposes relate to education
3) Those unique contributions that can be made by a
   volunteer committee on continuing education
4) Those unique contributions that can be made by other
   groups in the Association, especially the Medical
   Library Education Group
5) Those unique contributions that can be made by a
   full-time headquarters staff
6) Those unique contributions that can be made by a
   Committee on Continuing Education
7) Those unique contributions that can be made by an expert
   advisory panel (expert in education and library education,
   perhaps not in every instance members of the Association)
8) The relationship between concepts of policy making,
   accountability, and implementation.

While these issues are basic, the process of addressing them in an
orderly and unemotional manner could not have been achieved on a timely
basis, or perhaps at all, without the assistance of a professional
outside the organization with no loyalties to either Committee or staff.
This assistance resulted in a commitment to, and an environment of
trust for, the future development of the continuing education program.
The meeting is reported in reference (10). This cooperative spirit will
be evident in the following sections.

2. <u>The Target Audience</u>

The stated goal of the Medical Library Association is "the
fostering of medical and allied scientific libraries". In order to
accomplish this it follows that a supporting goal must be to foster
the development of people staffing those libraries, at whatever level.
However, an organization such as the Medical Library Association has
as its prime responsibility the needs of its own members, whose dues
to a large extent fund the Association's programs. When priorities
must be set as to the level, and to what extent, to address continuing
education programming, the needs of the membership (which is primarily
at the professional level) will normally be met first. This consciously
or unconsciously had been the policy prior to 1972

In Chapter VII a figure characterizing the target audience
within health sciences library personnel was shown. It is reproduced
here for discussion purposes.

FIGURE 1

ORGANIZATION OF LIBRARY PERSONNEL

	Professional (MLS or equivalent)	Technician	Clerical support staff
Jack-of-all-trades	a	d	g
Specialist	b	e	h
Middle management/ administrator	c	f	i

As stated in the model, there may be considerable overlap between the "technician" and "clerical support staff" except in large libraries. The model limited itself to the professional and technician, except where clerical support staff function in a technician capacity.

An agreement between the Medical Library Association and the National Library of Medicine was reached in 1974 that the Association would accept major responsibility for continuing education needs at the professional level, and increasingly, at the technician level. Library staffs with no training or little experience would be the responsibility of the regional medical libraries. Since the regional medical libraries enter into individual contracts with the National Library of Medicine, and some regions are quite decentralized, this agreement may leave some segments of the untrained "grassroots" level without training opportunities, depending on the geographic area, in which they are located. This was certainly the finding reported in Chapter IV and an informal survey shows that it is still the case in some areas.

The proposed model includes responsibility for these people, particularly when they occur in cell settings d and g of Figure 1.

Prior to 1973 there was little differentiation between the segments which make up health sciences library staffs. The recognition that different segments have different continuing education needs, and the development of some programs to be responsive to different needs has been a significant accomplishment during the years 1973-75. The programs developed during this time period are described more fully in the next section.

3. Needs Assessment

At the time this study was begun the kinds of continuing education activities undertaken by the Association were the one-day continuing education courses. By 1973 the Association had developed the strongest continuing education program of any of the library associations or other library organizations. Accomplishments during the following three years should not detract from the strength of the program relative to the "state-of-the-art" of continuing library education at that time.

Each year four or five new or revised course topics were decided upon as a result of the collective thinking of the Continuing Education Committee. Since the total number of current courses was not large (12 in January 1973) and only a few new ones were developed each year there were always several which seemed timely for developing.

As the program attempted to become more varied in responding to members' needs other sources of input needed to be considered. It was at this point that the present project began. Several different studies were begun to obtain information about the profession's continuing education needs.

Data from related recently completed continuing education needs surveys (1-5) were examined. A review of the published literature of medical librarianship at the present time and five and ten years before was carried out to identify changes in medical library practice and concerns (Chapter II and Working Paper No. 4). Two questionnaire surveys aimed at eliciting individuals' perceived continuing education

needs were conducted. On a recurring basis, individuals participating

in the MLA continuing education program are being queried on unfulfilled

perceived continuing education needs. An additional study was under-

taken to determine the extent to which continuing education opportunities

existed in the areas of the perceived needs.

The findings from these studies are remarkably consistent. At

the professional level the same general topics were ranked highest

as perceived needs for continuing education. These are:

Administration and management

Audiovisuals

Reference tools and services (including
on-line systems)

Budgeting

In the MLA study specifically, although there were slight

variations in ranking between the priorities of hospital librarians

and medical school librarians, the same general topics were perceived

as continuing education needs. These topics, in rank order of priority

were:

1. New roles for health sciences librarians

2. Measurement and evaluation of library services

3. Audiovisual materials

4. Reference tools and services.

5. Budget administration

6. Medical education: its implications for library service

7. Grant applications and management

8. Library planning -- space and equipment

9. SDI (Selective Dissemination of Information)

10. MEDLINE

11. Weeding and collection development

These perceived needs (primarily at the professional level) were then checked against the extent to which continuing education opportunities had been available in a twelve month period of time (Chapter III, Table 3). The only two subject areas from this list that had opportunities within more than one or two regional medical library geographic areas were audiovisuals (in 9 out of 11 regions at least one course was given) and reference tools and services (7 out of 11 regions held at least one course). While not all of the eleven top ranked needs may best be handled through continuing education programs, it would appear that appropriate programs on any of these topics are needed.

A second finding which came from the present study and was corroborated by Rothenberg et al. (1), Stone (3), and Chen (5) was that the non-professionals were concerned with acquiring skills and knowledge in library operations and technical procedures, subjects normally included as part of a master's program in librarianship, while the (professional) librarians were more concerned with library administration and management, and computer systems.

This information reinforces the conclusion drawn earlier that relevant continuing education programming must take into account not only the level (professional, technician) at which a person is working but also his/her environment. The "jack-of-all-trades"

technicians will need a broader set of basic library skills than the
technician working in a larger library environment.

Looking at needs assessment from the other end of the
spectrum, that of the individual plugging into the continuing
education program, the Medical Library Association has begun to
identify the basic competencies required by entry level librarians.
While this is being done preparatory to the implementation of a
new certification program, the testing process itself will yield
useful data to the examinee on areas of less than satisfactory
tested performance. With that information in hand, the individual
can then proceed to plan continuing education experiences accordingly.

A similar testing device is being prepared for the technician
level. Data is being collected on tasks undertaken by technicians
at the present time, but the development of the tests will not be
completed until late 1978 (tentative target date).

The continuing education programs being developed by the
Medical Library Association now include educational objectives
(e.g. "at the conclusion of this course participants will be able
to - - -"). This enables participants to determine more clearly
whether or not a specific course is aimed at his/her level. Where
appropriate, pre-requisites or equivalents are spelled out, and
courses are being developed to build on one another.

Since 1973 a "Clearinghouse of Continuing Education Opportu-
nities" has been published monthly as a part of the MIA News.
Information on courses and home study programs that would enhance the
performance of health sciences library staffs is included. This means

that the listing is not limited to programs directed at medical

librarians or even library staffs generally. Recent monthly issues

have listed as many as 90 programs. The Clearinghouse provides

information on existing programs that may be relevant to an

individual's own needs.

A sample page from the Clearinghouse can be found at the

end of this chapter as Appendix A.

4. Formats for Delivering Continuing Education

At the time the present project began the Medical Library

Association's continuing education program was focused on nine

one-day courses taught to 335 registrants at the Annual meeting

and to 239 registrants at five locations at regional meetings

(1972 data). By the end of the project period (1975) the continuing

education program had almost tripled in the number of participants,

number of courses offered, and number of geographic locations.

The quality of the existing courses, which are discussed later,

was also significantly further improved.

Needs Not Amenable to Course Programming

Not all needs identified in the MLA survey were viewed as

training or continuing education needs. A conscious decision was

made, when a "problem" or "need" was considered, on whether a

course or some other format was the most appropriate mechanism

for dealing with a problem. For example, the area of human

relations training was ranked a little more than half way down

the list of perceived continuing education needs (Chapter III,

Table 2). The topic was one heavily focused on by the Ad Hoc

Committee on the Goals and Structure of the Medical Library

Association. The Board of Directors of MLA passed a resolution

directing the Director of. Education to assess the feasibility and

desirability of developing programs in the area, of human

relations (with special emphasis on inter-racial awareness).

An extensive literature search was conducted to locate

materials which would be useful in designing, producing, and

evaluating a human relations training program for the Medical

Library Association. Three categories of information were

examined:

    1) descriptions of the possible forms this training

        could take

    2) descriptions of actual programs used by other agencies

    3) background materials which could be of use as the

        basis of the course designing process or as hand-

        outs to participants.

Annotated bibliographies were produced on the following

topics:

1. Articles and books describing the various methods of laboratory

   education which are used in efforts to reduce racial prejudice

   and to promote better human relations.

2. Literature on the case method of training personnel managers,

   including collections of cases and discussions of how to write

   cases. We found an almost complete absence of published cases

   dealing with the minority group employees, which led us to

   suspect that the trend had been to use laboratory education

   methods in inter-racial awareness programs.

3. Articles and books describing the specific problems of
supervising minority group employees and the general
problems of minority employment. Very practical discussions
of how to deal with the minority employee and the attitudes
of the rest of the staff to his arrival were found in the
literature of personnel management and industrial relations.
These articles were often difficult to identify in the
standard indexing tools -- we relied heavily on the special
index files of the A. G. Bush Library, Industrial Relations
Center, Chicago.

4. ERIC research reports selected from Research in Education.
The literature of education contains the greatest number of
accounts of actual human relations training programs, perhaps
because of (1) the necessity of coping with desegregation in
the public school system, (2) the wide availability of federal
funds for programs to develop positive staff attitudes regarding
integration, and (3) the necessity that some report of the
programs be written for submission to the sponsoring agency.
Research in Education also includes references to materials
collected by the ERIC Clearinghouse on the Disadvantaged which
was an excellent source of background materials promoting
inter-racial awareness.

5. A bibliography of books promoting inter-racial sensitivity,
recommended by the reference librarian of the Vivian G.
Harsh Collection of Afro-American History and Literature.

This is a sample of the type of material which could be used as background reading for human relations training experience.

After examination of the materials, and discussions with consultants, it was decided that the Medical Library Association did not have the resources (neither people nor funds) to develop an effective program in this area. Since these programs were available to some extent through other organizations, it was decided that they would be listed in the Continuing Education Opportunities Clearinghouse but that MLA itself would not develop similar programs. The information and bibliographies developed in this project are submitted with this report as Working Paper No. 3 -- Human Rights Bibliography.

Increasing Professional Awareness

In a different instance a similar decision was reached -- that a training experience was not the direct solution to a stated need. From Chapter III of this report, Tables 1 and 2 showed that the number 1 perceived continuing education need was "new and innovative roles in health sciences librarianship". Both hospital and medical school librarians ranked each of the suggested "new roles" high. Yet the mechanics of implementing these new roles are very traditional. It is the imaginative way of packaging them that is different. LATCH (Literature-Attached-To-Charts) and "clinical librarians" are different ways of packaging and selling reference services. Rather than develop a course on "how I do x good" it was felt that descriptions of

specific innovative programs could serve as role models for other libraries to adapt to their own needs. Therefore, a series was begun in the MIA News on "New Roles for Health Sciences Librarians." Individuals were solicited to provide descriptions of programs in their libraries that they consider innovative. The name of the person responsible for the program is given so that he/she can be contacted for more information. An example from this series is given as Appendix B of this chapter.

The maintenance and publication of a Clearinghouse on Continuing Education Opportunities has been discussed in an earlier section of this chapter. It too is a mechanism for increasing professional awareness.

Through talks to groups of librarians around the country, and in news items in the MIA News, the concept that formal courses are not the only formats for continuing education is continually stressed by the MIA Division of Education staff. Individual problem solving projects, journal clubs, reading the professional literature, talking with colleagues, and forming study clubs are mentioned as other possibilities. The availability of programs from other organizations is also stressed. Increasing professional awareness has to play an important role in the MIA continuing education program since it is our belief that although continuing education is a shared responsibility between employer and employee, it is left most often for the initiative to begin with the employee.

Formal Courses

By 1972 the Medical Library Association had developed a strong program of one-day courses with carefully limited class sizes. These courses were taught the day or two preceeding the Annual Meeting of the Association and in conjunction with regional group meetings of MLA. At the time, the quality of the courses and supporting materials was relatively high, when compared with the essentially non-existent continuing education programs of the other library organizations. Because the courses were well received, and because the survey of members (reported in Chapter V) indicated that members received more organizational support to attend professional meetings than separate continuing education courses the decision was made to expand and build upon the existing program.

It should be clearly recognized, however, that it was not simply more of the same. The courses were critically evaluated for their subject content and, more significantly, educational structure. Since the existing time length of courses was already well received, and the one-day preference by health sciences librarians had been reported in an independent study (5, p. 322) where possible the new courses were broken into one-day units.

Both existing and new courses were formatted to provide:

1. specific descriptions of course content

2. statement of pre-requisites and target audience

3. educational objectives stated in measurable terms --
   by the end of this course participants will be
   able to - - -

4. pre-tests where appropriate

5. post-tests to evaluate whether the objectives were
   reached

6. substantive course syllabi, including reading lists
   and other materials that might be sent to
   participants for study in advance of the course

7. supplementary classroom aids to be available to
   instructors in teaching the courses.

In 1972 nine current courses were available (11). They
are grouped and cross-listed by subject below:

Introductory

  CE 4 General biomedical reference tools (introductory)

Reference

  CE 4 General biomedical reference tools (introductory)

  CE 8 Literature of dentistry

  CE 9 Materials for the history of the health sciences

  CE 15 Literature of nursing

On-line Systems

Administration

  CE 2 Implications of machines in medical libraries

  CE 5 Human factors in library administration

  CE 14 Planning health sciences libraries

  CE 13 Grant applications and management.

Cataloging and Classification

Audiovisuals

    CE 16 Management of media (introductory)

Other

    By 1975 25 courses had been revised, developed, or were in
the production stages. Courses are cross-listed by subject and
ordered by level. A numeric list of courses with course
descriptions is included as Appendix C to this chapter.

Introductory

    CE 4 General biomedical reference tools

    CE 11 Inter-library loan (introductory half-day course)

Reference

    CE 4 General biomedical reference tools (introductory)

    CE 8 Literature of dentistry

    CE 9 Materials for the history of the health sciences

    CE 10 Literature of pharmacy

    CE 15 Literature of nursing

    CE 12 Indexing and abstracting services in the biomedical sciences

    CE 20 MEDLINE and the health sciences librarian

    CE 34 Biological Abstracts - Bioresearch Index

    CE 28 Management of reference services

On-line Systems

CE 20 MEDLINE and the health sciences librarian

CE 34 Biological Abstracts - Bioresearch Index

CE 35 OCLC utilization in health sciences libraries

Administration

CE 5 Human factors in library administration

CE 14 Planning health sciences libraries

CE 29 Hospital library management

CE 28 Management of reference services

CE 22 Planning hospital library facilities

CE 13 Grant applications and management

CE 18 Systems analysis

CE 19 Application of operations research to library
            decision making -- 2 day course

Cataloging and Classification

CE 24 MeSH and NLM classification

CE 23 Problems in medical cataloging and classification

CE 34 OCLC utilization in health sciences libraries

Audiovisuals

CE 16 Management of media (introductory)

CE 30 Basic media management -- hardware and physical facilities

CE 31 Basic media management -- software

Other

CE 17   Preservation of library materials

CE 26   Teaching skills for library educators -- 2 day course

It can be seen that a structure for developing new courses had finally been established and that the courses were beginning to be developed with specific target audiences in mind e.g. hospital librarians, medical school librarians, library school educators. However, with the exception of CE 11 -- Interlibrary loan and CE 4 -- General biomedical reference tools, there are still few offerings for the untrained.

While developing a more varied and stronger continuing education program for those people attending the Annual meeting, there were still many people who were not able to attend the meeting and were therefore not reached. In order to bring the programs to these people a strong drive was made to encourage local groups, library schools, university extension divisions, other library associations as well as more of the regional groups of MLA to sponsor the courses.

Figure 2 shows the growth in the number of courses presented in local areas.

FIGURE 2

LOCAL PRESENTATIONS OF CONTINUING EDUCATION PROGRAMS

	Number of Courses	Number of Geographic Locations	Different Types of Sponsors	Number of Registrants
1972	11	5	1	239
1975	32	14	3	570

In circumstances when it is desirable to present a large
body of information at one time, or to provide an experience which
requires intensive, reinforcing interaction, a residential
institute provides a preferred learning environment. The
experience may be viewed as more expensive if it is not held in
conjunction with a professional meeting, but under the
circumstances described above it may be the only way of
accomplishing the objectives of the institute.

Two types of institutes of this nature were planned during
the project. None had previously been held by the Association
(a 5 day institute had been held in Denver in 1968 but this
consisted of each of the one-day courses being offered on
consecutive days with the costs being underwritten by the National
Library of Medicine). One institute was offered twice during the
project period, the other later in 1975.

The first institute was aimed at library administrators;
registrants came from medical school, hospital, and special
libraries. The objective of the institute was to demonstrate
management and marketing skills and concepts, taught by consultants
in those areas, and adapt them to library situations. Although
the objectives of the institute were met, it appeared that within
medical librarianship there was not a large enough number of people
who could, or would, spend four days at a continuing education
program that was quite expensive by the Medical Library Association's
standards (yet inexpensive by others -- the tuition was $125 for
MIA members, $155 for non-members). The content of the program

was equally applicable to academic and special librarians, but because it was sponsored by MLA, much of the target audience did not consider its relevance. This let to the realization that in order to make the special institutes cost/ effective, it would probably be useful to co-sponsor them with other relevant organizations.

The second type of institute was aimed at hospital librarians -- those already with an MLA or its equivalent. This institute was co-sponsored with the American Hospital Association and in cooperation with the Catholic Hospital Association and the New England Regional Group of MLA. Our earlier surmise regarding co-sponsorship proved to be correct in this instance and the institute was a resounding success with respect both to meeting its objectives and being financially successful. This experience leads us to believe that the smaller, more intensive and expensive institutes must be co-sponsored in order to draw from a large base to attract a sufficient number of participants.

During the program development stages of both the Institutes and the one and two-day courses, records were kept on the amount of staff time required to work with course designers and, in the case of the Institutes, the speakers. This also included time spent preparing case studies and exercises for non-library faculty. The amount of time that was required for each type of continuing education program demonstrated that formal continuing education courses are relatively expensive to produce. This is

particularly so when the number of participants is limited in order to involve participants actively in the learning process.

When volunteers are used to plan or administer continuing education activities the true costs of developing and operating programs are often not realized. Any continuing education activity that is directed at small groups or individuals, and requires instructor feedback, will be expensive. Home study programming, where feedback is needed at a one-to-one level, is perhaps the most extreme example. The cost of continuing education programming cannot be glossed over.

There is also a large potential for courses in more flexible formats e.g. one day a weekend for ten weeks in cooperation with community colleges.

Home Study Programs

For many library staffs, particularly those in one or two person libraries, it is not possible to attend programs that are held either during working hours or away from the area in which they live. For these people more flexible individualized programs of study are needed. This had long been recognized but no concrete steps to deal with the need were initiated until 1973 when an effort was made to identify existing relevant programs and plan what would be done in this area as resources (primarily financial in the form of staff time) became available.

General programs in a variety of administrative and management areas were identified, such as the cassette/workbook

programs of the American Management Association and a plethora

of training companies. Correspondence courses on general and

school librarianship offered through some university extension

programs were identified but the courses often had little

relationship to on-the-job needs of health sciences library

personnel. A number of programmed texts and workbook/cassette

programs were found to be available on the topic of medical

terminology.

The way in which the Medical Library Association decided

to make a start in home study programming was in the upgrading

of the work materials and syllabi which accompany its continuing

education courses. The Continuing Education Committee and the

Division of Education

1) have begun the sale of course syllabi and workbooks

   independently of the courses

2) are investigating the development of additional

   supporting materials and assessment tools which would

   enable participants to obtain and be given credit

   for individual continuing education activities in

   their home settings

3) are investigating the development of cassette/workbook

   programs specifically in the area of health sciences

   librarianship. These will build on materials already

   developed in the MIA continuing education program.

Once the competencies being tested for in the new MLA

certification program have been identified (mid 1977 for the professional

level and 1978 for the technician level) the area of highest
priority in continuing education will be the development of
instructional materials to assist individuals in acquiring these
competencies. In the meantime, work will continue in the directions
outlined above.

Support Materials

In 1972 no support materials for continuing education
programming had been developed. The purpose of developing materials
was to assist local groups of library personnel and library schools
in developing continuing education programs in their own areas. Two
kinds of materials have now been, and continue to be, focused on by
MLA.

The development of self-contained instructional modules that
could be used as part of continuing education programs or in
library school courses was determined to be a desirable objective.
During the grant period a contract proposal was submitted. The
proposal identified areas which are thought to be most suited to
the effective development of modules. Topics were chosen on the
basis of there being a widespread need in that area, and on the
availability of qualified people who could spend three weeks at the
National Medical Audiovisual Center developing the modules. The
outcome of the proposal has not yet been decided upon.

A second type of support for local groups has been the
development of materials helpful in designing and administering

continuing education programs. The basics of course design are

covered in Working Paper No. 2, A Guide for Planning and Teaching

Continuing Education Courses, developed under this present grant, and

described more fully in section 5. Three additional resource

documents discuss the mechanics of developing and administering

continuing education programs (6-8).

5. Methods for Developing Programs

Section three of this chapter has compared the ways in which

content areas for continuing education programming were chosen

prior to 1973 and by the end of this project period.

Once a topic had been selected, in the pre-1973 period, a

course developer was chosen and given the following directions:

1) the subject area of the course.

2) provide camera ready copy.

3) leave $1\frac{1}{2}$ inch margins.

4) the course is to be one day long.

No honorarium was paid course designers, and the end products were

well received by course participants, whose expectations of continuing

education programming were not as high as today's participants. As

continuing education has become more widespread, participants have

become increasingly sophisticated and demanding in their expectations.

Perhaps because the course designer was giving freely of his/her time

in developing the course and materials, there were sometimes

difficulties in keeping designers to completion schedules. It was also

difficult to ask them to revise or rework parts of the course, when it

was being done out of the goodness of their hearts.

In order to both improve the quality of the courses and to coordinate and systematize the increasing number of courses being developed, procedures were established during 1974 and 1975 which placed major responsibility for the development of courses with individually appointed continuing education course liaisons from the Continuing Education Committee and Division of Education Staff. Overall coordination of program development was assigned to the Chairman of the Continuing Education Committee. Development of new and revised programs is now handled in the following manner.

A Continuing Education Course Liaison is assigned responsibility for acting as a liaison between the course designer and the Medical Library Association. The Continuing Education Liaison assists the designer in the mechanics of the course design, providing a series of review points for the course designer.

A "Letter of Agreement" between the course designer and the Association is used (a copy is attached as Appendix D). The Letter of Agreement spells out the end product that is expected from the course designer, and covers items such as:

A. An indication of the target audience
   for whom the program is being designed.

B. A statement of course objectives in terms
   of the skills or knowledge that a participant
   may expect to have at the completion of the
   course.

C. The length of the course.

D. A syllabus or workbook to be used by the participant during the course and to be retained for future reference. The syllabus also includes a bibliography and suggested time schedule for the various elements or segments of the course.

E. Reading lists or other materials which should be sent to the participants in advance of the course, and any materials which will be distributed as handouts during the course.

F. A summary of suggestions for instructors: e.g. should the syllabus be mailed in advance, special classroom arrangements or facilities, models to be used, copies of slides or overhead transparencies.

G. A post-test which will be used to determine whether participants achieved the course objectives.

H. A statement of prerequisites for course registrants.

The "Letter of Agreement" also spells out honoraria, time schedules for the review and completion of various stages of the product, and other paperwork requirements. The course liaison person's name and address is given with a note that that individual will handle any questions, monitor the progress of the work, and keep in touch.

To assist designers further, a copy of the publication A Guide for Planning and Teaching Continuing Education Courses (described earlier) is mailed to new course designers. Course liaisons may consult with educational consultants and subject content people to provide feedback to the designer and in the evaluation of the final product.

The following checklist summarizes a possible sequence of

steps Continuing Education Course Liaisons may follow:

1. General subject content area of course identified by the Continuing Education Committee.

2. Possible course designers identified by the Committee and ranked.

3. Course Liaison appointed.

4. Course liaison contacts first choice course designer and they begin the process of developing the course.

5. The course liaison sends the course designer:

   a. a sample copy of the "Letter of Agreement"

   b. a copy of Washtien, A Guide for Planning and Teaching Continuing Education Courses, if necessary.

   c. a copy of this document spelling out the Continuing Education Course Liaison's responsibilities, or a letter incorporating the pertinent points from this document.

6. The course liaison notifies the Chairman of the Continuing Education Committee to send the formal copy of the "Letter of Agreement." A copy of the signed agreement is sent to the Division of Education.

7. The course designer sends the course liaison and the MIA Director of Education a brief (one paragraph) course description, including the target audience, any prerequisites for the course, and a list of objectives. Where possible, these objectives are measurable and reflect what the participants will be able to do at the end of the course. The objectives are reviewed by the course liaison and the Division of Education and may need to be reworked. The course designer and the course liaison may obtain consultation with education specialists within their own institutions.

8. The course designer prepares a draft of the
   syllabus to be used by the instructor and the
   participants. This draft is sent to the
   course liaison and the Director of Education.

   The course liaison may ask a second subject
   specialist to read the draft for clarity and
   accuracy. Other considerations kept in mind
   are:

   1) Will the material enable participants
      to accomplish the stated objectives?

   2) Is the text grammatical and clear?
      Are there spelling errors?

   3) Are any illustrations, plans, or
      tabular materials clear and well
      prepared (MIA does not do art-work).

   4) Are the preliminary pages in "MIA
      format" (examples are given). The
      Division of Education provides the
      logo, but the rest of the material
      is supplied by the course designer.

   Since some revisions are usually necessary, the
   course designer is cautioned to be prepared for
   the draft to require re-typing, and also to
   allow plenty of time for the mails back and
   forth, and for the re-typing.

9. A post-test is developed by the course designer to
   assess the extent to which the course objectives
   were met by participants. It tests for a knowledge
   of the course material, not attitudes towards it.
   This may or may not be formally administered, but
   is useful to the participants. A pre-test is
   optional.

10. Copies of any materials which would be used in
    teaching the course, but not included in the syllabus,
    e.g. slides, transparencies, handouts, are prepared
    by the course designer.

11. A list of suggestions for instructors teaching the
    course, e.g. items included under F earlier in this
    paper, is developed by the course designer.

12. When the final draft of all the materials listed
    in 8-11 are accepted by the course liaison and
    the Division of Education, the materials are put
    into camera ready copy by the course designer
    unless other arrangements are agreed upon in
    advance.

    The camera ready copy is sent to the course liaison
    who checks to make sure that everything is in final
    form for printing. The course liaison then forwards
    the materials to the Division of Education for
    printing. Clear instructions are needed as to what
    handouts, if any, are NOT to be bound in with the
    syllabus, whether handouts should be collated in
    advance, etc.

13. When all items developed for the course are received
    by the Division of Education, it arranges for payment
    to be made to the course designer.

14. The course liaison has responsibility for trying to
    ensure that the course designer adheres to schedules
    and submits all contracted materials.

15. The course designer is sent two copies of the
    completed syllabus as a courtesy.

16. Two copies are sent to the MIA Archives.

17. It is usually desirable for course designers to
    teach the course the first time it is offered.
    They may also be asked to teach at regional
    presentations in their area at other times in
    the future. A pool of instructors is maintained
    so course designers will not always be asked to
    teach.

6. Identifying, Training, and Evaluating Instructors

In most instances the first time a new course is offered, the

course designer is given the opportunity to teach it. If the course

is in heavy demand and more than one section is to be offered the

first time it is taught, and as the demand for local presentations

increases, additional instructors are needed. New instructors are

selected primarily by the consensus of the Director of Education and the course designer or Continuing Education Committee Chairman. Candidates may be recommended by leaders in the field with particular expertise in the subject area of the course, by former participants in the course (a question on the course evaluation form is "Do you know the name of another person whom you think would be a good instructor for this course?"), or by individuals applying. No instructor is used without checking out his/her credentials, experience, and public speaking or teaching effectiveness. Once a person has been used as an instructor in the program a file is maintained on the person's class evaluations and is used to consider if the person will be invited to teach again. It is from such a pool of qualified individuals that instructors are chosen. In order to obtain a qualified person, the Association will use instructors from any part of the country if necessary (travel expenses are paid).

In evaluating some of the early continuing education courses developed by the Medical Library Association, Estelle Brodman wrote:

> As might be expected, some instructors turned out to be excellent teachers with well-planned, logical presentations; others were not. Some classes were lectures or monologs, others were discussions, and still others worked set problems cooperatively ... The main complaint, however, had to do with the frenetic quality of the day: the attempt to crowd too much in too short a time (9).

While the program continued to grow, the evaluations from the course presentations showed that MLA courses varied in both the quality of

design and according to the ability of the individual subject experts to teach what was in the course package. Steps taken to improve the course design have been described in the previous section.

MLA instructors have most often been people with great subject competence, practitioners in the library field, but with few skills in teaching or curriculum design. As one part of the present project ways were examined in which the teaching effectiveness of these people could be increased. We wanted to focus on principles which could be put into effect in planning and teaching continuing education courses. It was not thought that there was any one "right" way to teach. It was recognized that many different approaches and methods can lead to good results. We had to develop something that would be useful to people who could not afford to attend courses on "how to design courses" or "how to teach" -- nor could the Association afford to pay them to attend. An unsuccessful attempt was made to obtain grant funding for a series of workshops.

Given the constraints under which we were working, it was finally decided to develop a printed Guide to Planning and Teaching Continuing Education Courses. This publication is submitted with this report as Working Paper No. 2. Its usefulness is indicated by the fact that nearly all 300 copies printed were exhausted and it has since been republished by CLENE (Continuing Library Education Network and Exchange).

The purpose of the guide was to suggest how educational

principles could be applied in developing and teaching continuing education courses.

It was recognized that many good books had been written about these principles, and references to them were included in the bibliography, since the Guide could touch only lightly on the various aspects of teaching. The Guide serves as an introduction, an outline that the reader can fill in and expand through study and experience.

The Guide is divided into three main parts -- a checklist, text, and appendix. The checklist covers the factors to be considered in planning and teaching continuing education courses. The text discusses these factors briefly, presents applicable principles, recommends action to be taken and lists pertinent references. The appendix includes copies of some MLA Continuing Education program form letters as well as samples of materials used in various courses. The Table of Contents gives a clear description of the scope of the work (Figure 3).

Not all factors included apply to all courses and all conditions, but they are included so that they will not be overlooked when they do apply. The advice that applies to every part of the Guide is that the Guide is not a step-by-step book of recipes. It is up to the individual to determine how best to adapt the suggestions in the Guide to achieve student learning and teacher satisification.

The Guide did not lend itself to be evaluated in a controlled manner. All instructors who taught at the 1975 Annual Meeting of the Medical Library Association were sent copies of it to review prior

FIGURE 3

TABLE OF CONTENTS OF THE GUIDE

to the meeting with the suggestion that they might find it a
useful framework in which to think about the courses they would
be teaching. After the meeting they were questioned on its
usefulness and asked for suggestions on improving it. Many of the
instructors were excited by the publication and indicated that they
planned to use it for other purposes, e.g. in reviewing library
school curricula and designing their own workshops.

The instructor of the two-day program on Teaching Methods
for Library Educators requested permission to use it as the syllabus
for her course which was in the final design stages. At a staff
level it was found to be a useful tool for educating new members
of the Continuing Education Committee and for evaluating new
courses that are being designed.

The Continuing Education Committee used the _Guide_ in up-
grading its own knowledge in this area, and has subsequently
reviewed program offerings in the light of the principles outlined.
A result of this is seen in the move away from general course
descriptions to more specific sets of desired outcomes and objectives
for each course. The Committee has developed its more rigorous
letter of agreement with course designers, requiring that all new
and revised courses contain course objectives and formative and
summative testing.

At a staff level certain parts of the _Guide_ were expanded as
a need was felt either by our users, the Committee, or within
Headquarters. For example, the section that relates to "Responsibilities"
-- the who does what and when has been expanded. The _Guide_ was published

in a loose leaf form expressly for this reason, so that other groups
using the _Guide_ might add to, revise, or delete sections as
appropriate to their organization. We have happily shared copies
of the _Guide_ with other associations, organizations, library
schools or educators, and have been told that it has been useful
in developing and strengthening their programs.

A second avenue for training continuing education instructors
has been the development of a two-day continuing education course on
Teaching Methods for Library Educators. The effect of this on
instructors in the MLA continuing education program has been some-
what indirect for two reasons. Participants take the course at
their own expense -- the tuition is $60 for MLA members and $90
for non-members. The second reason is somewhat ironic. The course,
until 1976, was offered only at the Annual Meeting, at the very time
that many of the MLA instructors were themselves teaching the MLA
continuing education courses. Nevertheless, a number of the
registrants to date have been MLA instructors and the situation will
improve in the near future. The course has been scheduled for four
local presentations already in 1977 in addition to its being taught
at the Annual Meeting and a proposal is being presented to the MLA
Board of Directors that the course be repeated at the conclusion of
the Annual Meeting and offered at a reduced fee to MLA continuing
education course instructors.

In order to assist instructors in preparing for courses, and to
encourage course participants to think about their objectives in
registering, continuing education course participants at the Annual

Meeting are required to complete background sheets which are then

forwarded to the instructors. An example of the form letter used

is given in Appendix E.

Each course that is conducted by the Medical Library Association

is evaluated. Prior to 1974 a lenghty (5 page) form was given to

all participants. An understandably low response rate was obtained

and many of the questions were open ended, making tabulations

difficult. Consequently, only those questions which yielded useful

data were tabulated, and then infrequently.

In 1974 a new evaluation form (to be discussed more fully

in the next section) was developed. It has had minor revisions

since then, but is essentially a simple check-off type

questionnaire. Questions are asked on the perceived effectiveness

of the instructors. Attention is given to finding out not only

the extent to which a participant has met the course objectives,

but also if the objectives were met efficiently. For example,

it is not desirable to have participants be able to write

measurable objectives if that skill took eight hours to teach, if

a more effective instructor or course design could have taught

it in two hours.

Records on instructors' performance are maintained in the

Division of Education, which has the responsibility of assigning

course instructors. Only those individuals who consistently

receive above average ratings are kept in the pool of active

course instructors.

7. The Mechanics of Conducting Programs

In conducting continuing education programs the Medical
Library Association deals with two types of situations.

    (1) All arrangements, including location and registration,
        are handled by MIA staff.

    (2) Another organization or regional group of MIA is
        sponsoring a MIA continuing education course or
        courses.

Obviously, MIA has much more control over events in the first
instance, although the program has now been structured so that
local groups can take advantage of the expertise gained from
conducting many courses.

When a request is received from a sponsoring group a
qualified instructor is chosen from the "pool" of instructors,
described in the previous section. A letter is mailed to the
instructor confirming the name of the course to be taught, the
date and location. The name, address, and telephone number of
the person acting as the local contact for the group is included.
The financial arrangements are spelled out and the instructor is
requested to let the local contact know of any special requirements
that are needed for teaching the course. To remind the instructor,
and to be of assistance to the local contact, a form is attached
for the instructor to mail to the local contact specifying room set
up, audiovisuals, and other requirements (e.g. bibliographic tools).
Copies of the instructor form letter (Appendix F) and the
requirements form (Appendix G) are included at the end of this
chapter. If the instructor is teaching the course for the first

time he/she is sent a copy of the course syllabus, a copy of the

Washtien Guide, the instructor's manual for the course, and any

models, games, or audiovisual aids that have been developed for

the course.

The local contact is sent information specifying the agreement

between the local group and MIA (Appendix H). An accompanying

letter reinforces the fact that the instructor may require a

specific room set up, and explains how course evaluations and

certificates of attendance are handled (Appendix I).

All classroom materials, including evaluation forms and

certificates of attendance are shipped from the MIA Headquarters

to the local contact or some other pre-arranged destination. At

the conclusion of the course completed evaluation forms and unused

certificates of attendance and class materials are mailed back to

the Medical Library Association, as are the course participants'

cheques. Because MIA awards Continuing Education Units, social

security information for registrants is collected.

When the evaluation forms are returned to the Division of

Education the results are tabulated and the relevant pieces

of information recorded, mailed to the instructor, or forwarded

to the Continuing Education Committee as appropriate. The current

evaluation form is included as Appendix J.

All instructor expenses, including accommodations and an

honorarium, are handled by the Medical Library Association. A

permanent record is maintained at MIA Headquarters of all persons

participating in the MIA continuing education programs, whether

sponsored by MLA or some other group. Courses to date have been

sponsored at the local level not only by MLA regional groups but

also by library schools, interested groups of librarians, and local

chapters of the American Society for Information Science and the

Special Libraries Association.

8. Quality Control

In order to produce continuing education programs that are a

consistent specified standard, quality control has been built-in

at every step of the MLA continuing education course design.

Mechanisms for quality control are spelled out and developed

before a new program is begun. By providing checks along the

way, and using the feedback to modify the end product where necessary,

the Medical Library Association has been able to develop a quality

program with limited resources. We feel the importance of quality

control cannot be overemphasized when resources are limited. The

systematic application of quality control throughout the educational

process will allow the best products to continue to be developed

by optimally using the resources available (7).

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FOOTNOTES

1. Rothenberg, L, Rees, A.M. and Kronick, D.A. "An investigation of the educational needs of health sciences library manpower, IV. Characteristics of manpower in health sciences libraries." _Bulletin of the M.L.A._ 59:31-40 (January) 1971.

2. Fink, C.D. _A Forcast of Events and Conditions that Might Affect Job and Training Requirements for Medical Librarians._ Alexandria, Virginia: HumRRo, 1973. Technical Report 73-30, HumRRo-TR-73-30.

3. Stone, E.W., Patrick, R.J. and Conroy, B. _Continuing Library and Information Science Education._ Final Report to N.C.L.I.S. Washington, D.C.: American Society for Information Science, 1974.

4. Swanson, R.S. and Johns, C.J. "Some highlight findings of the ASIS membership survey" _SIG/ED Newsletter_ No. ED-76-1, 9-10 (January) 1976.

5. Chen, C.C. "An investigation of the continuing education needs of New England health sciences librarians." _Bulletin of the M.L.A._ 64:322-24 (July) 1976.

6. Virgo, J.A. "Continuing education programming for medical librarians -- an overview." _In Proceedings of the HEA Title II-B Institute on Continuing Education Program Planning for Library Staffs in the Southwest, March 17-28, 1975._ Baton Rouge: LSU, 1975. pp 59-68.

7. Virgo, J.A. _Quality Control in Professional Continuing Education: A Model._ Invited paper presented to the Association of American Library Schools, January, 1976.

8. Medical Library Association. Division of Education. _Responsibilities of Continuing Education Course Liaisons._ Unpublished paper. 16 p. 1976.

9. Brodman, E., "The Medical Library Association's experience with continuing education," in _Proceedings of the Third International Congress in Medical Librarianship, Amsterdam, May 5-9, 1969._ Amsterdam: Excerpta Medica, 1970. p.305.

10. Continuing Education Committee Report 1974/75. _Bulletin of the Medical Library Association._ 64: 113-4. (January) 1976.

11. "Continuing Education Courses." _Bulletin of the Medical Library Association._ 61:98 (January) 1973.

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APPENDICES

A. Continuing education clearinghouse listings

B. Innovative roles series

C. List of courses and descriptions

D. Letter of agreement for course designers

E. Form used by continuing education registrants

F. Instructor form letter

G. Room set-up form

H. Information on local presentation of continuing
   education courses 1975/76

I. Local contact form letter

J. Evaluation form

APPENDIX A

CONTINUING EDUCATION OPPORTUNITIES AVAILABLE

CONTINUING EDUCATION OPPORTUNITIES AVAIL-
ABLE--The following continuing education
activities have been listed with the
Medical Library Association's Continu-
ing Education Clearinghouse. If your
organization is sponsoring any activity
which you think might be of interest to
MLA members, please send us the pertin-
ent details.

MLA developed courses are listed first.
The fee for MLA one-day courses is
$30 for members and $45 for non-members,
unless otherwise stated. Course des-
criptions for all MLA courses were listed
in the August/September 1975 issue of
the MLA NEWS. Complete course descrip-
tions for non-MLA courses are given only
the first time they are included in the
MLA NEWS. You are encouraged to save
and refer to back issues for complete
course descriptions.

For up-to-date information on continuing
education opportunities, call the
Medical Library Association at (312) 266-
2456 and ask for the Division of Educa-
tion. In many instances course registra-
tion is limited. Early registration is
always preferable.

*****

MARCH

TITLE: Microforms
DATE: March 8-11, 1976
SPONSOR: School of Library Science
University of Oklahoma
LOCATION: Norman, Oklahoma
CONTACT: School of Library Science
University of Oklahoma
Off Campus Classes
1700 ASP
Norman, OK 73069

*****

TITLE: Supervision 1976: A Two
Day Seminar 806.1
DATE: March 9-10, 1976
FEE: $95
SPONSOR: University of California
Extension, Santa Barbara
LOCATION: Program Lounge
University Center
University of California,
Santa Barbara
DESCRIPTION: An intensive seminar which
will provide the supervisor with prac-
tical knowledge which can immediately
be used on the job. Intended as an
update for the experienced supervisor
as well as an introduction to those
new in the field. Topics include:
philosophy of supervision, time manage-
ment, decision-making, delegation,
performance evaluation, a review of
recent court decisions affecting super-
visors. Registration deadline is March
3, 1976.
CONTACT: University of California
Extension
Santa Barbara, CA 93106

*****

TITLE: Improving Communication
Skills
DATE: March 10-11, 1976
FEE: $75
SPONSOR: Univ. of Wisconsin-Extension

LOCATION: Madison, Wisconsin
DESCRIPTION: Many organizational problems
can be traced to ineffective communica-
tion, which in turn can reflect both a
lack of skill in the art and science
of communication as well as a style of
interpersonal relations which make
effective communication difficult. This
program will examine the process of
communication, the basic ingredients of
effective communication, barriers to
effective communication and specific
communication techniques involved in
improving interviews, meetings and
presentations. There will be opportunity
to demonstrate and practice some of
these techniques and skills.
CONTACT: David Schrieber
(608) 263-3473

*****

TITLE: Processing & Automation at
the Library of Congress
DATE: March 10-12, 1976
SPONSOR: ALA/ISAD
LOCATION: Washington, D.C.
DESCRIPTION: The institute has been de-
signed to inform participants of the
activities, operations and future plans
of the LC Processing Department and its
many functions. Among the topics to be
covered will be the Order Division, the
National Bibliographic Service, the
Automated Process Information File, the
cataloging system, the authority system,
COMARC, CONSER, the Cataloging Distribu-
tion Service, and the MARC input story.
The first day, March 10, will be devoted
to tours of the Processing Department of
the Library of Congress and the other
two days will consist of institute
sessions with LC staff members as
speakers.
CONTACT: Don Hammer
ALA/ISAD
50 E. Huron
Chicago, IL 60611
312/944-6780

*****

TITLE: Management by Objectives
DATE: March 10-12, 1976
FEE: $300
SPONSOR: Georgia Institute of Tech-
nology
LOCATION: Atlanta, Georgia
DESCRIPTION: This course is designed to
help participants develop an understand-
ing of and capability in applying manage-
ment by objectives technology to achieve
higher levels of organization performance
and individual satisfaction. The
approach is to develop management by ob-
jectives as a part of a total philosophy
of management.
CONTACT: Director
Department of Continuing Ed.
Georgia Institute of Tech-
nology
Atlanta, GA 30332

*****

TITLE: Library Personnel: Your Most
Important Resource.
DATE: March 11, 1976
SPONSOR: University of Kentucky
College of Library Science
LOCATION: Lexington, KY
DESCRIPTION: Margaret Myars, Director of
ALA's Office for Library Personnel Re-
sources, speaks on placement, women in
management, in-service training, and
discrimination.
CONTACT: College of Library Science
University of Kentucky
Lexington, KY 40506

*****

TITLE: C.E. 18: Systems Analysis
3/11/75
C.E. 8: A Review of the Lit-
erature of Dentistry 3/12/75
C.E. 13: Grant Applications
& Management 3/12/75
C.E. 23: Problems in Medical
Cataloging and Classification
3/12/75
DATE: March 11 & 12, 1975
FEE: $30 MLA members
$45 non-members
SPONSOR: Philadelphia Regional Group
LOCATION: Philadelphia, PA
DESCRIPTION: See August/September 1975
issue of the NEWS.
CONTACT: Helen Ross, Medical Staff
Library
Wilmington Medical Center
Wilmington, DE 19899

*****

TITLE: Management by Objectives for
Librarians
DATE: March 12-13, 1976
SPONSOR: University of Oklahoma
LOCATION: Norman, Oklahoma
CONTACT: School of Library Science
Off Campus Classes
University of Oklahoma
1700 ASP
Norman, OK 73069

*****

TITLE: Instructional Development
Training Seminars for
Teachers of Library and
Information Science
DATE: March 12-15, Portland, OR
April 9-12, Chicago, IL
SPONSOR: Center for the Study of
Information and Education,
Syracuse University
LOCATION: Portland, Oregon
Chicago, Illinois
DESCRIPTION: To assist teachers to de-
velop competence in the design, develop-
ment and field testing of instructional
modules. Enrollment limited to people
involved in teaching of library per-
sonnel--at least 50% of their time must
be spent in teaching activities.
CONTACT: Don Ely
CSIE
Syracuse University
130 Huntington Hall
Syracuse, NY 13210

*****

APRIL

TITLE: Information Broker/Free
Lance Librarian: New
Careers, New Library Services
DATE: April 3, 1976
SPONSOR: School of Information Studies,
Syracuse University
LOCATION: Syracuse, New York
DESCRIPTION: Designed for all interested
in new directions in library and infor-
mation services--professional or student,
educator or administrator, employed or
unemployed. Purposes are to: identify
alternative information services now
being offered to the public; understand
how to identify the need for new roles
and careers; learn how to develop them
outside or within existing systems; dis-
cuss relationship between these new

*****

NEW ROLES FOR HEALTH SCIENCES LIBRARIANS—5

COMMUNITY OUTREACH PROGRAM

The University of Southern California School of Medicine has a very active office of Minority Affairs. Throughout the year this office conducts activities aimed at attracting young minority students from high schools and colleges, in the Los Angeles area to careers in the health sciences. The High School Cluster Program conducted this summer involved approximately two hundred students. Half of these students worked in the LA County/USC Medical Center gaining experience in a hospital environment, while the other half of the students attended a variety of courses designed to advance their study skills. Clyde Harris, Coordinator of the Cluster Program, described the summer activities during an informal conversation and the media specialist at the Norris Medical Library, Elaine P. Adams, suggested to him that the library's media services division might have a contribution to make to the program. The division would arrange a series of film programs supporting the basic sciences introductory course.

The Cluster Program series lasted eight weeks. The Cluster Program administrators divided the one hundred students into small groups and assigned Vincent Reyes, a college student and counselor with the program, as course leader. The Library's media services division arranged for six group visits each week in the conference room and supplied the equipment and the film programming. Additionally, the division offered the services of the media specialist who had had experience as a high school instructor and was able to share with the course leader responsibility for guiding disscussion.

The media programs in the Norris Medical Library media collection were geared to medical students and professionals in the health sciences. The content was often too advanced for eleventh and twelfth graders. Therefore, the program relied heavily on films available from the film

collection of the Los Angeles City Public Library. Two films were shown each week, with three showings per film. Among the titles utilized were:
- The Perfect Drug Film (narcotics)
- Slow Guillotine (pollution)
- Your Amazing Mind (mind function)
- Tell Me Where to Turn (information and refferal centers)
- The Hurdler (biography of Charles Drew)
- Abortion: London's Dilemma (abortion)
- How Life Begins (childbirth)

This gives you a sampling of the subject matter that was covered.

The library's involvement in terms of staff consisted of the media specialist's time:
- 4 hours—Initial Planning
- 5 hours (each week)—Previewing the week's films; developing discussion approaches with the counselor; participating in program interaction with the students (the media specialist was not present continuously throughout each visit). 44 hours total.

There are plans to continue the film program next year. Dr. Adams would like to conduct a brief in-service for the counselors on how to utilize instructional media and encourage classroom discussion. It was found that course counselors in other subjects, such as English were interested in employing media in their presentations. Dr. Adams would like also to see students fulfill assignments developed from the content of the films and an evaluation system set up to determine how much students benefitted from the programs. She writes "It was a very rewarding experience for me and I encourage other librarians to engage in similar activities."

For further information on this program contact: Elaine P. Adams, Ph.D.
Media Specialist
Norris Medical Library
University of Southern California
2025 Zonal Avenue
Los Angeles, CA 90033

APPENDIX C

DESCRIPTION OF ONE AND TWO DAY COURSES

CE. 4:   GENERAL BIOMEDICAL REFERENCE TOOLS

An introductory course intended for personnel with limited
training or experience. Basic reference works common to
many health science libraries are examined. Coverage
includes an introduction to: Index Medicus, Abridged Index
Medicus, Hospital Literature Index, International Nursing
Index, Index to Dental Literature, various directories and
specific reference works such as the Dictionary of Medical
Syndromes, etc.   .7 CEU

CE 5:   HUMAN FACTORS IN LIBRARY ADMINISTRATION

Geared toward the person with supervisory responsibilities,
this course attempts to study personnel management in terms
of interpersonal relationships. Topics covered include:
employee motivation, techniques of resolving conflict
situations, discussion of active listening, and the analysis
of different styles of leadership. Using techniques of case
study, role playing, and small group discussions, problem-
solving approaches are illustrated.   .7 CEU

CE 8:   A REVIEW OF THE LITERATURE OF DENTISTRY

This introductory course familiarizes the student with the
basic reference sources and related search techniques
necessary in answering reference questions in dentistry.
Through a series of problems, the student has the opportunity
to use the various tools which are discussed and to develop
his information finding techniques.   .7 CEU

CE 9:   MATERIALS FOR THE HISTORY OF THE HEALTH SCIENCES

This course is designed to provide the student with an
awareness of the variety of materials any retrospective
collection might include and an awareness of some problems
in their care and processing. Appropriate reference sources
will be discussed and evaluated. The syllabus has been
completely revised and updated, and the scope of the course
has been expanded to include all the health sciences.   .7 CEU

CE 10: RECENT ADVANCES IN THE LITERATURE OF PHARMACY

Problem areas in the location of pharmaceutical information
are studied. Selected standard pharmacy reference tools
are covered, emphasizing drug nomenclature and product
information, business and statistical information relating
to the pharmaceutical industry, and the availability and
use of various directories. A series of problems gives
the student didactic experience in dealing with
complexities of pharmaceutical reference queries.
.7 CEU

CE 11: INTERLIBRARY LOAN (½ DAY)

The course is designed for individuals with limited or
no prior experience in this area of library work. Correct
procedures for completion and submission of an ALA Inter-
library Loan Request Form will be emphasized. Bibliographic
tools for verifying and locating desired material will be
described and evaluated.   .4 CEU

CE 12: INDEXING AND ABSTRACTING SERVICES IN THE BIOMEDICAL SCIENCES

An introductory course for persons with limited or no
experience in the use of Biological Abstracts, Chemical
Abstracts, Excerpta Medica and Science Citation Index.
Publication coverage, subject scope, indexing and
abstracting policy are viewed in relationship to effective
retrieval from these publications. Questions of when, why
and how to use the indexes are discussed. Case studies of
varied difficulty will permit students to become familiar
with all sections of the indexes and develop basic skills
in their use. Using a problem-solving approach, the class
will identify strong points, unique capabilities, similar-
ities, limitations and comparative effectiveness of each
publication. The publications will also be considered in
relation to their computerized versions and to Index
Medicus.   .7 CEU

CE 13: GRANT APPLICATIONS AND MANAGEMENT

This introductory course, intended for those individuals
responsible for providing library services in health-
related institutions, presents basic information about
grants and grant management. Topics include: the evalua-
tion of grant support, federal and non-federal grants,
requesting funds, contracts and grants management.   .7 CEU

CE 14: PLANNING HEALTH SCIENCES LIBRARIES

This course is intended for those actively planning a new
library or remodeling an old one. The syllabus has been
completely revised and updated, and it includes all phases
of planning from early stages through completion. This
course is concerned with planning the larger medical
library facility, especially medical school libraries.
.7 CEU

CE 15: THE LITERATURE OF NURSING

Planned for the person who has had little or no experience
with the nursing profession, nursing education, or nursing
literature, this course includes a discussion of library
needs of the school of nursing and of the graduate nurse,
as well as trends in nursing education and some important
libraries with whose services nursing librarians should
be familiar. The course also includes discussion of
acquisitions, reference sources, literature of associations
important to nursing, and non-book materials.   .7 CEU

CE 16: MANAGEMENT OF MEDIA IN LIBRARIES

Media in libraries is explored from a practical point of
view providing the librarian with basic knowledge and
considerations to enable planning and implementing media
programs in support of medical education. Emphasis is
given to organization, handling, cataloging and indexing,
and acquisitions. (Librarians who have attended this
course at the National Medical Audiovisual Center should
not apply for CE 16.)   .7 CEU

CE 17: PRESERVATION OF LIBRARY MATERIALS

A course designed to familiarize registrants with basic
preservation measures. This course will cover fine binding
and the preservation of archival materials, including the
special preservation problems encountered in rare book
collections and manuscript collections; basic preservation
measures will also be considered, including non-book
materials. Routine maintenance of modern collections, with
emphasis on the care and repair of modern bindings, and a
discussion of common preservation problems will be included.
.7 CEU

CE 18:   SYSTEMS ANALYSIS

This course is intended to introduce uninitiated students
to the terminology and concepts employed in the use of
systems analysis techniques in the medical library setting.
A syllabus will be sent in advance of the course to allow
students to work out exercises on a self-study basis. The
tutorial session will be devoted to group interactions
concerning applications of analytic techniques covered by
the syllabus.   .7 CEU

CE 19:   APPLICATION OF OPERATIONS RESEARCH TO LIBRARY DECISION-MAKING

This is a 2-day mini-course designed specifically for
librarians of medium and large health sciences libraries.
It is advisable that students who are planning to take
this course have already been exposed to the basic concepts
of systems analysis. No mathematical background is
required although helpful.

First day unit introduces the most basic concepts of
probability and statistics and the formation of mathema-
tical models and the general concept of operations research
and its application to public systems in various decision
making processes. Students will be given opportunities
to do actual statistical exercises.

Second day unit deals with the application of operations
research techniques in health sciences library settings.
Specific models will be introduced and their usefulness to
librarians in terms of various administrative decisions will
be discussed. Students will be asked to apply some models
to their own library situations.

Prerequisite for the course: CE 18 Systems Analysis, or
its equivalent. Persons demonstrating evidence of equivalent
knowledge as is being presented on the first day may apply
for the second day of the course separately. Course fee:
$30.00 each day for MLA members; $45.00 each day for non-
members.   1.4 CEU

CE 20:   MEDLINE AND THE HEALTH SCIENCES LIBRARIAN

MEDLINE, the National Library of Medicine's interactive
search system, is currently operational in about three
hundred medical libraries. Although additional ones will
continue to be added to the MEDLINE network, it is not
possible for all those wishing to join to do so. And yet the
services of MEDLINE must be made available to all qualified
health professionals. The purpose of this course is to
explain how MEDLINE works, how its services may be used by
all health sciences librarians, and how those librarians

can better serve their vital role as the mediary between the
requester and the MEDLINE system. Course participants will
be given an opportunity to perform simple MEDLINE searches.
Since enrollment must be limited, applications from MEDLINE
analysts and other library personnel having access to MEDLINE
in their own libraries will not be accepted. .7 CEU

E 22: PLANNING HOSPITAL LIBRARY FACILITIES

The purpose of this course is to start the hospital librarian
on a course of self-education to gain the skills necessary
for planning a new or remodeled library. Acquiring self-
confidence and finding a power base are emphasized. Methods
of gathering and organizing the data and writing a building
program are discussed, and each element of the library plan
considered. An exercise in reconciling all requirements
for space available is done by small groups at the end of
class. .7 CEU

E 23: PROBLEMS IN MEDICAL CATALOGING AND CLASSIFICATION

This is a course for persons with cataloging and classifica-
tion experience in the NLM Classification. Topics to be
covered include: International Standard Bibliographic
Description (ISBD); problems with form of entry, cross
references, and difficult materials; use of CATLINE;
problems with the use of MeSH and NLM Classification;
cataloging policies, and the future of NLM and OCLC as
sources of cataloging information. Prerequisite: CE 24
or equivalent. .7 CEU

E 24: MeSH AND NLM CLASSIFICATION

This course is intended to sharpen skills in assigning
NLM Classification and Medical Subject Headings (MeSH)
to health sciences materials including peripheral areas
such as biology, anthropology, and psychology. The
MeSH list will be emphasized, but problems in assigning
"non-MeSH" terms in conjunction with MeSH and conversion of
LC subjects to MeSH will be discussed. Applicable tools for
cataloging as well as the many sources of information on
cataloging will be presented. MeSH Tree Structures, the
Annotated Alphabetic MeSH, and use of the NLM Classification
schedules will be stressed. Some emphasis will also be
placed on problems encountered by smaller institutions
doing original cataloging with minimal resources. At the
end of the seminar, participants will be able to assign
MeSH headings and NLM Classification numbers to a variety
of materials, and be familiar with the basic practices of
health sciences cataloging.

CE 26: TEACHING SKILLS FOR LIBRARY EDUCATORS

An overview of basic planning and teaching skills plus introduction to innovative strategies for improving adult learning. The course will include exhibits of new materials, demonstration of methods and personal involvement of regis- trants. Limited to persons with full or part-time experi- ence in graduate library schools, continuing education courses or in-service training courses. Those preparing to teach such courses will be admitted as space allows. This is a two-day course; fee is $60.00 for MLA members and $90.00 for non-members.   1.4 CEU

CE 28: MANAGEMENT OF REFERENCE SERVICES

The course is designed for reference and administrative librarians and emphasizes the management of reference departments as well as handling reference problems. Discussion will focus on reference policies and philosophies, relationships with users and priorities of service. Participants should bring a copy of the reference policy for their library if they have one. Prerequisite: CE 4 or equivalent.   .7 CEU

CE 29: HOSPITAL LIBRARY MANAGEMENT

This course is designed for hospital librarians to increase their awareness of basic management principles and to apply these principles in common work situations. Topics will include: developing objectives, personnel (hiring, firing, and performance evaluation), budget preparation, reporting, relationships with hospital administrators and library committees. Preference will be given to librarians who are currently employed in hospital or clinic libraries. If space permits, individuals from medical school or other libraries, or library consultants, students, etc. will be enrolled.   .7 CEU

CE 30: BASIC MEDIA MANAGEMENT--HARDWARE AND PHYSICAL FACILITIES

This course is designed to introduce participants to the physical considerations which accompany the housing of an audiovisual collection. Topics to be covered in lecture will be considerations in designing a proposed facility or re- designing an existing facility in either a hospital or health science center to meet the specialized needs of audiovisual software and equipment, care of AV software, and evaluation of equipment to promote a collection of usable, cost-effectiv and patron/staff oriented audiovisuals. Activities planned

involve grouping participants from similar facilities to design an AV facility based on considerations discussed in the lecture and examples from other facilities. Individual activities include operating various pieces of equipment and handling various pieces of software. .7 CEU

CE 31:   BASIC MEDIA MANAGEMENT--SOFTWARE

This course offers the librarian a variety of solutions to problems usually encountered in developing AV software services in a health sciences library. Acquisitions, budgeting, circulation, packaging, shelving, and allotment of staff time in providing software services are included; reference services, sources of quality health science audiovisuals, and cataloging for optimal use have been given special emphasis. This course also explores policies which are needed in providing AV services in libraries. .7 CEU

CE 34:   BIOLOGICAL ABSTRACTS--BIORESEARCH INDEX

This course will provide registrants with an understanding of the BIOSIS data base--printed and machine--as it relates to content, coverage, standards and procedures used in the bibliographic, abstract and index sections. Participants will gain confidence in searching the indexes more effectively, both alone and in combination, gain more experience in setting up strategies for specimen searches and have the knowledge and background information to teach basics of the use of BA and BioI to library users. Bibliography of related reference aids will be provided. The course is aimed at persons already having a basic familiarity with the organization of BA and BioI but wishing to become more proficient in their use. .7 CEU

CE 35:   OCLC UTILIZATION IN HEALTH SCIENCES LIBRARIES

This course will teach how to implement OCLC, understand and perform on-line searching, inputing, editing, and tagging, by means of training films, slides, and active learning sessions. This introductory course is intended for participants with no previous experience with OCLC. .7 CEU

APPENDIX D

LETTER OF AGREEMENT BETWEEN COURSE DESIGNERS AND MLA

This Agreement, by and between

_____
name

_____
address

_____
city, state, zip

_____, and
office phone

_____
Chairman, CE Committee

_____
address

_____
city, state, zip.

_____, for the
office phone

Medical Library Association, establishes the terms and conditions
for the preparation or revision of course work materials for the
Medical Library Association Continuing Education course:

_____

_____
_____

ARTICLE I   Scope of Work

The final product shall consist of the following:

A.   A syllabus or workbook to be used by the participant
      during the course and to be retained for future
      reference. The syllabus should include a biblio-
      graphy and approximate time schedule for the
      various elements or segments of the course.

B.   A statement of course objectives, i.e., the skills
     or knowledge that a participant may be expected
     to have at the completion of the course.

C.   Reading list or other materials which should be sent
     to the participants in advance of the course and any
     materials, such as case studies, which will be dis-
     tributed as handouts during the course.

D.   A summary of suggestions for the instructors; e.g.
     should syllabus be sent in advance, type of audio-
     visual equipment needed, special classroom assign-
     ments (seating, work surface requirements), etc.
     If the syllabus does not "stand alone" as a teaching
     aid, an instructor's manual should also be included
     in the package.

E.   A post-test which the instructor will use to deter-
     mine whether participants achieved the course ob-
     jectives.

F.   A statement of prerequisites (other C.E. courses,
     college courses, experience, etc.) needed for course
     registrants.

ARTICLE II   Special Conditions

A.   All typewritten material for students and instructors
     shall be camera-ready copy with 1½ inch margins.

B.   The Continuing Education Committee member designated
     to work with you is:

     _____
     name

     _____
     address

     _____
     city, state, zip

     _____
     office phone

     This individual will answer any questions you have and
     will periodically contact you with regard to your progress.
     All material should be forwarded to this liaison person.

C. All materials will become the property of the Medical
    Library Association which will have irrevocable rights
    for duplication and distribution.

ARTICLE III   Expenses, Honorarium and Completion Dates:

A. Reimbursements for original art work, slide preparation,
    etc. are possible if required for the syllabus or for
    effective course presentation, but such expenditures
    should have advance written approval of your C.E. Committee
    liaison. Subject specialists, education research depart-
    ments and other resource people may, of course, be utilized
    but these services cannot be reimbursed.

B. Following the receipt and acceptance by the committee of
    materials specified under article I, you will receive an
    honorarium of $_____.

C. A preliminary statement of course objectives and a course
    outline should be received by your C.E. Committee liaison
    by _____.   Following review by the C.E.
    Committee, suggestions or comments on these items will be
    provided by the liaison person.

D. The final syllabus and supplemental material is due no
    later than _____.

_____   _____
date   Course Developer

                                   _____
                                   Chairman, C.E. Committee

Sign one copy and return to the C.E. Committee
liaison within 10 days after receipt.

APPENDIX E

TO BE COMPLETED AND RETURNED BY ALL C.E. REGISTRANTS

Medical Library Association, Inc.

NOTE: Your C.E. registration will not be processed unless accompanied by this completed sheet.

COURSES REGISTERED FOR:

	1st choice	2nd choice
Saturday	_____	_____
Sunday	_____	_____

NAME: _____

MAILING ADDRESS (for confirmation notice):

_____

_____

Soc. Sec. #: _____

(necessary for CEU records)

HIGHEST ACADEMIC QUALIFICATION:

	Major
High school	_____
College (# years)	_____
Bachelor's degree	_____
Master's degree	_____
Post-master's	_____

PLACE OF EMPLOYMENT:

Hospital	_____
University	_____
Research Center	_____
Other (please specify)	_____

_____

WHAT DO YOU HOPE TO GAIN BY TAKING THESE COURSES? (Please answer separately for each course, on reverse side)

Complete only if registering for CE 19

HAVE YOU TAKEN CE 18 (SYSTEMS ANALYSIS)? _____
If no, briefly describe how you attained equivalent background:

IF YOU ARE REGISTERING FOR THE SECOND DAY OF CE 19 ONLY,
briefly describe how you attained the knowledge to be presented on first day:

Complete only if registering for CE 26

PLEASE CHECK ALL ITEMS BELOW WHICH APPLY:

_____ Ph.D. Candidate
_____ Planning to teach in library school
_____ Presently teach in library school
_____ Teach or have taught in MLA Continuing Education program

_____ Planning to teach in MLA CE pgm.
_____ Responsible for staff development or CE programs
_____ Extension librarian with experience in presenting workshops

Complete only if registering for CE 30

DESCRIBE YOUR PRESENT RESPONSIBILITIES WITH REGARD TO AUDIOVISUALS:

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APPENDIX F

INSTRUCTOR FORM LETTER

July 16, 1975

Neil Barnhard
14 Pinnacle Drive
Little Rock, AR   72205

Dear Neil:

Welcome to MLA's continuing education program and thank
you for agreeing to teach CE 5, Human Factors in Library
Administration, at the TALON/SRG meeting in Shreveport, LA
on October 7, 1975.   Your local contact will be Marilyn
Miller.   Her address is:

> Marilyn Miller
> Reference Librarian
> LSU Medical Center
> P.O. Box 3932
> Shreveport, LA 71130

Would you let the local contact know how you would like
the room set up for your course and what equipment and/or
reference tools you need to teach it? You may wish to use
the attached form for this purpose. Courses run from 9 am
to 5 pm, with an hour for lunch. Most groups break for
coffee in the morning and afternoon and your local contact
can give you the specifics on scheduling.

While you are responsible for making your own accommodations,
etc., you may wish to ask Marilyn for information about the
nearest place to stay and how to get there from the
airport.

We will reimburse your expenses (coach airfare, ground travel,
accommodations, meals, etc.) and pay you an honoaraium of
$50. Please send receipts and the ORIGINAL airline ticket
if applicable. MLA will cover your actual room expenses,
and up to $12/day for meals. Automobile travel is reimbursed
at the rate of 15¢/mile.

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Neil Barnhard
page 2.

Under separate cover I am sending you a packet of
materials you may find helpful in preparing for and
teaching the course. Also included is a copy of the
syllabus for the course, and suggestions for instructors
and handouts which we have on file. Each participant
will receive a copy of the syllabus at the beginning of
class; if you wish them to receive the syllabi in advance,
Marilyn can arrange this but be sure to give her enough
notice and remember the mail is not always as fast or
direct as we would like.

Marilyn may ask you to distribute the course evaluations
and certificates of attendance at the end of class. We
find that we get a much higher response rate on the
evaluations if we wait and hand out the certificates in
exchange for a completed evaluation. But that is up to you!

Again, let me thank you for helping us in our continuing
education program. If there is any further information you
need, or anything else we can help you with, please do not
hesitate to contact me or my assistant, Julie Blume, at
MLA Headquarters.

Sincerely,

Julie A. Virgo
Director of Education

cc: Local contact
     CE Committee Chairman

APPENDIX G

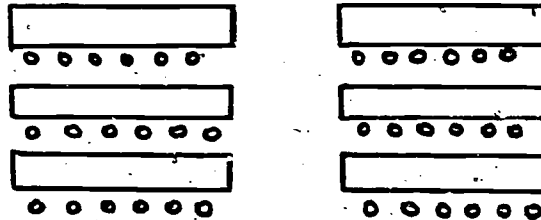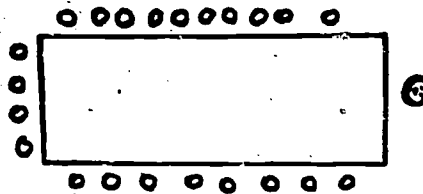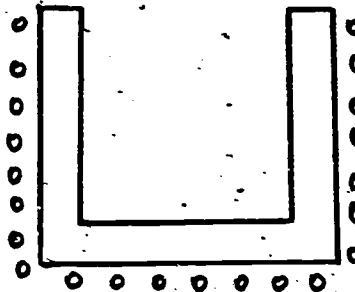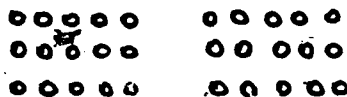MEDICAL LIBRARY ASSOCIATION

Continuing Education Program

Name of Instructor _____

Title of Course _____

Date(s) Offered _____

Course Location _____

Please check the following items that are required to teach the above course.

TYPE OF ROOM SET-UP

( ) Classroom

( ) Conference

( ) Hollow - U

( ) Theatre style

( ) Other -- Please specify and diagram

TEACHING EQUIPMENT

( ) Instructor's table

( ) Podium

( ) Large blackboard

( ) Chalk

( ) Eraser

( ) Screen

( ) Flip chart

( ) Felt tip pens

( ) Masking tape

( ) Lantern slide projector (3¼" x 4")

( ) Carousel slide projector

( ) Overhead transparency projector

( ) 16 mm motion picture projector

( ) Table for reference tools or equipment

( ) Other -- Please specify
        This includes all CE 16 equipment

TEACHING MATERIALS

( ) Reference tools
    Please attach a separate sheet listing titles and
        number of copies

( ) Terminals (please specify models)

( ) Telephones

SHOULD YOU NEED ADDITITONAL EQUIPMENT, OR OTHER ITEMS NOT
LISTED HERE, PLEASE SPECIFY.

APPENDIX H

INFORMATION ON

LOCAL PRESENTATION OF CONTINUING EDUCATION COURSES

1975/76

The attached list of one-half to two-day continuing education
courses, developed by the Medical Library Association, are
available for local presentation under the sponsorship of
MLA regional groups, library schools, university extension
divisions, and/or interested professional groups. This
information is accurate for the 1975/76 Association year
(June, 1975 - June, 1976). After this period, check with
the Division of Education for more recent course information.

COURSES:

The sponsoring group may choose any of the courses for local
presentation.

Each course requires one day (9 am - 5 pm) for presentation
unless otherwise specified. The number of courses offered
is determined by the sponsoring organization and more than one
course can be offered on the same day or several can be grouped
together in sequential fashion over a period of two or more days.

Courses can be arranged for any date or dates that are
convenient for the sponsoring group. However, the Medical
Library Association's Division of Education asks that it be
notified a minimum of six weeks before a course is planned
so that appropriate arrangements may be made for the presen-
tation.

NUMBER OF REGISTRANTS:

Continuing education courses are designed for maximum inter-
action between student and instructor and are usually most
successful when classes are small. Fifteen to twenty
individuals per section is preferable although some courses
can accommodate as many as twenty-five persons. A minimum
of twelve persons per course per section must register in
order to cover costs of presentation.

REGISTRATION:

The sponsoring group handles all course registrations
directly. Checks should be made payable to the sponsoring
group; at the conclusion of the course, a single check
covering all registration fees should be sent via registered

mail' to the Medical Library Association in Chicago. MLA
also needs social security numbers for each registrant
in order to keep our continuing education records accurate.
The sponsoring group is responsible for collecting this
information on all participants, including non-MLA members.

INSTRUCTORS:

Selection of instructors is made by the Division of Education
of the Medical Library Association. MLA pays all instructor
expenses.

COSTS:

A fee of $45 per person per day is charged. However, individual
members of the Medical Library Association, and those persons
designated in the MLA Directory as institutional members'
representatives pay $30. Members of a regional group of MLA
but not members of MLA itself are not eligible for the $30
registration fee. Two-day courses cost $60 for members,
$90 for others. The half-day course, CE 11, costs $15 for
members, $25 for non-members.

Arrangement costs not specifically agreed upon by the Division
of Education are paid by the sponsoring group.

Costs of assembling and shipping course materials are
assumed by the Association.

If the sponsoring group wishes to include food or coffee
breaks it is responsible for the cost.

Costs of publicity or promotional mailings to the group's
members are borne by the sponsoring organization.

ARRANGEMENTS:

The Division of Education provides information regarding the
number of rooms required, audiovisual equipment needed, and
so forth. It also provides lists of necessary items for the
bibliography courses; however, the sponsoring organization
furnishes the actual materials. The Division of Education
lends advisory assistance if desired.

COURSE PACKAGE:

The Division of Education provides:
      1) Copies of the syllabus for the course.
      2) Any printed materials (manuals, handouts)
         needed for presentation of the course.
      3) An instructor for the course.
      4) Certificates of Attendance and evaluation forms.

The Division of Education will work closely with the
sponsoring group to insure that their continuing education
activities are presented in a manner consistent with the
high standards of the Medical Library Association.

WHO TO CONTACT:

Requests for continuing education courses for the
1975/76 calendar year should be made to:

       Division of Education
       Medical Library Association
       919 North Michigan Avenue
       Suite 3208
       Chicago, IL 60611

       Telephone: 312/266-2456

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APPENDIX I

LETTER TO LOCAL CONTACT

July 16, 1975

Faye Meyn
Sacred Heart General Hospital
1200 Alder Street
Eugene, OR 97401

Dear Faye:

This letter is to confirm the arrangements for the
sponsoring of one continuing education course by the
Pacific Northwest Regional Group in Eugene, OR on
September 30, 1975. The course you are sponsoring is
CE 16, Management of Media in Libraries. The instructor
for CE 16 will be Mike Homan. His address is:

> Michael Homan
> PSRMLS
> UCLA-Biomedical Library
> Center for the Health Sciences
> Los Angeles, CA 90024
> 213/825-5341

You should work with the instructor directly to find out
what his requirements are in terms of classroom set-up,
blackboards, AV equipment, bibliographic tools, etc.
Would you also assist him with information about accommo-
dations, how to get to the place at which the course is
being taught from the airport, etc., although those matters
and payment thereof are the instructor's responsibility.

Mike may need a number of AV equipment items for CE 16.
I hope you can borrow all the necessary pieces, but it is
possible that you will need to rent some items. MLA does
not cover rental charges. Your group may either absorb
the costs from its own budget or charge participants in
that course a "lab fee" to cover the additional expense.

Syllabi for registrants will be shipped directly to you,
one month in advance of presentation. Would you notify
us of their arrival or nonarrival? Unused syllabi must
be returned to MLA's Division of Education so that the
number of registrants plus the number of returned syllabi

Faye Meyn
page 2

should equal the number of syllabi sent to you. Mike may
wish to have the syllabi sent to students in advance, and
he will notify you if this is so.

We will also send you certificates of attendance and evalu-
uation forms. Please type the course number and name,
date of presentation, and participant's name on the certi-
ficate and give them to each student at the conclusion of
the course. We find that we get a high rate of completed
evaluation forms if you hand out the certificate in exchange
for an evaluation!

As you know, we now award continuing education units (CEUs)
for participation in MLA courses. Therefore, in order to
keep our records up to date, for each course we must receive
from you a list of registrants with their address and
social security number. Also, at the conclusion of the
course, please mail a check for the total course registration
to the Division of Education at MLA Headquarters by
registered mail. Please note that there are two registration
fees: $45 registration, but $30 for MLA members. Those
persons eligible for the $30 fee are individual members of
MLA and those individuals designated as institutional
representatives in the MLA Directory. Persons who are
members of a regional group of MLA but not members of MLA
itself are not eligible for the reduced registration fee
and are expected to pay the full $45.

Courses will be presented if there is a minimum of 12
registrants. If you do not get 12 registrants for the course,
you may still choose to sponsor the course by supplementing
the registration fees with an amount from your group's own
funds.

If there is any further information you need, or anything
we can help you with, please do not hesitate to contact
me, or my assistant, Julie Blume, at MLA Headquarters.

Sincerely,

Julie A. Virgo
Director of Education

cc: CE Committee Chairman

APPENDIX J
CONTINUING EDUCATION COMMITTEE
Course Evaluation - Participants' Questionnaire

By completing this form thoughtfully you will help to make future courses
more valuable for yourself and others, and you will assist the Committee
in reaching an objective evaluation of its continuing education program.
Please complete this form and give it to the instructor before leaving

Instructor's Name _____

Course Title_____

Course Number _____   Date-_____

Sponsoring Group _____

1. How did the instructor present the course:
    Very well ( )
    Well ( )
    Average ( )
    Poorly ( )
   Comments and/or suggestions:

2. Please comment on the effectiveness/level/quality/etc. of the syllabus
   and other materials used in the course:

3. How well did the course meet its objectives as stated in the syllabus?
    Completely ( )
    Somewhat ( ) - Please answer 3a
    Poorly ( ) -- Please answer 3a

    3a. Why? Your misunderstanding of course objectives ( )
               Inaccuracy of course objectives ( )
               Course content ( )
               Other:

4. How well did the course meet your own objectives and expectations in taking it?
    Completely ( )
    Somewhat ( ) - Please answer 4a
    Poorly ( ) -- Please answer 4a

    4a. Why? Your misunderstanding of course description ( )
               Inaccuracy of course description ( )
               Course content ( )
               Other:

5. How could the course have been more useful to you?

6. What alterations, if any, do you feel need to be made in the course content or presentation?

7. Please list the names and addresses of individuals you feel would be qualified to teach this course:

8. Please suggest subjects for future MIA continuing education courses:

THANK YOU!

CHAPTER IX

SUMMARY AND CONCLUSIONS

The purpose of the present study, as stated in the original
project proposal, was "to assess and identify the needs for
continuing education for medical librarianship and to design,
implement, and evaluate some components of a program which will
be responsive to these needs."

Continuing education needs were assessed using several
different approaches. A questionnaire survey was carried out
within the regional groups of the Medical Library Association
(regional members do not necessarily belong to MLA) and a random
sample survey of MLA members was also made. A less traditional
approach to assessing continuing education needs of a profession
was taken in an attempt to provide objective data which would
support the perceived subjective needs of health sciences library
staffs. The contents of the published journal literature at the
time the study was undertaken were compared with the literature
five and ten years previously to document changes in the field.
The results of continuing education needs studies conducted by
other library groups and organizations were analyzed and compared
with the results obtained in the present study.

Despite differences in types of library staffs surveyed
(all types of librarians, information scientists, special librarians)

the needs identified were very similar:

    Administration

    Audiovisuals

    Reference tools and services
     (including on-line systems)

    Budgeting

The present study analyz i these needs by types of health sciences
library staffs but found that the perceived needs were the same,
although the settings might require different approaches to the
materials.

One of the most significant findings from this phase of the
study was the fact that library staffs had such difficulty in
articulating what _specific_ continuing education needs they had,
and at what level. This pointed to the need for the development
of task analysis data from which assessment tests could be
developed.

At the same time that an inventory of needs was being developed,
data from a one year time period were collected on continuing education
opportunities that were already available. More than 1,000
organizations who might be offering continuing education activities
relevant to health sciences library staffs, were solicited for
information about their programs. Information about the location,
subject matter, cost, length, target population, and type of
sponsoring organization was analyzed for 264 courses sponsored by 205
organizations. While the activities analyzed do not represent all
opportunities during that time period they do reflect some patterns

in the supply of group learning opportunities.

Programs were available in all eleven regional medical library areas although the number of opportunities varied considerably by region from one in Region 10 to 51 in Region 2. When the analysis of courses offered was compared with the needs expressed the offerings appeared very sparse. The management of audio-visuals was covered to some extent in 9 out of 11 regions; reference, the most frequently offered, was not offered in 4 out of 11 regions, and all other highly ranked topics were hardly available anywhere.

It would appear that any programs aimed at the highest ranking topics would be well-received.

A study was made of the organizational constraints and supports given to library staffs for their continuing education activities. The results showed that continuing education is primarily a self-directed activity. The most significant response from this phase of the study was the number of respondents who indicated that their most immediate superior "accepts my decision with regard to my continuing education needs." This response was checked more frequently than any other question regarding support on the questionnaire. It points to the motivation of the individual as an important factor in continuing education.

Another significant finding was that employers are more supportive of employees attending professional meetings than independent continuing education courses. This supports our view that for some people, who are able to get release time and/or expenses paid for professional meetings, conducting continuing education courses in conjunction with professional meetings is

important. Two-thirds of the respondents had no in-service training, that they were aware of, available to them in their employing institutions. These people must look to outside organizations and their professional associations to provide continuing education.

The most meaningful professional learning experience had by the largest number of respondents was an on-the-job challenge. The category was checked by twice as many people as the next highest ranked category. This finding again points to the needs of the individual and to his/her responsibility to respond to the need at an individually motivated level. It also supports the need for information about what continuing education opportunities were available so that the individual can tap into them. The Clearinghouse on Continuing Education Opportunities, begun during this project and continuing, will serve this purpose.

In order to learn more about continuing education programming both in librarianship and in other professions, library organizations and organizations in professions known to be active in continuing education programming were surveyed.

A surprising finding was that some of the national library associations seem consistently less interested in supporting or sponsoring continuing education program than any of the other groups surveyed. For example, 3 of the 11 national library associations felt no responsibility for providing continuing education programs for any levels of their membership. National library associations ranked highest of all groups in their perceived "lack of membership interest" as a reason for not providing continuing education, and they ranked

lowest in the percentage of associations planning to offer continuing
education programming in the next two years although they were the
group with the second greatest potential for growth.

At this point in the study attention was turned to developing
a model continuing education program for health sciences library
staffs, based on the information gathered in the project. Some
options were considered, but discarded as not being economically
feasible or not appropriate to the environments in which the target
library staffs function, e.g. educational television, telephone
lecture networks.

The model developed addresses eight areas:

.. Optimal allocation of available resources.

.. The target audience.

.. Needs assessment.

.. Formats for delivering continuing education.

.. Methods for developing programs.

.. Identifying, training, and evaluating instructors.

.. The mechanics of conducting programs.

.. Quality control.

While the first and last mentioned are rather pervading features
intended to permeate the total model, they are spelled out as
separate entities to stress their importance in the model.

Under each component different possibilities are considered.
The final section of the report compares the Medical Library
Association's continuing education program as it was when the project
period began and when it ended, within the framework of the model.

During the project period the program grew in depth, variety, and in the number of people reached. Continuing education was no longer viewed as a series of one-day courses, but more as a frame of mind. Topics that were identified as indicative of subject content needs are not always best met by formal courses. Through newsletter articles and talks given by project staff the attitude of continuing education being a shared responsibility, but mostly the responsibility of the individual, was stressed. One important role of the Association is to enable the individual to perceive, identify, and tap into all the available resources, whether they be produced by the Medical Library Association or others.

Various sub-components of the model were tried and tested. We learned that we should build on the existing one-day programs, targeting them at specific audiences, further improving their quality, and providing them more often at annual and local meetings. We found that intensive residential institutes, while accomplishing their education objectives, tended not to be cost/effective unless co-sponsored by a similar organization which could bring in a larger number of potential participants than MLA's membership alone provided.

As a result of the project many activities occurred which would either have taken much longer to happen without the project support, or might never have happened at all.

Continuing education activities in a variety of formats have been developed. The existing one-day continuing education courses proved to be an important part of the total program and were significantly strengthened. The number of new courses developed

in areas ranked most highly in the needs assessment, almost
tripled as did the number of registrants and locations where they
were offered. This growth has continued to occur since the conclusion
of the project period. In a recent analysis by CLENE (Continuing
Library Education Network and Exchange) the Medical Library
Association proved to be the largest single producer of continuing
education activities in librarianship.

There is still a tremendous potential for further growth and
improvement. Demographic data in easily manipulated formats are
still not available, although this capability is expected within
the next six months. Continuing education programming is still
almost non-existent for the untrained and technician levels. Little,
within MLA, is available for the administrator of the large medical
library although he/she can tap into the Continuing Education
Opportunities Clearinghouse which continues to be published monthly
as a part of the MLA News. Home study courses and self-assessment
programming is only just beginning. There is insufficient staff
available to provide the types of individual and organizational
consulting services for continuing education and staff development
that would be desirable. These are areas that will be addressed
in the future.

Some of the indirect benefits of the project include the focus
which it placed on continuing education within the Association and
the profession. A full time staff member (Assistant Director of
Education) whose major responsibility is continuing education

programming has been added to the MIA Division of Education.

Project staff were provided the opportunity of working with an

educational consultant who brought to bear her experiences both as

an educator and from continuing education programming with other

organizations. Finally, the project provided data which reinforced

some things we felt we already knew intuitively, but can now

proceed forward with confidence, knowing that these intuitions

have been substantiated in more objective ways.