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ABSTRACT
        Job roles of preprofessional personnel in Federal
libraries in the Washington, D.C. area were studied in March and
April of 1973. A literature review showed library technicians to be
increasingly important to libraries. Indepth interviews were
conducted at 15 libraries concerning staff composition, job
descriptions, and educational requirements. Upward staff mobility was
found to depend on educational opportunities. Characteristic job
descriptions are included, and model curricula are described. A
timetable is suggested for an adequate educational program in the
Washington area. A bibliography is appended. (PF)

ALTERNATIVE EDUCATIONAL PATTERNS FOR CAREER OPPORTUNITIES

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Margaret E. Chisholm - *Project Director*

Charles R. Anderson - *Research Assistant*

1973

College of Library and Information Services
University of Maryland
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Maryland and the United States Department of
Agriculture, National Agricultural Library

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Rationale for study

Currently there is an increased awareness of the need to provide upward mobility for employees in many different employment environments. Emphasis is being placed on the importance of career ladders. In some respects it is far more realistic to consider the concept of career lattices or branching. The descriptive term career ladders indicates one upward path, and this is rather restrictive and inhibiting. The concept of branching on career lattices implies that in each career there are plateaus or decision points and at those points there should be provided alternative job advancements and educational opportunities based on a combination of training and experiences.

The National Agricultural Library and the School of Library and Information Services of the University of Maryland have worked cooperatively on several projects including "An Experimental Educational Program in Library and Information Services." The focus of past efforts have been upon the professional staff. The current research project was initiated by a recognition that an investigation of educational and on-the-job experiences which could be synthesized to provide upward mobility opportunities for all personnel was needed.

Scope

A number of anticipated products were projected in the original research proposal. Time, financial constraints, and a growing understanding of the

magnitude of some of the problems involved forced a narrowing of scope as the project developed. The development of a fully approved plan of articulation among institutions (one of the anticipated products) proved to be impossible given the current confused state of knowledge regarding exact curriculum content and purpose of the various existing programs. A recommendation for a study to collect the data needed to develop such a plan is made at the conclusion of this report. Similarly, while some generally agreed upon perceptions of job roles in Federal libraries were developed, the data needed to make definitive recommendations for job roles would have required a much greater committment of resources than the present project permitted.

This report, therefore, focuses upon the current situation regarding education and man-power needs at the pre-professional level in Federal libraries in this geographical area. It is a "Final" report only in the sense that it represents the best effort of the project team within the time and resource constraints to identify and explore problems and present recommended solutions. It should be considered as merely prolegomena to the needed research in this area.

Format of report

Chapter I presents a narrative summary of the literature and some information on the current status of technician programs. Chapter II reports the results of a survey of local employment patterns including employment needs and opportunities in Federal libraries. Chapter III discusses role definition at the pre-professional level and includes a number of model job descriptions. Chapter IV and V identify and discuss appropriate curriculum and educational programs on the basis of the present state of knowledge

about employer needs. An annotated bibliography, samples of data collection

instruments, and appendices are included at the end of this report.

CHAPTER I

LIBRARY TECHNICIANS - A SUMMARY OF DEVELOPMENTS

Professional interest in a middle level of library workers, between

clerical and professional, received little serious attention in the lit-

erature until the 1960's; although some programs, particularly those

training sub-professionals for special libraries, were reported earlier.[1]

(149)

When the "Manpower Shortage Crisis" descended upon the library pro-

fession, this middle level class of employees was seen by some librarians

as a partial solution to the problem. (Various names have been applied to

this class of workers - Library Technician, Library Technical Assistant,

Library Aide, Library Assistant, Sub-professional assistant, or Library/Media

Technical Assistant. With the exception of Library Aide, a term often

applied to public library personnel with a Bachelor's degree and non-degree

assistants to school librarians, the abbreviation LMTA, although at times

incorrect historically, will be used for the other terms throughout this

study.) Opinions about the utilization of LMTAs, however, were not unan-

imous among librarians.(13,16,20,22,24) At the 1965 ALA Midwinter meeting,

the Library Education Division Executive Board approved this statement:

> The consensus of Board opinion is that the establishment of courses
> for the training of library clerks or assistants in junior colleges
> should not be encouraged. While there is a need for library technicians

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[1]Numbers in parentheses in this report refer to items in the anno-
tated bibliography pp. 107-129.

and even though some courses are being given, there appears to be
no evidence that they have been successful. It was noted that the
Personnel Committee of the New York Library Association has recently
recommended against a proposal for the establishment of undergraduate
training programs. There are no standards for such courses.[2]

It is worth noting,however, this was a consensual, not a unanimous opinion.[3]

A dissenting opinion to this statement was presented by Louis Shores in

1966.(18) The Federal Government recognized the library technician including

the possibility of junior college preparation by issuing in 1966 the GS-1411

classification series for "Library Technicians."(74)

A 1968 survey (1) noted the following concerns about LMTAs in the lit-

erature:

A. Questions raised about the LMTAs often focused on five problem areas:

   1) LMTAs would become cheap substitutes for librarians and lower the

      intellectual level of the field;(16,24,37)

   2) no clear distinction existed between job classifications for pro-

      fessionals and non-professionals;

   3) the potential employment market for LMTAs was uncertain, and students

      were often given unrealistic expectations;(20)

   4) community colleges were beginning to establish programs of uncertain

      value with no standardization;(24) and,

   5) the community college curriculum would not give students adequate

      preparation in general education to permit them to work towards a

      graduate degree in librarianship.(65)

B. Those in favor of the LMTA concept viewed it as an important part of the

   solution to the manpower shortage.(17) These writers felt that by devel-

   oping an LMTA class of employees the wasteful use of professional staff

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[2]LED Newsletter, No. 53 (March, 1965), pp. 2-3.

[3]Personal communication, Dr. W. B. Lukenbill, Jan., 1973.

time would be curtailed,(14,22) and analysis and clarification of pro-
fessional and non-professional duties would be encouraged.(12) This in
turn, it was suggested, might stimulate recruitment of better librarians(22)
and upgrade the profession.(128) Comparisons were made to other programs
such as medicine which have long recognized a need for various levels of
workers. (13,150)

The first significant survey of library technician programs was made in
1965 out of concern for the acute manpower shortage. This survey identified
26 formal programs for library technicians at that time.(15) By 1967, interest
in these programs had increased sufficiently to lead to study by an inter-
divisional committee of the Library Administration Division and the Library
Education Division of ALA. The report of this committee (often referred
to as the Deininger Report from its chairman, Dorothy F. Deininger) produced
a statement of definition for the sub-professional or technical assistant
which was adopted by the Library Administration Division and The Library Ed-
ucation Division at Mid-winter, 1968:

> Library Technical Assistant duties are based on skills required by
> the Library Clerk, but in addition, a proficiency developed in one
> or more functional areas or in certain limited phases of library
> service. Library Technical Assistants will generally follow estab-
> lished procedures which have been developed by Librarians. They work
> under the supervision of a Librarian and may supervise and direct
> Library Clerks or clerical staff. In a closely coordinated library
> system, a Library Technical Assistant may be responsible for a service
> unit.(26)

Also in 1967, a national conference on library technology was held in
Chicago which in turn led to regional workshops, the initiation of a News-
letter, and the formation of the Council on Library Technology (COLT) which
met in Toledo, Ohio May 23-25, 1968.(19,32,51,65)

Since the 1965 survey referred to earlier, the number of formal programs
offered or planned in community or junior colleges had increased by some 400

per cent by 1971 although the rate of growth in the past two years has been

markedly slower than the 1967-1970 period. During the earlier period, 77

new programs were begun; however, in 1971 only seven new programs were developed,

and four were planned for 1972. In addition, a number of programs have been

discontinued - 29 between 1968 and 1971. Reasons given for this discon-

tinuance in most cases were lack of student enrollment and/or lack of job

opportunity.(56) Another view of the growth picture can be seen from a com-

parison between enrollment data for 1967 and 1970.(30,56) In 1967, 468 full-

time students and 1023 part-time students were reported; for 1970, the figures

were: 770 full-time and 1,848 part-time. Yet a composite picture of 1967

enrollees indicated the typical program would have thirteen full-time students

and twenty-four part-time, while in 1970 a typical program had twelve full-

time students and twenty-nine part-time. There are indications of a slight

increase in the typical program between 1971 and 1972 in a limited survey

taken in 1972. This survey reported a mean enrollment of forty-nine students

full and part-time, based on reports from twenty-one institutions.(55) How-

ever, data collected in March, 1973 by this investigator suggests, on a very

tentative basis, the possibility of some leveling-off, if not a decrease in

growth rate.

The current growth status of library technician programs is not directly

ascertainable at this time. The Council on Library Technology is beginning

a project to gather data for a new edition of the COLT Directory, and a dup-

lication of COLT's efforts in this survey would have been unwarranted. How-

ever, California and Texas, as two states which have done considerable work

in formalizing their library technology programs, were selected to collect

some data on current enrollment, graduations, and placement. One-page forms

requesting statistical data only were sent to twenty-two community colleges

in California, and the three colleges in Texas listed by the 1971 COLT
Directory as having library technology programs. Replies were received from
eight schools in California, and no replies were received from Texas.

Based on data contained in the 1971 COLT Directory, had the eight schools
which replied to the above questionnaire been selected by a random sampling
operation, there is a 99.9 per cent probability that the difference between
the mean enrollment figure for these schools (36.6 - full and part-time) and
the mean enrollment for all programs listed in the Directory (36.8) was not
due to chance.[4]

Without suggesting that the responses from these eight schools giving
data for 1972-73 represent in any valid statististical sense a random sample
permitting generalizations about present programs in the U.S., this review
merely reports that the mean enrollment for these schools in 1973 was forty-
three students, the mean number of graduates was nine, and the placement rate
was sixty-eight per cent.

In 1967 the typical program produced five graduates and placed all of
them; in 1972 the mean number of graduates was seventeen and only fifty-eight
per cent were placed in library technician positions. (Some caution should
be exercised in drawing conclusions from these comparisons due to differences
in survey techniques and numbers of institutions surveyed.) A 1971 study
indicated a placement rate of seventy-seven per cent.(58) Furthermore, while
the total enrollment in technical assistant programs in California increased
sixteen per cent from 1971 to 1972, in 1973 there was an eighteen per cent
decrease, with a mean 1973 enrollment for all California programs of forty-nine.

Since the period of rapid growth in institutions for training LMTAs, a

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[4] attained t value = 0.012. s.d. for eight schools = 20; population s.d.
= 36.3. Mean for all programs calculated from data in 1971 COLT Directory.(57)

number of problems referred to earlier have been addressed by the profession.
The Library Education Division of the American Library Association has devel-
oped, revised and adopted as official policy criteria for programs in junior
and community colleges.(77) Efforts at standarization of programs have been
made in several states.(41,88,89,92,95) A number of studies have clarified
role identification and task analysis for non-professional employees in
libraries.(56,61,63,131,133,135) Problems in the acceptance of library tech-
nicians by the working librarian still exist, but given the entire tone of
the literature, and the present direction taken by the American Library Assoc-
iation, it does not seem reasonable to postulate a sudden reversal of a trend
towards more effective utilization of LMTAs.

Canadian programs, begun in 1966, took a different direction than Amer-
ican programs initially. Three major differences were noted: 1) the Canadian
Library Association took a more active part in the development of programs,
giving it more influence over content and direction; 2) there was more uniform-
ity in development throughout Canada than in the U.S.; and, 3) there was more
concern in Canada for the mobility of graduates and less emphasis on training
for local needs only.(118) As noted above, there are indications that the
first difference may be reduced in the future which may in turn lead to more
uniformity and perhaps, certification of LMTAs.(56)

CHAPTER II

LOCAL EMPLOYMENT PATTERNS IN FEDERAL LIBRARIES

To gain some perspective on current and future manpower situations in
Federal libraries in the Washington area, a survey using in-depth personal
interviews with library directors was planned. Initially, forty-three li-
braries were identified (through directory sources) as being of sufficient
size to affect manpower trends locally. The smallest library surveyed em-
ployed a total of fifteen persons in the categories of librarian, specialist,
technician and clerk, while the largest selected had some 4,000 employees.

Of the initial forty-three, eleven libraries were eliminated for various
reasons which included mergers with other libraries, incorrect directory
entries, and unique library situations. Of the remaining thirty-two, seven
libraries refused to participate in the survey, citing lack of time as the
major reason. The three National Libraries were considered separately from
all other libraries due to the large differences in staff size. In-depth
interviews were conducted at fifteen libraries, four libraries provided sta-
tistical data only, and the remaining three were not used in the survey due
to time constraints. Two of the three National Libraries could not provide
any data other than the gross total of employees and the number of library
technicians; therefore, the survey focused on the small and medium sized
libraries in this area. All libraries were guaranteed complete confidentiality.

Interviews, held during late March and April, 1973, were fairly structured
and followed, in general, guidelines provided by the Department of Labor in
a nation-wide manpower survey questionnaire. The following list provides an

outline of significant areas covered in interviews:[1]

1. Staffing

    A. Numbers

        1. 1410 series - Professional Librarians
        2. 1412 series - Technical Information Specialists
        3. 1411 series - Library Technicians
        4. Clerical

    B. Sex and race characteristics of employees; changes in sex, race, and age composition of staff over the past five years; factors influencing these changes.

II. Job roles

    A. Changes over past five years
    B. Anticipated changes over next ten years

III. Educational background and qualifications for employment of staff

IV. Upward mobility and manpower problems

    A. Reductions and increases in staff
    B. Sources of new staff members

V. Manpower projections

Given the nature of the interviews and the subject matter covered, results, with the exception of hard data supplied in certain categories, are presented in narrative summary form, synthesized and interpreted by the investigator to form coherent pictures of attitudes.

Staffing

The total manpower situation has remained remarkably constant over the past five years, with a net loss in total employment among libraries surveyed amounting to only 0.01 per cent.[2] Within this total, however, several significant changes should be noted which affect the educational programs

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[1]Base periods used were end of fiscal or calendar years 1972 and 1967.

[2]Includes only one of the three National Libraries for reasons noted earlier.

discussed in other sections of this report. These changes occured in two

categories, Technical Information Specialists and Library Technicians, as

Table 1 shows:

TABLE I

CHANGES IN LIBRARY STAFFING,
1967-1972, BY JOB CATEGORY[a]

Category	1967	1972	% Increase (+) or Decrease (-)
Librarians	177	194	+10%
Technical Information Specialists	73	46	-37%
Library Technicians	188	220	+17%
Clerks	81	55	-32%
TOTAL	519	515	

[a]In addition to these figures, approximately 562 persons are
currently employed in two National Libraries in jobs equivalent
to the library technician category out of a total work force
of some 4,665 persons. Table includes only one of the three
National Libraries.

In addition to the marked drop in utilization of the Technical Infor-

mation Specialist series, it should be noted that, while the ratio of

librarian to clerk has remained very nearly constant at 1:.28, the ratio of

librarian to library technician has changed from 1:.97 in 1967 to 1:1.1 in

1972. Technicians are utilized far more extensively in the small or medium

sized libraries than in the National libraries. In the small or medium sized

libraries, forty-three per cent of the total work force are in the 1411 series; in the National libraries, only fourteen per cent are reported in this category.

With regard to sex and age characteristics of library employees, the only agreed upon change has been in a lowering of age levels. Slightly less than half of the libraries feel there has been no change in the past five years in the numbers of minority employees; the rest have noted an increase in minority employment, primarily black. Half the libraries feel the distribution of male and female employees has remained constant; the remainder are divided in believing there are more_men or women now than in 1967. Table 2 shows present estimates of distribution by sex and race.[3]

TABLE 2

SEX AND RACE CHARACTERISTICS BY JOB CATEGORY[b]

	Female	Male	White	Minorities
Librarians	65%	35%	89%	11%
Specialists	61	39	91	9
Technicians	63	37	53	47
Clerks	76	24	56	44

[b]does not include any of the National Libraries

When asked to discuss factors which have influenced any changes noted, respondents placed the most emphasis on recruitment policies and an increase in the supply of qualified applicants. Other factors, such as changed salary

[3]One library is excluded from these results due to restrictions on maintaining race data.

levels, changing economic or social conditions, or personnel policies were
felt to be of little importance.

Two-thirds of the libraries did not have a formal recruitment program
for increasing the number of minority group members. Of the libraries
giving formal attention to minority recruitment, the method most used was campus
recruitment at minority schools, i.e., at the professional and specialist
level - a perhaps natural focus given the near balance noted at the technician
and clerical level in Table 2. Some libraries commented upon minority re-
cruitment problems caused by hiring from the Federal Register, and two
libraries felt recruitment efforts were hampered by a lack of qualified
minority applicants.

In only one-quarter of the libraries were staff positions reduced
during the past year, while a total of seventy-five positions were filled
in all libraries surveyed.

TABLE 3

REDUCTIONS AND ADDITIONS TO STAFF POSITIONS
(end of FY or CY 1972)

Category	Number Reduced	Number Filled
Librarian	8	21
Specialist	4	2
Technician	2	22
Clerk	4	21
TOTAL	18	66[a]

[a] an additional fifteen persons were hired in the categories
of technicians and clerks in a single library, but this particular
library could not provide a breakdown. Includes one of three National
Libraries.

Job Roles

Interviewees were asked to discuss changes which might have taken place over the past five years in job roles of librarians, specialists, technicians, and clerks. The general consensus regarding librarians was that more complex tasks were being performed, particularly those requiring subject specialization and knowledge of electronic data processing. Specialists, it was felt, now performed more indexing and abstracting than in the past, although one library noted that librarians had taken over many of the tasks formerly performed by specialists. There was general agreement that technicians were now performing more duties which were semi-professional and being used more often at ready-reference desks. There was a corresponding increase in level of responsibility noted for clerks who assumed former technician roles. Looking ahead to the next ten years, two primary trends were noted: 1) more utilization of technicians for public service at ready-reference desks,[4] and 2) more subject specialization and research analysis for librarians. Nearly all agreed on increasing use of the computer, and several libraries planned to become distribution centers rather than collection builders.

Education

This section of the survey was designed to discover policies of the various libraries in the area of hiring requirements as well as present educational levels of staff. All but two libraries surveyed followed minimum requirements for hiring as outlined by the U.S. Civil Service Qualification Standards. (See Appendix B.)

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[4]one library felt some technicians would be replaced by computer control of serials.

In addition to minimum requirements, the directors were asked about additional qualifications they tended to seek in recruiting, e.g., additional education, experience, personal characteristics. Experience was favored over education; more than half of the directors giving primary importance to experience with or without education. When desired educational areas were specified, they tended to cluster around the physical sciences and the social sciences. In only one case was there specific mention of an attempt to evaluate the applicant's general intelligence, despite educational background and experience.

Two-thirds of the directors felt their staff lacked necessary educational preparation for specific jobs being performed. Weak areas noted were either in areas such as languages, statistics, or government documents, or in general areas such as supervisory skills or practical skills. When asked to comment on the adequacy of library education in preparing graduates for work in their libraries, dissatisfaction with present programs in general (only one library school was specifically identified by three directors) was apparent.

In addition to the usual criticism of an overemphasis on theory at the cost of practical skills, several directors criticized a lack of "service orientation" on the part of recent graduates. An illustrative comment was "we don't seem to be getting any 'people' librarians anymore." Several specific curriculum areas were mentioned as inadequate - legal bibliography, micropublications, and administrative skills. One director felt there was an overemphasis on computers at the expense of traditional librarianship at one particular library school.

Although most interviewees felt that educational qualifications for staff would remain about the same over the next ten years, there was some indication

that more persons with a second graduate degree would be sought. At present,
nine per cent of the librarians hold double degrees. Full characteristics
of educational background are given in Table 4.

TABLE 4

EDUCATIONAL BACKGROUND OF PRESENT STAFF BY JOB CATEGORY
(end of FY or CY 1972)

Education	Librarian	Specialist	Technician	Clerk
Less than HS diploma				11.6%
HS diploma	5.0%	9.6%	77.4%	81.4%
Some college	8.3	42.8	10.2	4.6
Associate degree				
Library Science			0.8	
Other	1.7		9.4	
Bachelor's degree				
Library Science	1.7			
Other	8.3	9.6	2.3	2.3
Graduate degree				
Library Science	66.0			
Other		38.0		
Double degree				
Library Science				
Plus other	9.2			
TOTAL[a]	100.2	100.0	100.1	99.9

[a]may not equal 100 per cent due to rounding error

The most notable fact which emerges from the above data is the relatively
slight incursion in small and medium sized Federal libraries in this geograph-
ical area of graduates of community college associate degree programs in
library technology, although this degree has been recognized as fully qualifying

for appointment in the Library Technician series since 1966.

Upward Mobility and Manpower Programs

In general, the hiring pattern noted in Table 5 has not changed over the past five years. That is, approximately sixty-seven per cent of the

TABLE 5

SOURCES OF PERSONNEL PLACED BY JOB CATEGORY[a]
(end of FY or CY 1972)

Source	Librarians	Number Specialists	Technicians	Clerks
New graduates:				
1) library programs	14	-	-	-
2) non-library programs	-	-	6	3
In-library promotions	1	-	8	4
Transfers from other Federal libraries	4	1	2[b]	5[b]
Transfers from non-library occupations	1	1	6[c]	6[c]
Re-entrants to labor force	1	-	4	1
Military Service	-	-	1	-
TOTAL	21	2	27[d]	14[d]

[a]totals differ from Table 3 since Table 5 includes promotions and transfers and new hiring. Where more than one source applied, the first on the list was used.

[b]an additional 5 persons were transfers as noted in the undifferentiated category of technician/clerk.

[c]an additional 10 persons were transfers as noted in the undifferentiated category of technician/clerk.

[d]the additional 15 persons noted in b and c above will increase these totals.

professional librarians hired have been new graduates from library schools, while in the technician/clerk category (undifferentiated due to data collection restraints) only sixteen per cent are recent graduates with in-library promotions and transfers from other Federal libraries accounting for twenty-one per cent each of the new technicians and clerks, and an additional thirty-nine per cent of these workers coming from non-library occupations.

Should this hiring pattern continue, the noted reliance on workers with experience in the technician and clerk categories suggests that programs for continuing education for upward mobility may be of more importance than developing programs for two year A.A. degrees at community colleges. There are some indications from data collected from studies in other areas of the country, particularly California, that this corresponds to nation-wide trends, i.e., community college programs in library technology often tend to be largely composed of part-time students, many of whom are already employed in libraries.

Some support for the above suggestion may be found in responses to questions about specific occupations for which directors found it difficult to obtain qualified personnel. The two major difficulties found were in the technician and clerical categories, and the major reason given was a general shortage of trained personnel. The most usual solution was to hire persons with less than the desired qualifications and train them on-the-job; the second most prevalent tactic being to help existing staff obtain formal education. Since the respondents tended to include sending new personnel to formal courses such as those offered by the USDA Graduate School in their concept of on-the-job training, this reinforces the importance of part-time college training courses for present workers. Not surprisingly, the only positions which most directors felt they had no difficulty in finding qualified personnel to fill were at the professional librarian level.

Manpower Projections

Only half of the libraries surveyed had developed any projections of
employment needs for the future. Although some of these projections seem
overly optimistic given the growth rate noted earlier, they do include esti-
mations of turn-over rate due to retirements and resignations. No simple
amalgamation of figures is possible since each library computed projections
over differing time spans and on different bases. However, Table 6 gives some
indications of future expectations.

TABLE 6

MANPOWER PROJECTIONS

Job Category	Time Span 1973-1978	Time Span 1973-1983	Total
Librarian	47	-	47
Library Technician	14	115	129
Specialist	-	-	-
Clerk	4	-	4
All categories[a]	104	-	104
TOTAL	169	115	284

[a]one library had developed a projection, but had
not broken this down by job category in order to retain
flexibility.

It is only possible to identify, on the basis of the above figures, an
expressed need for some 129 library technicians over the next ten years, and
a specific need for forty-seven additional librarians over the next five years,
with an additional 104 persons to be hired in whatever category seems most

needed at the time (for a total of 284 additions over a ten year period).
Furthermore, given informal expressions of turnover rate in the National
Libraries, there are suggestions that these three libraries will require
replacement of some 640 library technicians over the next ten years.

Conclusions

Although minority groups in the Washington area compose 72.4 per cent
of the population,[5] they fill only about ten per cent of the higher level
jobs in small and medium-sized Federal libraries in this area. The large pool
of minority workers in the technician and clerical categories could provide
ample human resources for higher level jobs given opportunities for upward
mobility. Given the alternative routes to the 1410 series provided by Civil
Service regulations and the anticipated projections of educational qualifi-
cations of staff, there are indications that some twenty-five per cent of the
openings in the 1410 series will be available for persons who do not follow
the traditional M.L.S. route to become professional librarians. Since entry
to the 1410 series can also be based on a combination of experience and exam-
ination, it seems reasonable to assume that upward mobility can be furthered
by the provision of educational opportunities for present workers to better
prepare for the Federal librarian examination. Furthermore, the expressed
need for additional trained library technicians calls for specific attention
to educational programs for technicians, primarily geared for present clerical
employees as suggested earlier.

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[5]U.S. Department of Commerce, Bureau of the Census, Statistical
Abstract of the U.S. (Washington, D.C.: Government Printing Office, 1972),
p. 23.

CHAPTER III

JOB ROLES

Until very recently, formal attempts at job role definition for LMTAs

and Library Associates have, with the exception of the Federal government,

generally been based upon the philosophical position expressed in the Amer-

ican Library Association's Library Education and Manpower statement. Federal

libraries using the U.S. Civil Service Commission's Classification Standards,

which lack a category equivalent to the Library Associate, tend to include

job functions defined in other libraries by the Associate category in the

Library Technician category. A new trend in role definition for technicians

can be seen in the work of the Recruitment Task Force of the Federal Library

Committee which has been drafting suggested "bench-mark" position descriptions.[1]

Sample job descriptions are presented in the following pages to illustrate

these three trends.

Non-Federal Library Job Descriptions

Job Title: Library Technical Assistant I

Job function

Under general supervision, performs technical work in processing,

recording, filing, and circulation of library materials.

Characteristic tasks

1. Operate and maintain circulation desk

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[1] Samples of Library Technician "bench-mark" position description
drafts produced by the Recruitment Task Force of the FLC are included
courtesy of Ms. Omdahl and Mr. Cylke of FLC.

2. Place materials on reserve

3. Interpret library rules to users

4. Assist in public service areas

5. Assist users in audio-visual materials, equipment and reprography equipment

6. Process interlibrary loans

7. Do simple bibliographic searching and order checking

8. Supervise stack maintenance and shelving in smaller libraries

9. Assist in the maintenance of serials

10. Under supervision, catalog with Library of Congress cards if no problems
    are involved

11. May supervise clerical employees

Qualifications

    Education: Associate degree with LMTA training or one-year certificate
        with equivalent library experience

    Experience: Two years library experience if lacking the A.A. degree

    Skills: Proficient in clerical, oral, and written communication and
        able to work with staff and public

- -

Job Title: Library Technical Assistant II

Job function

    Under general supervision, performs moderately complex technical
library work requiring wide knowledge and experience in library procedures.

Characteristic tasks

1. Do moderately complex bibliographic checking in English and possibly some
   foreign languages

2. Establish and maintain serial records

3. Perform elementary reference work

4. Supervise student assistants including work schedules and training

5. Schedule and direct shelf-reading program

6. Supervise operation of circulation desk

7. Direct the activities of a subsystem in cataloging or acquisitions departments

8. Do simple cataloging

9. Supervise LTA I and clerical staffs

Qualifications

    Education: Same as LTA I

    Experience: At least two years in LTA I classification with increasing responsibility

    Special skills: Same as LTA I

- -

Job Title: Library Associate

Job function

    Performs work involving a wide variety of duties including possible supervision of a library function, with opportunity for considerable degree of independent judgement.

Characteristic tasks

1. Supervise small branch or departmental library

2. Assist in collection development

3. Provide reference service at information desk

4. Perform original cataloging in subject area

5. Prepare bibliographies

Qualifications

    Education: Bachelor's degree from accredited four-year college including a minor in library science or the equivalent in in-house

training courses

Experience: None required

- - - - - - - - - - - - - - --- -

Federal Library Job Descriptions

Job Title: Library Technician GS-4

Job function

Under supervision of a librarian or supervisory library technician, performs a variety of detailed, non-routine, or more complex or non-professional duties following prescribed or standardized methods or instructions.

Characteristic tasks

1   Coding, searching for, recording or filing materials.

2.   Processing duplicate non-fiction and adult fiction titles which are being added, reclassified or reinstated.

3.   Searching catalogs and shelf list.

4.   Identifying and maintaining records of foreign language serial publications.

5.   Shelf maintenance of special collections.

6.   Maintenance of system of circulation controls, such as reserves, renewals, overdues and inter-library loans.

7.   Receive calls requiring skill in sensing the meaning and intent of the request.

Qualifications

See Appendix B

- -

Federal Library Job Descriptions

Job Title: Library Technician GS-5

Job function

Under supervision of a librarian or supervisory library technician, performs tasks which involve use of a significant specialized knowledge of a) the particular library's functions, services, practices and procedures; b) the terminology content and classification scheme of the library's collection or a specialized collection; or c) both.

Characteristic tasks

1. Bibliographic work -- prepares entries for acquisition, verifies data, searches trade journals, catalogs and reference tools

2. Maintains serial checklist -- recording and searching

3. Performs cataloging, either temporary or preliminary and original cataloging in brief form, adaption of LC cards, cataloging new editions

4. Aids individuals in use of library resources by locating materials through catalog, on shelves, etc.

Qualifications

See Appendix B

- -

Job Title: Library Technician GS-6

Job function

Under general technical supervision of a librarian or supervisory library technician, performs work in one or more of the functional areas of librarianship (such as acquisition, cataloging and reference) to provide

technical support and relieve the professional librarian for higher level
and more demanding responsibilities.

Characteristic tasks

1. Performs bibliographic searching of difficulty requiring extensive searching.

2. Performs descriptive cataloging of specific library materials.

3. On second shift, serves as person in charge; aids individuals, answers
   ready-reference questions, etc.

4. May supervise one or two lower grade employees.

Qualifications

See Appendix B

- -

Job Title: Library Technician GS-7

Job function

Under general technical supervision of a librarian who is located either
within the local library or at a higher organizational level, works on the
basis of a general assignment of responsibilities and follows through the
full continuity of the job.

Characteristic tasks

1. Responsible for operation of a small branch, bookmobile or hospital library
   where the subject area is relatively narrow or non-technical, and where
   acquisition and cataloging is done centrally.

2. Acquisition services for a library of significant size or group of libraries,
   responsible for checking order data, etc.

3. Performs descriptive cataloging, possibly of materials in foreign languages.

4. Performs difficult searching in special subject fields.

5. Gives book talks or other presentation to groups.

6. Establishes working relationships within the library and with library clientele.

Qualifications

     See Appendix B

- -

Draft Bench-mark Positions - Federal Libraries

Library Technician II (GS-5)

Duties:

    Performs a variety of technical and quasi-professional duties in a general, academic, specialized or combination general and specialized library.

In the Technical Processes Area:

    - Prepares bibliographic entries for materials to be acquired.

    - Maintains serial checklist including the following duties:

       a) Records and identifies a large volume of periodicals with a wide range of subject matter, formats and foreign languages.

       b) Searches decision files, order records and bibliographic works for titles.

    -Performs cataloging, either temporary or preliminary, and original cataloging of routine nature.

    -Adapts Library of Congress printed cards to specific needs of the library.
    -Types catalog cards from rough draft

    -Prepares materials for binding. Work includes assembling, sorting, collating, designating type of binding and lettering to be used.

    -Files or supervises lower grade employees who file into card catalog and shelf list.

Work may entail several or all of the above duties depending on the volume of library acquisitions. In addition, may assist with other tasks such as circulation of materials, assisting users in locating materials, maintain shelf order or inter-library loans.

I. Job Requirements and Difficulty of Work Requires:

    -Knowledge of standard bibliographic tools and or special subject journals.

    -Knowledge of the terminology of the library's special subject field.

    - Knowledge of periodical indexes.

-Knowledge of rules for serials control.

-Sufficient familiarity with one or more languages to recognize identifying titles or subjects in a specialized field.

-Knowledge of the Anglo-American Filing rules and ability to interpret them to other personnel.

-Knowledge of the Dewey Decimal Classification System, Library of Congress Classification, or other system(s) used by the library.

-Knowledge of the basic rules for subject and descriptive cataloging.

The work involves technical duties which require application of specific knowledge. Initiative and judgment are necessary.

II. Responsibility

Works independently within established guidelines with limited supervisory responsibility for lower grade personnel. A librarian is usually available to consult on unusual problems, but person sometimes works alone in a small facility. The work requires that judgment be exercised in selecting best procedures for handling library materials, and deciding which matters to refer to others.

III. Personal Relationships

Contacts are with supervisor, associates, library users, library jobbers and contractors.

- -

Library Technician II   (GS-5)

Duties:

Performs a variety of technical and quasi-professional duties in a general, academic, specialized or combination general and specialized library.

In the Public Services Area:

-Performs difficult bibliographic searches to verify author, title, edition, publisher, date and place of publication of materials needed on inter-library loan.

-Initiates inter-library loan requests to other agencies to obtain hard-to-locate materials.

-Answers ready-reference questions.

-Aids patrons in use of library resources by giving assistance in physical location of materials and help in using card catalog and indexes.

-Does basic readers advisory in recommending books to patrons.

-Performs all facets of circulation desk duties indluding registration of borrowers, charging and discharging of books, calling in overdue materials, placing reserves and searching shelves.

-May train or supervise lower grade personnel in circulation desk routines.

Work may entail several or all of the above duties depending on the size of library holdings, variety of resources and patron usage. In addition, may assist with other tasks such as cataloging and book processing, acquisitions, bindery, etc.

I. Job Requirements and Difficulty of Work Requires:

-Considerable knowledge of library's organization, services and facilities.

-Knowledge of library circulation rules, policies, and procedures and ability to interpret these to others.

-Ability to train and supervise others of lower grade in circulation desk routines.

-Good knowledge of Dewey Classification System, Library of Congress Classification, or other system(s) used by the library.

-Knowledge of standard bibliographic tools plus technical subject periodicals and indexes.

-Knowledge of the technical terminology of the subject specialty of the library.

-Knowledge of American Library Association's Inter-library Loan Procedures.

-Knowledge of resources of other agencies from which needed materials can be borrowed.

-Ability to use ready reference sources.

-Ability to demonstrate use of card catalog and simple indexes to library patrons.

-Knowledge of library resources sufficient to aid patrons in selecting materials to meet informational requirements.

-Ability to recognize identifying information on books or documents in a variety of foreign languages - but full knowledge languages is not required.

Work involves a complex of technical library routines which vary considerably and require the use of considerable initiative and judgment in the application

of library regulations, or the use of a variety of standard references or guides.

II. Responsibility

Works independently within a framework of established policies rules, and regulations, but must apply considerable judgment in their application. Work is under supervision of a Librarian or Supervisory Library Technician who is not always present. Work is primarily reviewed for overall effectiveness, quality of services rendered and compliance with policies and procedures.

III. Personal Relationships

Deals with the clientele of the library in providing services or explaining library rules and regulations. Has contacts with personnel in other libraries in locating inter-library loan sources, and works with other personnel in circulation services.

- -

Library Technician III   (GS-7)

Duties:

Performs a variety of duties in the Public Services area of a general, specialized, or combination general and specialized, library:

-Performs complex bibliographic searching (incorrect or fragmentary information, obscure items) requiring use of extraordinary sources of information within and outside the library.

-Provides reference assistance involving both ready-reference and more difficult requests.

-Prepares reports.

-Prepares bibliographies providing complete citations.

-Performs abstracting and/or indexing services.

-Based on review sources and knowledge of library holdings and user needs recommends materials for purchase.

-Edits library bibliographic publications.

-Identifies, acquires, maintains, and controls serials and periodicals.

-Serves as the individual in charge of all circulation desk activities to include decision on workload priorities, work schedules and job assignments.

-Instructs and guides library patrons in the use of card catalog, bibliographies, and other reference books.

-Selects and prepares materials for binding.

-In charge of documents collection to include selection, acquisition, cataloging, processing, and reference services.

-Trains and supervises lower graded employees.

-Responsible for the operation of a small branch library where subject area is narrow or general.

Work may entail one or more of the above duties depending on the size of library holdings, variety of resources, size of staff, and utilization.

I. Job Requirements and Difficulty of Work Requires:

-Knowledge of library policies, rules, and procedures.

-Thorough knowledge of Dewey Classification System, Library of Congress Classification, or other system(s) used by the library.

-Knowledge of Anglo-American Filing Rules (in excess of 200).

-Ability to deal with patrons courteously and helpfully.

-Thorough knowledge of reference sources.

-Ability to identify information and resources in one or more foreign languages.

' -Ability to type.

The work involves technical duties which require application of specific and specialized knowledges. Duties are mostly non-repetitive and involve the ability to analyze requirements.

II. Responsibility

Works independently in a situation where guidelines are not always established. A supervisor is normally available to deal with unusual prob-lems. Work is spot-checked for technical adequacy.

The work requires choices of procedure in dealing with patrons in person and over the telephone.

III. Personal Relationships

Contacts are with supervisor, associates, patrons of the library, personnel in other government and civilian libraries, and library jobbers.

IV. Physical Effort and Work Environment

Work is performed in a library or office environment and entails con-siderable standing and walking. Occasional lifting up to thirty pounds may

be required.

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Library Technician IV GS-9

Duties:

Performs a variety of duties in the Public Services area of a general, specialized, or combination general and specialized library:

-Performs reference service which requires an in-depth knowledge of subjects covered in the collection.

-Performs complex bibliographic searching not accomplished by lower graded employees involving the use of unconventional sources of information both inside and outside the library.

-Has major responsibility for library service pertaining to a special collection of technical materials.

-Establishes systems and has the complete overall responsibility for the circulation of materials.

-Incumbent may be in charge of the library in the absence of the librarian and uses independent judgment in handling requests and problems.

-Trains and supervises lower graded personnel and maintains equitable distribution of workload.

-Is assigned special projects for independent completion within a subject, language, or functional specialty.

Work may entail one or more of the above duties depending on the size of library holdings, variety of resources, size of staff, and utilization.

I   Job Requirements and Difficulty of Work Requires:

-Thorough knowledge of library policies, rules and procedures.

-Thorough knowledge of Dewey Classification System, Library of Congress Classification, or other system(s) used by the library.

-Knowledge of Anglo-American Filing Rules (in excess of 200).

-Ability to exercise initiative and to resolve most problems.

-Thorough knowledge of reference sources inside and outside library.

-Competence within one or more subject or functional areas.

-Ability to use resources in one or more foreign languages.

-Performs duties with minimum supervision receiving guidance when work is of an unusual nature or changes in policy and functions are involved.

The work involves technical duties which require high level application of specific and specialized knowledges. Duties are mostly non-repetitive and require the ability to analyze, define, and satisfy requirements.

II. Responsibility:

Works independently in a situation where guidelines are seldom established. A supervisor is not always available to deal with unusual problems. Work is reviewed for overall accomplishment.

- -

Changes in work roles merely hinted at in the survey reported in Chapter II are given far more extensive consideration in the suggested "bench-mark" positions. Many of the duties listed in these "bench-mark" descriptions are ones traditionally associated with "professional" responsibilities. But, it must be noted that few tasks traditionally defined as "professional" have ever been subjected to empirical analysis similar to the "Functional Job Analysis" used in the Jobs in Instructional Media study (135) to prove conclusively that they must be performed by Master's librarians, and the "bench-mark" descriptions were drafted with knowledge of actual jobs now being done in Federal libraries.

In the absence of a large-scale, scientifically rigorous study such as the JIMS report, the approach taken by the FLC has validity. The job descriptions produced by workshops and institutes almost always are qualified by some statement to the effect that the descriptions are to be considered as models only and should not be adopted in toto by any library. Moreover, there is evidence that, in practice, there is wide variance in task assignments, at least in the Associate category, from library to library. Mugnier reports in 1973 that, "Of sixty general tasks assigned to library assistants (fairly universal tasks), I was able to isolate ten which are assigned by two-thirds or more of the 176 participating supervisors." And, ". . . of eight cataloging

activities considered by eighteen technical services supervisors, none are assigned by as many as two-thirds of the supervisors." Ms. mugnier goes on to note that " . . . fifty-eight of the sixty tasks considered are from the 1948 ALA "List ot Professional and Nonprofessional tasks in Libraries" professional tasks."[2]

Similar variance probably exists in task assignment for technicians. Of the twenty most common tasks noted in recommended job descriptions, only three are reportedly performed by more than fifty per cent of recent technician graduates (see Table 8, p. 41). As technicians gain in experience, at least in the Federal Government, the variations may tend to decrease. For example, the survey of SOLIT members, referred to elsewhere in this report, suggests that of the twenty-four tasks described in Table 8, seventeen are performed by over fifty per cent of the respondents, and these include ten of the most common tasks on job descriptions. Although the results of this survey are inconclusive due to a low response rate (thirty five per cent),[3] some support for the suggested "bench-mark" descriptions prepared by the FLC may be found in Table 7.

Although one of the anticipated products of this investigation was "definitive recommendations for job roles" it now seems apparent that data sufficient to make these recommendations can only be collected through a large-scale study using some such technique as the "Functional Job Analysis" developed by Dr. Sidney A. Fine of the W.E. Upjohn Institite for Employment Research, and budgetary and temporal restraints on the present report did not permit such a study. Accordingly, beyond the suggestions implied in the

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[2]Letter, Charlotte Mugnier, May 4, 1973. Library "Assistant" is used as a synonym for "Associate." (See also No. 9s.)

[3]However, there is a high correlation between the rank order of jobs performed by the SOLIT sample and in the James study (Spearman $r = 0.83$).

collated job descriptions included, no definitive recommendations will be made.

TABLE 7

DUTIES PERFORMED BY SOLIT MEMBERS

Job	%performing (N = 34)	
Type cards/forms	85%	
Verify references	82	
Search catalogs	79	
Shelve library materials	76	
Assist readers	68	
Maintain circulation records	68	
Type correspondence	68	
Instruct people how to use the library	65	LEVEL A (50% or more)
Catalog books	62	
Conduct literature searches	62	
Photocopy library materials	59	
Prepare interlibrary loan forms	59	
Repair and mend books	56	
Search order files	56	
Supervise personnel	50	
Prepare journals for binding	50	
Prepare bibliographies	50	
Maintain bookkeeping records	32	
Choose subject headings for books/articles	32	LEVEL B (25-49%)
Choose publications to buy	29	
Determine library policy	29	
Work with data processing equipment	21	
Prepare library budget	18	LEVEL C (0-24%)
Keypunch library records	12	

CHAPTER IV

EDUCATIONAL PATTERNS

Two general approaches to training LMTAs have been followed in the
U.S. The most common type of program has tried to give students a broad
introduction to library technology, covering every type of technical work
in libraries. This approach has been said to produce a "watered-down"
librarian who is very mobile, can work in almost any type of library, but
is "less valuable than a librarian, however, because he lacks the latter's
professional ability."(73) The second approach has attempted to train
students in certain specific skills or to prepare them to work in one specific
type of library. This creates a much less mobile graduate than the first
type program, but "when doing the work for which he is qualified, he would
be much more valuable."(73)

The reasons community colleges have tended to develop the first type
of program above seem, in retrospect, natural if not well-advised. The sudden
expansion, primarily due to government aid, of vocational educational programs
in community colleges antedated the library profession's development of
rational job classifications for library technicians, and to a great extent,
any agreed upon acceptance by the profession of the technician category of
worker. Consequently, programs were developed rapidly without a coherent
theoretical base.

New instructors in these programs tended to teach the same type of
library courses they themselves took in graduate library schools, in some cases

not even "watering" these courses down - as course descriptions in many

current programs still indicate. As a 1972 workshop sponsored by the

Council on Library Technology reported:[1]

> Few published statements of the LTA programs make an incisive
> distinction between the lower division credits of an undergraduate
> curriculum and upper division courses in library service. While
> none of the forty program brochures state that the courses could
> substitute for upper division credits, some intimate that their
> training would enhance further library education. An example of this
> is ". . . students who wish to transfer to a four-year college or
> university in library science may use the technical training avail-
> able in the . . . program as a basis for study towards a professional
> library degree."(73, pp. 14-15)

While the "Criteria for programs to prepare library technical assis-

tants,"(77) had a positive effect on programs established after 1968, many

weaknesses in programs were still apparent when Hensley conducted a study

in 1971 to determine how well these programs conformed to the "Criteria. . ."

(58) Among other findings, Hensley noted that:

1. Individual programs had generally small enrollments and a low completion

   rate.

2. Many programs trained personnel for jobs which did not exist in libraries,

   and some misled their graduates into thinking they would be accepted as

   professional librarians.

3. Although the "Criteria. . ." called for involvement of an Advisory Board

   in surveying local needs, curriculum planning, and faculty appointments,

   only 44 out of 72 programs appointed such a board before initiating classes;

   only 33 programs conducted preliminary surveys, and only two advisory

   boards were specifically identified as being involved with curriculum

   planning, while nine boards were involved with faculty appointments.

4. Few technician programs had full-time directors or faculty; more than

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[1]Copyright 1972 Council on Library Technology. Reprinted by permission.

half were administratively part of the learning resource center.

Furthermore, while the "Criteria. . ." states that:

> The curriculum should reflect program objectives and should be based
> upon a set of clearly stated goals for the total program. It should
> provide for upgrading of appropriate level library/media center
> employees as well as recent high school graduates.

the Hensley study indicated only forty programs had clearly stated objec-

tives while the remainder either had no formal objectives or gave no response

to the question. The large amount of general unease in the library pro-

fession about the worth of these programs is understandable in the context

of the above developments. Generally, the development of many LMTA programs

and professional resistance to these programs and their graduates seems

to have stemmed from a misunderstanding about the definition and role of the

LMTA. Some statements by Dr Charles Evans at a COLT regional workshop(73,

pp. 20-22) put this in perspective.

Dr. Evans defines the LMTA program as a "community college program

designed to prepare people for careers in non-professional library work."

He goes on to analyze this definition in five steps: (all italics mine)

> First, the program prepares people for work. It doesn't aim to provide
> a general education; it doesn't aim to raise the cultural level of its
> students. . . It just prepares them for work.
>
> Second, the program prepares people for library work. . . Its courses
> concentrate on Library skills, like shelf maintenance, book repair or
> cataloging. (I assume Dr. Evans means descriptive cataloging.)
>
> Third, the program prepares people for non-professional work only.
>
> Fourth, the LMTA program prepares its students for careers in library
> work . . . it must do more than prepare them to hold a job; it must
> develop in them the capacity for on-the-job improvement of their skills . . .
>
> Fifth, . . . the LMTA program is a community college program, (i.e., it
> must fit the needs of the local community) [and must] teach the technical
> skills that are needed in local libraries, whether or not they are
> among those listed by Asheim as appropriate for the LMTA class . . .
>
> Although most community college programs include the four basic core

courses (at least in name) recommended by the "Criteria . . ." - Intro-
duction to Library/Media Centers; Support Operations for Technical Services;
Support Operations for Public Services; and, Practical Experience and Super-
vised Field Work; (usually a fifth area, Support Operations for Audio-Visual
Operations is included) - descriptions of some of the above core courses and
additional course offerings often tend to support professional feelings about
"watered-down" library courses. To illustrate, the following syntheses of
actual course descriptions are presented as paradigms:

LS 101. Introduction to Library Services

   History of print and non-print materials from prehistoric beginnings
to present. Basic philosophy, procedures, tools, and techniques. Rela-
tionship of libraries to overall educational programs in society.

LS 102. Technical Services

   Acquisition and preparation for use of library materials. Order
procedures, simple classification, cataloging, filing and bookkeeping.

LS 201. Public Services

   Introductory reference course designed to train students to use
library materials such as the card catalog, general reference sources,
and standard bibliographic sources. Major emphasis on encyclopedias,
dictionaries, indexes, bibliographies, yearbooks, and methods of
evaluating and selecting reference books. (italics mine)

LS 202. Audio-Visual Services

   Use and simple maintenance of audio-visual materials. Development
of expertise in handling audio-visual services. Emphasis on production
of materials.

LS 203. Cataloging and Classification

   Covers classification in Dewey and LC, principles and practice of
cataloging.

LS 204. Children's Literature

   Survey of the development of children's literature. Selection and
evaluation of children's books. Story-telling, planning summer reading
programs, and book talks. (italics mine)

LS 205. Advanced reference sources

Special reference sources in major subject fields. Review of
public service techniques. Historical background and important doc-
uments in selected subject areas.

Many attempts have been made to proscribe the appropriate curriculum

for library technology programs, ranging from detailed presentations such

as that of the Chancellor's Office of the California Community Colleges (89)

and the Tex-Tex Syllabi(92) to a brief exposition such as the following:

1. Library services - Explanation of the ethics and philosophy of the pro-

    fession - description of the purposes of all types of libraries.- field

    trips to other libraries.

2. Library resources - Explanation of the use of the card catalog, indexes,

    simple reference books and other library materials.

3. Ordering procedures - The preparation of orders for book jobbers.

4. Circulation routines - The charging and discharging of books, receiving

    of application forms and the keeping of library statistics.

5. Cataloging techniques - Typing cards, filing, bibliographic work and

    simple cataloging.

6. Binding and repair procedures - The preparation of books and magazines

    for the bindery and the proper mending and care that can be done without

    commercial help.(83)

This last outline corresponds fairly closely to a list of duties per-

formed by most library technician graduates, although it does not seem to

furnish preparation for a number of other tasks performed by graduates as

the following table illustrates:

TABLE 8

DUTIES PERFORMED BY LIBRARY
TECHNICIAN GRADUATES

Duties	Number	Per cent	
Type cards/forms	76	83%	
Assist readers	71	78	
Instruct people how to use the library	70	77	
Maintain circulation records	64	70	LEVEL A
Search catalogs	63	69	(50% or more)
Shelve library materials	54	59	
Type correspondence	53	58	
Repair and mend books	49	54	
Search order files	45	49	
Supervise personnel	40	44	
Photocopy library materials	40	44	
Catalog books	38	42	
Verify references	34	37	
Prepare journals for binding	29	32	LEVEL B
Conduct literature searches	29	32	(25-49%)
Maintain bookkeeping and accounting records	28	31	
Choose subject headings for books or articles	27	30	
Choose publications to buy	26	29	
Prepare bibliographies	26	29	
Determine library policy	22	24	
Prepare interlibrary loan forms	20	22	
Prepare library budget	12	13	LEVEL C
Keypunch library records	7	8	(0-24%)
Work with data processing equipment	6	7	

Table 8 also supports contentions that some technicians are being used to perform tasks usually considered professional. Note for example, the thirty-two per cent of new technician graduates who conduct literature searches, the thirty per cent who choose subject headings for books or articles, the twenty-four per cent who determine library policy, or the thirteen per cent who prepare library budgets. Indeed, evidence such as the above often provokes an allusion to Gresham's Law, i.e., "bad money drives out good," in library circles to imply the takeover of professional jobs by poorly trained technicians.

However, this implication involves a questionable assumption; it assumes that all technician graduates possess a limited educational background, i.e., are in their early twenties and have gone directly from high school to a community college program. In fact, the median age of graduates reported in the James study(59) was thirty-three.[2] Although there is no comparable study of educational background of students in technician programs, the various reports of programs indicate a sizeable proportion of these students have at least some other college education if not a bachelor's degree in some other field and are often people like housewives returning to the labor force after their children are in school or grown. Some corroboration for this is furnished by a survey of the Society of Library and Information Technicians (a Washington, D.C. organization) conducted by this investigator. Thirty per cent of the respondents to this survey had completed one to three years of college, fifteen per cent were college graduates, and an additional thirteen per cent had one or more years of graduate education. A study of characteristics of employees in health sciences libraries indicated similar educational

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[2]Median age is used here since the mean age was 35.2 with a standard deviation of 13.5.

backgrounds - 28.5 per cent, one to three years of college; 19.9 per cent

holding a bachelor's degree, 13.2 per cent having some graduate education.(154)

Moreover, since most librarians are not economists, the operation of

economic forces more important than Gresham's Law is not often recognized.

For example, the power of the buyer in decision making with regard to the

allocation of resources for library services will not be easily recognized

by librarians who liken their profession to the medical or legal profession.

This is a very real power. If a small library, with limited resources, finds

it more cost-effective to use a library technician to choose subject, headings

for the small number of books being added to the collection each year, then

this library will very likely use a library technician if one is available.

Little attention may be given to mandates from librarians who insist that

subject cataloging is a "professional" task and that library standards re-

quire graduate librarians.

One might equally well quote a law older than Gresham's, taken from

physics, i.e., "nature abhors a vacuum," to make it clear that if library

service is desired by a particular client-group with limited resources, a

way to provide it will be found, and if professional librarians are in effect

priced out of the market, cheaper substitutes will be sought.

Therefore, since all-practical evidence indicates that library tech-

nicians are here to stay, and libraries who need this category of worker are

going to employ them, this report suggests the most important factors to be

considered in designing educational programs for technicians are Dr. Evans'

Fourth and Fifth points, referred to earlier, i.e., the LMTA program must fit

the needs of the local community, and LMTA programs must develop in graduates

the capacity for on-the-job improvement of their skills.

The mean beginning salary for a technician graduate in 1969 was
$5,708 as compared with $8,161 for beginning Master's librarians.(59)
This suggests a much lesser degree of geographical job mobility for tech-
nicians than for professional librarians. The implications of this factor,
when taken in conjunction with the suggestions in the preceding paragraph,
are sufficient, without recourse to arguments about "professionals" versus
"non-professionals" to argue strongly against any "jack-of-all trades"
approach to educating library technicians. Therefore, suggestions for cur-
riculum models applicable to all technician training must be limited to a
very basic core, with primary attention in curriculum design given to local
needs. This enhances the importance of local surveys coupled with analyses
of tasks in local libraries for any community college considering a tech-
nician program. At the same time, the above approach can, if carried to
extremes, create considerable difficulties for developing national standards
for evaluating programs and attempts at certification of library technicians.

Certification of technicians is generally seen as a desirable devel-
opment. For example, an Indiana study(41) reported that eighty-five per cent
of the respondents agreed LMTAs should be certified in some way. "This
desire to 'control' is consistent with national trends in other recognized
sub-professional or supportive type occupations wherever professionals in
that particular field of work are instrumental in the design of related pol-
icies, plans or programs."(41, p. 30)

A COLT workshop listed the following purposes of certification:[3]

First, certification would establish a basic set of entry require-
ments for the position of LTA's such as minimum education, minimum

requirements of the programs to avoid having programs like the six-
week wonder programs that turn out LTA's who do not really deserve
the title - not through the fault of the student, but through the
inadequacy of the training program.

Second, certification might establish a recognized operational level
for the LTA and thereby distinguish between clerical, technical, and
professional levels.

Third, certification might establish a clear cut status for the LTA,
something he has not had to the present time.

Fourth, certification would serve to improve the psychological morale
of the LTA.

Fifth, certification should improve the status of the professional
librarian by defining professional responsibilities or adding impetus
to the definition of professional responsibilities of librarianship.

Sixth, certification should help in the recruitment of potential LTA's
and result in a recognized level of entry and of qualification for
entry into the programs.

Seventh, certification may establish criteria for training programs
and help to develop uniformity in quality of instruction within the
programs throughout the country.

Eighth, certification could result in the establishment of salary
schedules and task analysis.

Ninth, certification could provide for the mobility of LTA's within

and without various states.

Tenth, as states move to certify LTA's a closer relationship should
result between the professional associations and the LTA's themselves.

Last, certification should help in improving library service through
the country.(57, pp. 54-55)

While the above are all excellent reasons, they may be symptomatic of
a) a tendency to overemphasize one category of library worker, and b) over-
reliance upon parallels between fields such as medicine and librarianship,
i.e., a feeling that because doctors are supported (in part) by medical tech-
nicians, and librarians are supported (by recommendation) by library tech-
nicians, the medical technician and the library technician are somehow in the
same category of supportive employee. For example, Point Five above suggests
that certification of LTA's should "improve the status of the professional
librarian . . ." It might be argued that professional status for doctors was
not achieved by creating more stringent requirements and/or certification for
supportive medical personnel.

An alternate approach to education for various categories of library
workers was expressed by Ruth Warncke in a contribution to Library Journal's
"Library education and the shortage (of both manpower and talent)."(16) Ms.
Warncke suggests that graduates of five-year programs often believe that these
programs equip one for any high-level professional job and obviate the need
for any continuing education. At the same time, many new graduates are as-
signed jobs "that not only can be done by people without the fifty-year halo,
but that are done by them whenever a fifty-year graduate is not available, i.e.,
an increasingly large amount of the time." Ms. Warncke feels that the latter
situation is an "unconsciously realistic appraisal of the value of many of our

fifth-year programs." Her conclusions are: 1) a sound under-graduate
program is needed ("infinitely better than most such programs now in exis-
tence") to provide workers for the many jobs in libraries requiring a basic
knowledge of library functions and the basic educational background of a lib-
eral education, (and these workers should be paid salaries equivalent to
present salaries for beginning fifth-year graduates), and 2) fifth-year pro-
grams should be up-graded to produce "administrators, subject specialists,
a vanced catalogers, and information specialists." There seems to be nothing
in this approach contrary to the accepted position of the American Library
Association expressed in its "Education and Manpower for Librarianship"
statement. At the same time, it implies a recognition of a basic difference
between technical, pre-professional, and professional responsibilities.

The importance and the need for supportive personnel in libraries is
unquestioned. This report does question, however, the need for extensive
formalization at the national level of educational programs for technical and
clerical category library workers. Without hard evidence, for example, that
graduates of two-year programs possess so much job mobility that inter-state
recognition of their training by national certification would be valuable, it
seems questionable to argue for this type of certification at this point.
State certification seems much more justifiable.

LMTA programs at community colleges have developed in response to local
needs; this has been a cause for weakness in the development of extremely
varied programs; it can also be a factor for strength if programs are devel-
oped with the close cooperation of the local library community and if the
true economic value (as a substitute for costly in-house training) of this
type of program is recognized.

The emphasis on local needs may dispel the fears of the library profession

that two-year Associate degree programs are developing to flood the national job market with "watered-down" librarians who will drive out the professionals. The library technician is <u>not</u> a cheap librarian, and if local librarians are closely involved with the development of local programs and make clear to community colleges the needs of the libraries in the area for supportive personnel, there is no reason why graduates with the requisite skills cannot be produced.

With this in mind, the curriculum models presented in the next Chapter should be viewed as general suggestions for this geographical area, not as prescriptive models.

CHAPTER V

CURRICULUM MODELS

Library Technicians

Various task analyses have identified a number of duties presently being performed by library staff members with a technician classification. The following list includes the most agreed upon tasks.

1. Explaining to borrowers the library rules for checking out and returning materials.

2. Giving users directions on location of library departments.

3. Explaining to users the resources and services of the library.

4. Finding specific books on the shelf for users.

5. Searching for simple trade bibliographical data.

6. Helping people use the card catalog.

7. Answering simple reference questions using ready-reference tools.

8. Supervising the work of clerical staff.

9. Charging out library materials and clearing returned materials.

10. Checking catalogs and shelf lists for holdings.

11. Planning displays

12. Operating various non-print equipment such as tape recorders, motion picture projectors, etc.

Any community college considering developing a technical assistant program should, of course, set definite achievement levels geared to the particular manpower requirements for job entry in the local area. A college planning such a program would be well advised to follow the guidelines set forth in

the American Library Association Library Education Division's "Criteria for programs to prepare library/media technical assistants."(77) For clarification, the portion of that statement pertaining to curriculum planning is reproduced below:

I. Goal statement

    A. Any community college planning a Library/Media Technical Assistant program should draft clearly defined objectives for the program stated in terms of the educational results to be achieved. The goals should be consistent with general Library/Media Technical Assistant roles and relevant policy statements of the American Library Association. They should reflect the needs of the constituency the program seeks to serve. Cost estimates for initiating and developing the program should also be prepared and locations for field experience investigated.

    B. The Library Learning Resource Center staff at the college will normally prepare the statement of goals and develop plans with guidance from the college administration. The staff will also recommend a local advisory committee.

II. Local advisory committee membership

    A. Any community or junior college contemplating a program for Library/ Media Technical Assistants should, as a first step, establish a local advisory committee.

    B. This committee should be appointed in accordance with the administration policy of the institution and report to the president, the board, or other college administrator as may be appropriate.

    C. Membership on the local committee might include:

        1. a representative from the state library.

        2. the director of a major local public library or his personnel

director

3. a school library/media supervisor

4. the librarian of a local four-year academic institution or
    his designate.

5. the head of a local special library or information center

6. a representative named by a state-wide library or media associ-
    ation or other relevant professional association.

7. the librarian and the library/media technical assistant program
    director of the community college should be <u>ex-officio</u> committee
    members.

8. others may include: local or state civil service board members,
    placement counselors, deans of graduate library schools or
    their designates, department heads or supervisors in local
    libraries, etc.

D. Membership on the local advisory committee should be for two or
    three years with staggered terms.

III. Advisory committee responsibilities

A. Before any course is planned, announced or offered, the local
    advisory committee should:

1. review the statement of goals.

2. investigate the local need for such a program and advise on
    conduct of a survey relating to employment possibilities for
    Library/Media Technical Assistants. <u>No program should be
    announced or started without a positive recommendation from
    the local committee after such investigation</u>.

3. advise on qualifications for the position of the program director.

4. advise on the nature and content of the curriculum based on

total program objectives.

5. ensure that program planning, resources, and fundings are
adequate prior to initial course offerings.

B. The committee will provide continuing liaison between the community college and employers of supportive library staff personnel.

C. The committee should ensure that programs meet state and national
standards.

D. The committee should meet as regularly as needed but not less than
once a year.

E. The local advisory committee should also communicate freely on civil
service, professional relations, etc. regarding the Library/Media
Technical Assistant program at state, regional, and national levels
and, if appropriate, establish formal organizations and channels to
facilitate such communications.

Given the above qualifications on final planning of a program, the
tasks analyzed on page 49 seem, however, common enough to general technical
assistant work in libraries to provide the basis for a curriculum model.

The curriculum model leading to the Associate Degree in Library/Media
Technology is divided into three areas; 1) General Education courses; 2)
Library/Media core courses; and, 3) Specialized library and/or subject courses.

General Education

The General Education area should constitute approximately fifty per
cent of the total course work, including courses in the Humanities, Social
Sciences, Natural Sciences, and Mathematical Sciences. These courses should
be eligible for transfer credit to a four-year college.

Library/Media courses

Library/Media core courses, constituting approximately twenty-five per cent of the total course work, are intended to familiarize the student with basic technical tasks in a library/media center. These core courses are described in the following paragraphs (with recognition that titles are suggestions only).

Specialized courses

These optional courses will comprise approximately twenty-five per cent of the total course load. They could be either specialized library courses, such as "Advanced A/V methods;" specialized techniques or methods such as "Office Procedures and Skills;" "Graphics" or "Data Processing" or special subject courses such as foreign languages, medical technology, or government documents, depending primarily upon local job needs and student interest.

Course of study

To provide career lattices for all levels of employment in libraries, the progression through the core courses in four semesters is linked to job opportunities as shown in Figure 1. (Movement beyond the Library/Media Technical Assistant level is discussed elsewhere.) This does not suggest that completion of one level would automatically qualify the student for immediate acceptance in a job at that level, but merely recognizes the link between job categories and educational levels. This also provides students who do not finish the program with some preparation for work in libraries.

FIGURE 1

SUGGESTED CAREER LADDER AND RELATED TRAINING

Job	1st Semester	2nd Semester	3rd Semester	4th Semester
Library Page	Introduction to Library Services			
Clerk I	Technical Processes			
Clerk II		Public Services		
Senior Clerk			Audio-visual	
Library Technical Assistant				Practicum and seminar plus A.A. degree

Source: Office of the Chancellor, California Community Colleges, "The
Library Technical Assistant Program: Guidelines and Courses
Content for Community College Programs," (July, 1970), p. 14.
(Some portions of the original in this non-copyrighted publi-
cation are omitted for clarity)

CORE COURSES

1. Introduction to Library Services (3 credits)

Description: An introduction to the history, development, and philosophy
of libraries and their organization with special emphasis on Federal li-
braries. Role of the technical assistant in overall staffing patterns.
Basic terminology and tools of the field such as the card catalog. Prac-
tical experience in a working library emphasized.

Outline

I. Introduction to Course

II. History of library services

III. Role of library technician

 IV. Use of card catalog

  V. Organization and arrangement of shelves

 VI. Mending books and magazines

VII. Laboratory exercises

Performance objectives - the student will be able to:

   a. locate a variety of materials through the catalog;

   b. differentiate between types of libraries and services;

   c. do simple book mending;

   d. shelve and shelf-read library materials.

2. Technical Services Support Activities (3 credits)

Description: Various tasks performed by technical assistants in the acquisition of varieties of materials added to libraries and types of programs and techniques involved. Laboratory sessions to teach search and verification procedures involved in using tools such as National Union Catalog, Cumulative Book Index, and more specialized sources, particularly those connected with government publications.

Outline

  I. Introduction to course

 II. Acquisition procedures

III Processing methods

 IV. Catalog cards - typing and filing rules

  V. Records

Performance objectives - the student will be able to:

   a. locate necessary bibliographic information to order materials;

   b. prepare order forms;

    c. keep business records and statistics;

    d. type and file catalog cards;

    e. check orders in the card catalog for duplication;

    f. order LC cards.

3. Cataloging and Stack Organization (3 credits)

    Description: Study of major classification schemes from practical view-

    point of stack arrangement and principles of descriptive cataloging.

Outline

    I. Introduction to course

  II. Classification schemes - shelf arrangement

III. Descriptive cataloging

Performance objectives - the student will be able to:

    a. discuss relationship between classification schemes and stack
        organization;

    b. catalog material on hand, excluding subject cataloging.

4. Public Services Support Activities (3 credits)

    Description: Circulation systems; information-finding through basic ref-

    erence sources; public relations.

Outline

    I. Introduction to course

  II. Public relations

III. Circulation systems

 IV. Reference sources

Performance objectives - the student will be able to:

    a. design and assemble displays;

    b. charge and discharge materials;

c. assist patrons in use of card catalog and other finding tools;

d. answer simple reference questions, and recognize when to refer questions to a librarian;

e. understand and appreciate the service aspect of libraries.

5. Non-print Materials (3 credits)

Description: Operation and routine preventive maintenance of common types of audio-visual equipment and survey of various production techniques.

Outline

  I. Introduction to course

 II. Use of audio-visual equipment

III. Maintenance

 IV. Production techniques

  V. Acquisition of audio-visual materials

Performance objectives - the student will be able to:

a. operate projectors, viewers, tape recorders, phonographs, and video tape recorders;

b. perform preventive maintenance on the above equipment and recognize problems requiring expert service;

c. mount slides;

d. splice film and filmstrips;

e. demonstrate knowledge of sources of audio-visual materials;

f. apply clerical procedures necessary to acquisition and inventory of audio-visual materials.

6. Work Experience and Seminar (3 credits)

Description: Closely supervised field work in two or more types of libraries with seminar meetings to discuss experiences and related theory. Purpose is to broaden the students perspective regarding differing methods and routines taught in earlier courses and provide practical job knowledge and experience.

Technical Information Specialists

In the preceding section, a curriculum model for the training of LMTAs
which would provide graduates with educational preparation necessary to meet
minimum qualifying standards for the GS-1411 series, Library Technician, was
outlined. In addition to the GS-1410 series - Librarian - a third employ-
ment category exists within the Federal library system, that of Technical
Information Specialist, GS-1412.

According to the qualification standards:

> The subject-matter knowledge for the Technical Information
> Specialist typically covers a broad field, rather than a deep
> subject knowledge and competence related to a specific discipline or
> field of interest, or a full knowledge of the state of the art.(74)

Technical Information Specialists may analyze and transmit the intellectual
content of scientific, technological, or other specialized information;
acquire, index, and prepare abstracts of documents; analyze questions from
users and perform literature searches; or perform limited aspects of the work
of a professional librarian. Ordinarily, these specialists begin with some
knowledge of a subject field and are taught the required library techniques
on the job.

Basic educational requirements for appointment to grade GS-5 in the 1412
series (in some cases experience may substitute for specific education) are:

> A full 4-year course of study in an accredited college or
> university which meets all academic requirements for a bachelor's
> degree, and (1) which has included at least 24 semester hour credits
> in the physical sciences, biological sciences, social sciences or
> other specialized subject matter field for which the applicant is
> being considered; or (2) any combination of subjects which included
> at least 15 semester hour credits in a major subject (such as physics
> or chemistry) which is especially applicable to the position for which
> the applicant is being considered.

As an example of the way in which persons might utilize the convenience
of beginning their post-high school education at community colleges, while

retaining the option of transferral later to a four-year college and at the same time gaining the presumed benefits in the job market for the 1412s which a background in library skills would provide, the following curriculum model is presented.

I. Mathematics as related to librarianship - Community College Preparation*

   A. General Education

       1. English (12)

           ENG 101 Composition and Rhetoric (3)
           ENG 102 Composition and Literature (3)
           ENG 201 English Literature I (3)
           ENG 202 English Literature II (3)

       2. History (6)

           HIST 101 History of Western Civilization I (3)
           HIST 102 History of Western Civilization II (3)

       3. Science (8)

           Electives selected from Biology, Chemistry, or Physics

       4. Social Sciences (6)

           SOC 101 Introduction to Sociology (3)
           SOC 102 Sociology II (3)

       5. Fine Arts (3)

           ART 101 History and Appreciation of Art (3)

   B. Mathematics (20)

       MTH 102 College Algebra and Trigonometry (4)
       MTH 120 Calculus I and Analytic Geometry (4)
       MTH 121 Calculus II (4)
       MTH 220 Calculus III (4)
       MTH 221 Calculus IV (4)

---

*Course numbers and titles based on Charles County Community College 1972-73 Catalog. Numbers in parentheses are semester hour credits.

C. Library Science (12)

 LSC 101 Introduction to Library Science (3)
 LSC 102 Library Resources (3)
 LSC 105 Introduction to Technical Services (3)

D. Physical Education (4)

<div align="right">TOTAL CREDITS - 68</div>

4-year college preparation

The Community College program is designed to satisfy University

General Education requirements and the Mathematics Department introductory

sequence requirement. The two years at Maryland would be spent in ful-

filling the requirements for a Bachelor of Science in Mathematics, i.e.,

1) eight upper division mathematics or probability and statistics courses;

2) supporting course work in a) Sciences - Botany, Chemistry, Microbiology,

Physics, or Zoology; and b) a supporting area which may be interdisciplinary

as long as six credits are taken in one department and six credits are at

the 300-400 level.

II. Chemistry as related to Librarianship-Community College Preparation*

 A. General Education

  1. English (12)

   ENG 101 Composition and Rhetoric (3)
   ENG 102 Composition and Literature (3)
   ENG 201 English Literature 1 (3)
   ENG 202 English Literature II (3)

  2. History (6)

   HIST 101 History of Western Civilization I (3)
   HIST 102 History of Western Civilization II (3)

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*Course numbers and titles based on Charles County Community College
1972-73 Catalog. Numbers in parentheses are semester hour credits.

3. Science (12)

   Electives selected from Physics
   PHY 121 General Engineering Physics I (4) 3 hrs lec., 2
     hrs lab.
   PHY 220 General Engineering Physics II (4) 3 hrs lec.,
     2 hrs·lab.
   PHY 221 General Engineering Physics III (4) 3 hrs lec.,
     2 hrs lab.

4. Mathematics (3-4)

   MTH 120 Calculus I and Analytic Geometry (4)

5. Social Sciences (6)

   SOC 101 Introduction to Sociology (3)
   PSY 101 General Psychology (3)

6. Fine Arts (3)

   ART 101 History and Appreciation of Art (3)

B. Chemistry (16)

   CHE 120 General Chemistry I (4) 3 hrs lec., 3 hrs lab. Equivalent
     to U. of Md. Chem 103 - College Chemistry I (4)
   CHE 121 General Chemistry II (4) 3 hrs lec., 3 hrs lab.
   CHE 220 Organic Chemistry I (4) 3 hrs lec., 4 hrs lab.
   CHE 221 Organic Chemistry II (4) 3 hrs lec., 4 hrs lab.

C. Library Science (9)

   LSC 101 Introduction to Library Science (3)
   LSC 102 Library Resources (3)
   LSC 105 Introduction to Technical Services (3)

D. Physical Education (4)

                                        TOTAL CREDITS - 68

The Community College program is designed to satisfy University General

Education requirements and the Chemistry Department introductory sequence

requirement. The two years at Maryland would be spent in fulfilling the

requirements for a Bachelor of Science in Chemistry, i.e., 12 upper division

credits plus German or Russian.

Similar models in other subject areas could be developed depending

upon individual student interests. Depending upon the area of the sciences in which the student took introductory courses at the community college, by completing the supporting course work required above in the same area, upon graduation the basic requirements for GS·5, Technical Information Specialist, would have been met. Should the student elect to continue in a graduate program, one academic year of graduate education in a subject field directly applicable to a position applied for is qualifying for appointment to grade GS-7, while a Master's degree is qualifying for GS-9 and the doctorate for GS-11

It must be clearly recognized that under new academic regulations at the University of Maryland, a maximum of sixty credit hours are transferrable from community colleges. While some departments on campus have indicated a willingness to accept community college courses in library science as electives, others have not. In any case, some credits would inevitably be lost under curriculum models such as the above. However, this may not be significant in a larger view if one remembers that loss of credit does not imply loss of knowledge, and, in later employment seeking, the library science courses will still appear upon the community college transcript.

An alternative plan, which would avoid some of the problems posed by the above, could be to postpone library science courses until reaching the University of Maryland and then take 9-12 hours in the Library Science Education Curriculum as electives, although with no intention of preparing for a teaching career.

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

The opportunity for upward mobility in Federal libraries for all
employees already exists in the formal structure of Civil Service regulations.
(See Appendix A) What does not yet exist is a formal mechanism for pro-
viding the education to fulfill requirements listed in these regulations
for all who desire the opportunity.

Undergraduate courses in library science offered at two community
colleges in the area and the University of Maryland are not oriented towards
providing continuing education for employees in Federal libraries since these
courses have been developed for other reasons. Courses at the U.S. Department
of Agriculture Graduate School are not always conveniently located enough
to be available to employees of all government libraries in this area.
Availability of graduate courses for working persons is limited due to time
constraints.

All evidence developed through this study and others, (for example,
see No. 6s), indicates a definite need for extensions of library courses at
times and places convenient for Federal library employees. The lack of an
accepted articulation program between community colleges, undergraduate pro-
grams, and a graduate library school, creates hardships for persons employed
in this area who wish to continue their educational development. Lack of
sufficient data for rational curriculum planning based on job needs prohibits
the intelligent development of programs to serve the job needs of Federal
libraries.

Accordingly, the following recommendations, projected on a time-line, are made to seek answers to problems noted in this study. The first three recommendations are interim solution proposals; the last recommendation, involving a considerable commitment of both time and money, is suggested as the most logical method for an overall solution.

1. September, 1973 - June, 1974

An articulation plan between two-year, four-year, and graduate programs in library science should be developed. To this end, the following research studies should be conducted:

a) an analysis of course content at the community college, undergraduate and graduate levels

b) development of a competency-based examination for students wishing to apply for "credit by examination"

2. Spring Semester, 1974 -

The University of Maryland, as the only Federal land-grant college in the area with a graduate school of library science, should take the initiative in developing extension services for persons working in Federal libraries. To this end, the following is suggested:

a) The School of Library and Information Services should begin an experimental program, similar to the one initiated at Drexel some years ago(54) to admit government library employees as non-degree students to pursue specific subjects directly related to their work requirements. There is at present provision for non-degree status in the catalog of the school, but students in this category must now meet the same qualification standards as regular students, i.e., a bachelor's degree from an accredited school, etc   It is recommended that a limited number of students, who may not meet the usual admission

standards, be admitted on an experimental basis to specific courses.

b) The School of Library and Information Services should take a
leadership role in cooperating with local community colleges to
provide extension night courses in Library Technology for improving
upward mobility for government employees into the Library Tech-
nician series. Since a number of respondents in the survey discussed
in Chapter II stated their staff found it difficult to attend courses
at the U.S. Department of Agriculture Graduate School, more con-
venient locations for such courses should be found. In addition,
given the recognition granted an Associate of Arts degree in Civil
Service standards, and the manpower projections, one community college
should provide a full two-year program leading to the A.A. degree in
Library Technology. The only institution in this area presently
offering a two-year program is Washington Technical Institute, and
their program is in Media Technology, not primarily intended to meet
the needs of Federal libraries. Charles County Community College
does offer a one-year certificate program and could logically consider
a two-year program, but its geographical location might be inconvient
for many workers presently employed in Washington and Baltimore li-
braries. A more centrally located community college would be pref-
erable for this program. This would permit Charles County Community
College to continue concentrating upon its present program for the
employment market in Southern Maryland libraries.

3. 1974 -

As partial alternative or in conjunction with the preceding recommenda-
tion, modules for mediated instructional packages to provide continuing education
for employees in Federal libraries could be developed. These modules, based

on behavioral objectives at specified levels of performance and consisting of

programmed texts, video-tapes, directed readings, multi-media presentations,

and possibly Computer-Assisted Instruction, should be of sufficient sophisti-

cation to allow student determination of required access points, i.e., the

student, through interaction with the modules, determines the proper plug-in

point for his present level of development. Depending upon the level of

financial support available, (since nothing in this recommendation is tech-

nologically impossible at this time) these modules could be as simple as

mailable educational kits, or as sophisticated as on-line terminal installations

in various Federal libraries.

4. September, 1973 -

The possibilities of conducting a full-scale Functional Job Analysis

and related curriculum planning study, along the lines of _JIMs_ study, but

directed at Federal library needs, should be investigated, and, if feasible,

carried out.

APPENDIX A
CAREER LATTICE BASED ON CIVIL SERVICE REQUIREMENTS

Explanation: Aide - Library Aide - 1411 series
LMTA - Library Technician - 1411 series
TIS - Technical Information Specialist - 1412 series
Libn - Librarian - 1410 series

	0	3 months	6 months	1 year	2 years	3 years	4 years	5 years
Ph.D.	Libn GS-11							
M.A. or M.S.	Libn GS-9			TIS GS-11				
One Year Graduate School	TIS GS-7			TIS GS-9	TIS GS-11			
B.A. or B.S.	LMTA GS-5			TIS GS-7 or Libn GS-9*	TIS GS-9	TIS GS-11		
3 Years College				TIS GS-5	TIS GS-7	TIS GS-9	TIS GS-11	
A.A. Degree	LMTA GS-4			LMTA GS-5	LMTA GS-6	LMTA GS-7 or Libn GS-9*		
2 Years College						TIS GS-7	TIS GS-9	TIS GS-11
1 Year College or Business School	Aide GS-3			LMTA GS-4	LMTA GS-5		Libn GS-9*	
High School Diploma	Aide GS-2							Libn GS-9*
Trade or Secretarial Course		Aide GS-2						
No High School Diploma	Aide GS-1		Aide GS-2	Aide GS-3	LMTA GS-4	LMTA GS-5	LMTA GS-6 or TIS GS-5	TIS GS-7

EXPERIENCE

EDUCATION

passing a competency examination to enter 1410 Libn series is required

APPENDIX B

QUALIFICATION STANDARDS
Clerical GS-300

Office Machine Operator (various positions) GS-1/3

Positions Covered by This Standard

A. Occupations requiring alphabetical keyboard proficiency as well as both significant clerical and machine skills:
   Cold Type Composing Machine Operator---------------GS-324
   Bookkeeping Machine Operator----------------------GS-354
B. Occupations which require significant clerical as well as machine skills:
   Calculating Machine Operator----------------------GS-355
   EAM Operator-------------------------------------GS-359
C. Occupations requiring primarily machine skills:
   Office Machine Operator---------------------------GS-350

Description of Work

Persons employed in these positions have as their primary responsibility the operation of the specific office machine described in the individual job title, although clerical work of varying degrees is also involved in many such positions. Positions in the Office Machine Operator Series, GS-350, involve the operation of one or more types of office imprinting, duplicating, or reproducing machines, or miscellaneous office machines not specifically included in other series when such work is performed in an office or clerical situation.

Education and Experience Requirements

GS-1 - No experience or education required; however, the appropriate tests must be passed.
GS-2 - Must pass the appropriate written test and -
   Alternative 1 - Pass appropriate performance test.
      (Note: Alternative 1 is not available for Calculating Machine Operator, EAM Machine Operator, or Office Machine Operator because no appropriate performance tests have been prepared for these occupations at any grade level.)
   Alternative 2 - Have had 6 months of specialized experience.
   Alternative 3 - Have completed a specialized course of instruction in the operation of the appropriate machine plus any one of the following:
      a. 3 months of general or specialized experience, or
      b. graduation from high school.
GS-3 - Must pass the written test and the appropriate performance test (if any) and have had either (a) 1 year of acceptable experience of which at least 6 months is specialized experience, or (b) 1 academic year of business or secretarial school or junior college. For occupations for which no performance test is available, education offered under (b) must have included training in the operation of appropriate office machines.

Definition of Terms Used

General experience: Progressively responsible office machine operation,
     clerical, or other office experience in which the applicant demonstrated
     potential ability to work at the grade level of the position.
Specialized experience: Experience in the operation of the type of machine
     appropriate for the position for which application is made, with the
     following specific requirements for certain positions:
          Office Machine Operator GS-350-2 -
     Experience in operating any office machine is acceptable.
          Calculating Machine Operator (Comptometer-Type) GS-355-2/3 -
     Specialized experience must be on a comptometer-type of machine
          EAM Machine Operator GS-359-3 -
     At least 3 months of the experience must have been in setting :   ectric
     accounting machines for operation including the wiring of plup   :ds
     and control panels from prescribed wiring diagrams, the sett:·   f various
     control devices on the machines, the conducting of tests us: .st decks
     and other procedures to determine proper functioning of mach. .s, and,
     when applicable, accuracy of wiring.
One academic year of business school: Thirty-six weeks of successfully com-
     pleted full-time study is creditable as 1 academic year. ("Full-time
     study" normally will involve 20 clock hours per week.)
Specialized course if instruction: A formalized educational program or
     course intended to provide sufficient skill that the graduate can be
     considered to be a competent operator. The duration of the courses varies
     widely depending to a large degree on the prerequisites for entering the
     training, e.g., a typist can be taught card punching in 30 hours; it may
     take many times as long to teach a nontypist to operate a bookkeeping,
     card punch, or other alphabetical keyboard equipped machine.

Written Tests

     All applicants are required to pass tests covering (a) verbal abilities
and clerical abilities (alphabetizing and arithmetic) and (b) eye-hand
coodination and perception of differences. All applicants for positions of
operators of machines equipped with an alphabetic keyboard will be required
to pass a performance test on a typewriter-style keyboard. Applicants for
positions of EAM Operator must pass a test of abstract reasoning ability.
     Higher scores may be required for the higher grades.
     The tests may be waived for all inservice placement actions (but not for
appointments outside the register) provided there is other adequate evidence
of the ability of the applicant to perform the work to be assigned in a
successful manner and provided, for grades GS-1 and GS-2, the alternate standard
which followes is met. (Adequate evidence may consist of such things as:
supervisory evaluations; performance on previous jobs or assignments; pro-
duction records.)

Alternate Standard for GS-1 and GS-2 When the Tests are Waived

     When the tests are waived in inservice placement actions, the following
experience and education standards must be met:
     GS-1 - Any one of the following:
          a. Three months of specialized experience, or

    b.   Having completed a specialized course of instruction in the operation of the type of machine to be operated in the position to be filled, or

    c.   Any other educational background which is also acceptable at grade GS-2.

GS-2 - Any of the acceptable combinations of experience and/or education listed above under Alternatives 2 and 3 for this grade level.

Basis of Rating

Applicants will be ranked on the basis of (a) their score on the verbal abilities test, and (b) the extent and quality of their experience and education. Other required tests must be passed but are not used to rank the eligibles.

GENERAL NOTE AS TO APPLICABLE STANDS FOR POSITIONS ALSO REQUIRING SKILL IN TYPING OR STENOGRAPHY

Some office machine operator positions may require typing or steno-graphic ability but may be so constituted that the machine operator skills, rather than the typing or stenographic skills, form the paramount quali-fication requirements for positions. Positions so constituted are clas-sified in the office machine operator series appropriate for the paramount requirement and are identified by the parenthetical addition of the words "typing" or "stenography" to the titles otherwise prescribed for those series. In actions involving such positions, the qualification standards established for the series in which the positions are classified, rather than the clerk-typist or clerk-stenographer standards, are to be used. An appropriate means should be used to assure that applicants possess sufficient skill in typing or stenography to perform the duties of such positions. The skill requirement need not be set as high as that required in the competitive standard for clerk-typist or clerk-stenographer, but rather should be set at the level which is required for successful performance in the specific position to be filled.

Physical Requirements

See part II, Physical Requirements, paragrpph 4. For all positions, applicants must possess emotional and mental stability.

QUALIFICATION STANDARDS
Library Technician Series[1] [2] GS-1411
Library Aid GS-1/3
Library Technician GS-4/7
Supervisory Library Technician GS-4/9

Description of Work

Positions in this series comprise what is essentially a support occupation.
Library Aids and Technicians work in libraries where they provide support
and assistance to professional Librarians. In the lower grades (GS-1/3)
assignments frequently involve considerable clerical work and some manual
labor. In the higher grades (GS-4 and above) assignments may be specialized
or may involve supervisory or administrative responsibilities.

Positions in this series involve duties related to the following library
functions: the mechanical preparation of library material; the physical
upkeep of library material; care of shelves, files, and equipment; circulation
work such as registering borrowers, explaining lending rules, reserving books
for library users; acquisitions work such as ordering publications, prepar-
ation of book lists, routine correspondence; cataloging work such as making
additions to serial shelf list and catalog records, temporary brief, or lim-
ited cataloging, processing added copies and new editions; answering factual
or directional questions involving the use of standard reference tools and
specific, readily available sources. When the library collection includes
foreign language publications, positions may require ability to read or recog-
nize identifying information (e.g., titles, authors, dates, etc., of publi-
cations) in one or more foreign languages. (For a more detailed discussion
of duties performed by Library Aids and Technicians, see the classification
standard for this series.)

Experience and Training Requirements

Applicants must have had general and specialized experience of the type
described below, in the amounts indicated for each grade.

Grade	General experience (years)	Specialized experience (years)	Total experience (years)
GS-4	1	1	2
GS-5	1	2	3
GS-6	1	3	4
GS-7 and above	1	4	5

[1]Qualification standard for Clerk, GS-300-1/3, are to be used for
filling position of Library Aid GS-1/3.

[2]This standard has been approved by the Administrator of Veterans'
Affairs for use within the Veterans Administration under the provision of
Section 4105, Title 38, U.S.C.

Note: For Supervisory positions, see the qualification standard in part
III of this handbook for "Supervisory Positions in General Schedule Occupations."

General experience is progressively responsible clerical or office work
of any kind which has demonstrated the ability to perform satisfactorily at
the grade level of the position. General experience may also include work
involved in the physical handling of library materials provided this gave the
applicant some general knowledge of library rules , regulations and procedures.

Specialized experience is progressively responsible experience in a
library which has included duties similar to those mentioned in the Description
of Work paragraph above. Clerical work performed in a library (e.g., work
classified to the Mail and File Series, GS-305, or to the Clerk-Typist Series,
GS-322) may be credited as specialized experience provided the clerical work
has demonstrated the applicant's ability to apply general library operating
practices.

Excess specialized experience may be credited as general experience.

For first level supervisory positions, no supervisory experience is re-
quired, but supervisory aptitude must have been demonstrated (e.g., evidence
of supervisory capacity may be measured by one of the methods described in
the qualification standard for "Supervisory Positions in General Schedule
Occupations."

Quality of Experience

Applicants for GS-4 positions must show: 6 months of specialized exper-
ience at a level of difficulty comparable to the next lower grade level in
the Federal service. For GS-5 and above, applicants must show 1 year of
specialized experience at a level of difficulty comparable to the next lower
grade in the Federal service.

For any grade level, the required amount of experience will not in itself
be acceptable as final proof of qualification for a given grade level. The
applicant's record of experience, education or training must show he has the
ability to perform the duties and responsibilities of the position.

Substitution of Education for Experience

For a maximum of 3 years of the required experience (1 year of general
plus 2 years of specialized experience) study successfully completed in a
resident school or institution may be substituted as follows:

General experience only -

Successfully completed study in a school above the high school level may
be substituted for experience on the basis of 1/2 academic year of study
(i.e., 18 weeks of substantially full-time study, or 15 semester hours, or
the equivalent in quarter or trimester hours) for 6 months of experience.

Specialized experience -

1. For the first year of specialized experience, study successfully
completed in a resident school above the high school level may be substituted
at the rate of 1/2 academic year of study for 6 months of specialized exper-
ience provided such study included subjects closely related to the position

being filled, e.g., in library science, in business administration, or training in office routines, or in a subject field appropriate for the library in which the position is located. A full 2-year course of study may be substituted for 2 years of the required experience (1 year general plus 1 year specialized) and is fully qualifying for the GS-4 grade level.

2. For the second year of specialized experience, study of the quality described in paragraph 1 above may be substituted at the rate of 1 academic year of study for 6 months of specialized experience. Therefore, a full 4-year course of this type of study may be substituted for a maximum of 3 years of the required experience (1 year of general plus 2 years of specialized experience) and is fully qualifying for the GS-5 grade level.

3. Study in library science courses completed in a resident institution above high-school level may be substituted for a maximum of 2 years of specialized experience on the basis of 3 semester hours of library science for 3 months of experience. Substitution on the same basis may also be made for the general experience.

Education and training other than that outlined above, e.g., specialized training as a library aid or technician in manpower development programs, at a school for library technicians, or through "in-house" courses, will be allowed appropriate credit, depending upon its applicability and extent.

No substitution may be made for the required supervisory experience or for the additional specialized experience required above the GS-5 level.

NOTE:

"School above the high school level" means an educational institution (e.g., business or commercial school or college, a secretarial school, a junior college, or a college or university) for which high school graduation or the equivalent is prerequisite and in which the applicant successfully completed study which was not primarily limited to courses in typing and/or stenography.

For the item under "General experience only" and items 1 and 2 under "Specialized experience" education in amounts less than one-half of an academic year are not substitutable for experience. "One academic year" consists of approximately 36 weeks of substantially full-time study, or 30 semester hours, or the equivalent. Semester hours gained in part-time study may be credited at the rate of 1/2 year for each 15 semester hours (or the equivalent in quarter or trimester hours).

Substantially full-time study in the case of business and commercial schools is the equivalent of at least 20 classroom hours of instruction per week.

Written Test

For competitive appointments at GS-4 and above, a written test is required. For competitive appointments at grades GS-1/3, follow the test requirements in the qualification standards for Clerk, GS-300-1/3. The written test should be waived for in-service placement actions at all grade levels.

Selective Placement

At GS-5 and above, Library Technicians sometimes specialize in the performance of duties concerned with acquisition, cataloging, reference, circulation, or serials work; or may be required to have some familiarity with

specialized terminology or ability to recognize identifying information on foreign language documents. In filling such positions, selection may be limited to those eligibles who have had experience in the appropriate work at a qualifying level of difficulty.

Special Requirements for Positions Involving Public Contacts

Some library aid or technician positions may involve substantial contact with others. Duties performed require a clear speaking voice, tact, courtesy, and capacity for effective public contacts. In filling such positions competitively and noncompetitively, appointing officers should assure themselves by reference checks, personal interviews, or other appropriate means that applicants possess these qualities to the degree necessary for satisfactory performance of the duties of such positions.

Suggestions for Evaluating Experience in In-Service Placement Actions

In ranking individuals for in-service placement actions, detailed facts about position requirements can be more easily established. As a result, in establishing lists of qualified candidates, it is possible to evaluate experience or training in a way that best relates to the demands of the position being filled. For example:
1) For a position requiring specialized experience in a particular function, such as cataloging, experience gained in cataloging titles being added to the collection would be ranked as top level experience. Experience gained in filing catalog cards would be ranked at a lower level, or non-qualifying, depending upon the requirements of the job.
2) For a position requiring the ability to identify and record titles in foreign languages, experience gained in searching for publications in the particular foreign languages required by the position would be ranked as top level experience. Experience gained in similar processing functions not requiring foreign language ability would be rated as non-qualifying
3) For a position requiring familiarity with legal terminology, content and classification scheme of a law library, experience gained in searching duties in a legal collection would be ranked as top level experience. Experience gained in searching duties in a general collection including some legal publications probably would be ranked at a lower level depending upon the extent of the legal collection.
4) Outside education or in-house training related to the requirements of the position would be ranked higher than other qualifying education, e.g., education or training in library work directly related to the position would be ranked higher than education or training in administrative work.

In evaluating candidates, it is suggested that information be secured from former supervisors to elicit information as to demonstrated abilities, type of work experience, and past responsibilities. Other things being equal, the greatest credit should be given to those with the broadest experience and to those who demonstrate the most potential for advancement.

Physical Requirements

See part II, Physical Requirements, paragraph 2.

QUALIFICATION STANDARDS
Technical Information Services Series   GS-1412
Technical Information Specialist
Supervisory Technical Information Specialist
Technical Information Officer
(appropriate specialization)
GS-5/15

Specializations

The subject-matter knowledge for the Technical Information Specialist typically covers a broad field, rather than a deep subject knowledge and competence related to a specific discipline or field of interest, or a full knowledge of the state of the art. Some positions require foreign language proficiency to read documents published in languages other than English. The following specializations are authorized:

Subject specializations

Biological Sciences   Education   Business and Industry
Medical Sciences   Fine Arts   Engineering
Physical Sciences   Humanities   Law
Social Sciences   Music

Foreign language specializations

Romance   Germanic   Arabic
Slavic   Oriental

Description of Work

Positions involve work concerned with analyzing and transmitting the intellectual content of scientific, technological, or other specialized information. The specialists perform a variety of functions, or the work may be specialized in one functional area. Duties include acquisition, analysis of subject content of the documents acquired, indexing and preparation of abstracts or extracts. Some positions involve responsibility for terminology control, such as development of thesauri, lists of descriptors, subject heading lists, etc. Other employees analyze questions from users and perform literature searches; they prepare replies in the form of documents, bibliographies, or specific answers or units of information. Also included are duties and responsibilities involved in the direction, administration, or coordination of technical information services.

Some assignments include the application of specific techniques or the performance of limited aspects of the work of the professional librarian. These employees have knowledge of a professional, technical, or other specialized subject matter, and, in most cases, are taught the required library techniques on the job.

Some assignments require understanding and application of the special techniques, methods, and devices of a semi- or fully-automated documentation system.

Basic Requirements

For grade GS-5 -

As a basic requirement, applicants must have education or experience
as described under A, B, or C below.

A. A full 4-year course of study in an accredited college or university
which meets all academic requirements for a bachelor's degree, and (1) which
has included at least 24 semester hour credits in the physical sciences,
biological sciences, social sciences, or other specialized subject-matter
field, for which the applicant is being considered; or (2) in any combination
of subjects which included at least 15 semester hour credits in a major sub-
ject (such as physics or chemistry) which is especially applicable to the
position for which the applicant is being considered.

B. Four years of successful and pertinent experience of such nature and
level to provide (1) a knowledge of the basic principles, theories, practices,
techniques, terminology and expressions of a discipline or subject-matter
field; an understanding of the standard methods, procedures, and techniques
of research and analysis in the subject-matter field; ability to acquire
additional information about the field and related fields; and some knowledge
of literature resources in the field; and, where appropriate, (2) ability to
read and comprehend nontechnical material in one more foreign languages. Such
experience should be equivalent to that which would have been acquired through
successful completion of a full 4-year curriculum in an accredited college or
university with major study in appropriate subjects, or combination of sub-
jects, as specified in item "A" above.

C. Any time equivalent combination of experience as described in item
"B" with education as described in item "A."

For grades GS-7 and above -

In addition to meeting the experience or education requirements or GS-5,
applicants for higher grades must have the amount and kind of advanced ex-
perience indicated below:

	Years of advanced
Grade:	experience
GS-7	1
GS-9	2
GS-11/15	3

Advanced experience consists of the performance of work which has provided
the applicant with the professional, technical, language, or other specialized
knowledges and abilities to perform the work of the particular position for
which he is being considered. The work experience should demonstrate the
applicant's capacity:

a) to perform, supervise, or direct one or more of the functional areas
of work covered by this series, e.g., indexing, preparing abstracts,
performing literature searches, preparing bibliographies, developing
thesauri or lists of descriptors, etc.; or

b) to acquire an understanding of abstract ideas and theoretical concepts;
to keep informed and recognize changes, advancements and new developments

in the particular field; to recognize and understand subtle variations and deviations from standard practices or those which are significant from a research point of view; to understand and recognize the co-relationship of information in related fields; to make refined observations and to recognize or interpret scientific implications; to learn about current research efforts in the area of concern; to keep abreast of new methods or techniques, new equipment or systems; to maintain up-to-date information on the state of the art; and/or

c) to read or translate material in two or more foreign languages, requiring a specialized vocabulary (e.g., technical, legal, scientific, or other subjects of comparable difficulty) and knowledge and comprehension of the subject matter.

Advanced experience may have been gained in positions requiring substantial subject-matter knowledge of the field(s) and/or foreign languages involved such as:

a. Technical Information Specialist (such as indexer, abstracter, literature searcher, bibliographer);
b. Librarian;
c. Technical Writer or Editor;
d. Intelligence Specialist;
e. Translator;
f. Professor, teacher, instructor of college level courses;
g. Subject-matter specialist (such as chemist, biologist, psychologist, engineer, attorney, etc.).

Substitution of Education for Advanced Experience

Full-time* graduate education may be substituted for experience on the following basis. The education must have equipped the candidate with the knowledge and ability to perform fully the work of the position for which he is being considered.

a. For 1 year of advanced experience. - One full academic year of graduate education in a subject field directly applicable to the position. (This amount and kind of education meets all the requirements for grade GS-7.)

b. For 2 years of advanced experience. - Completion of all requirements for a master's or an equivalent degree, or 2 full academic years of graduate education, which is in a subject field directly applicable to the position. (This amount and kind of education meets all the requirements for grade GS-9.)

c. For 3 years of advanced experience. - Completion of all requirements for a doctoral degree (Ph.D., or M.D. or equivalent, or 3 full academic years of graduate education, which is in a subject field directly applicable to the position. (This amount and kind of education meets all the requirements for grade GS-11.)

*Part-time graduate education is also accepted at the rate of 30 semester hours (or the equivalent) for 1 year of specialized experience.

d. Alternate requirements. -
   1) Superior academic achievement at the baccalaureate level is quali-
      fying at grade GS-7. The pertinent criteria in section III of part
      II, Instructions to Users, of this handbook must be met.
   2) Completion of a total of at least 6 years of legal and pre-legal
      education which meets all the requirements for an LL.B. or J.D.
      degree will provide eligibility in full at grade GS-9 for positions
      requiring legal knowledges.

Level and Quality of Experience

For grades GS-11 and below, at least 6 months of the required advanced
experience must have been at a level of difficulty comparable to that of
the next lower grade, or 1 year must have been at a level of difficulty
comparable at least to that of the second lower grade in the Federal service.
For grades GS-12 and above, at least 1 year of the required advanced experience
must have been at a level of difficulty comparable to that of the next lower
grade in the Federal service.

For any grade, the required amount of experience will not in itself be
accepted as proof of qualification for a position. The quality of exper-
ience, rather than the length of time employed, will be given primary con-
sideration. The applicant's total education and experience must give positive
evidence of ability to perform adequately the duties of the particular position
for which he is rated eligible.

When education is combined with experience in order to meet length of
experience required for any given grade, the applicant must have had the
quality of experience appropriate for that grade.

Supervisory and Officer Positions

For supervisory positions, see the qualification standard for "Supervisory
Positions in General Schedule Occupations," in part III of this handbook.

For "technical information officer" positions, candidates must meet all
other requirements for the grade of the position and also show that they
possess administrative and managerial ability. Typically, at higher grade
levels, management responsibilities increase and there is less pre-occupation
with direct line supervision of detailed technical information services work.
Candidates for "officer" positions must have demonstrated, for example, the
ability to perform successfully duties such as planning, organizing, directing,
coordinating, or developing programs, work methods, and procedures; planning
or conducting management studies; estimating requirements for staff and supplies;
and coordinating activities among different units.

Written Test

No written test is required for positions above grade GS-7 for competitive
or in-service placement actions.

Competitive appointments to grades GS-5 and GS-7 will be made on the
basis of selective certification from the current register resulting from the
Federal Service Entrance Examination. Where scientific and technical subject-
matter knowledge is required, an appropriate register which is currently in
existence will be used.

Basis of Rating

Applicants for grades GS-9 and above will be rated based on an evaluation of the applicants' experience, education, and training.

Physical Requirements

See part II, Physical Requirements, paragraph 3; in addition, applicants must possess emotional and mental stability.

QUALIFICATION STANDARDS

LIBRARIAN SERIES

Librarian
Administrative Librarian
Supervisory Librarian
Library Director
(with specializations as appropriate)
Grades GS-7/15
Librarian Trainee
(Special provision at GS-5)

Description of Work

Positions involve work that primarily requires a full professional
knowledge of the theories, principles, and techniques of librarianship.
An inherent requirement of these positions is a knowledge of literature
resources. Such work is concerned with the collection, organization,
preservation, and retrieval of recorded knowledge in printed, written,
audio-visual, film, wax, near-print methods, magnetic tape, or other media.
Typical library functions include one or more of the following: selection,
acquisition, cataloging and classification of materials, bibliographic and
readers' advisory services, reference and literature searching services,
library management and systems planning, or the development and strength-
ening of library service. Some positions may involve work in connection
with the development of information retrieval systems.

Specializations

Since many libraries are highly specialized, the work often lies chiefly
in one subject-matter field, or closely related subject areas. To serve
subject specialists who are the principal users of these libraries, some
librarians require a knowledge of a specialized subject or field of endeavor.
Such subject-matter knowledge typically covers a broad field, rather than
a deep subject knowledge and competence related to a specific discipline or
a full knowledge of the state of the art. Because materials in libraries
are often in foreign languages, some librarians also must have a proficient
knowledge of one or more foreign languages.

To provide qualified personnel for librarian positions requiring know-
ledge of a subject-matter field and/or proficient knowledge of several
foreign languages, the following specializations are authorized:

Subject-matter specializations:

Biological Sciences
Medical Sciences
Physical Sciences
Social Sciences
Business and Industry
Engineering

Education
Fine Arts
Humanities
Law
Music

Foreign language specializations

Germanic   Slavic
Oriental   Arabic
Romance

Experience and Education Requirements

All librarians must meet the requirements for professional education
in library science or possess equivalent experience as shown in IA, IB, IC,
or IIA, below. The usual way of entering the profession is to qualify
at grade GS-9 on the basis of a master's degree in library science. How-
ever, it is possible to qualify for entrance at the GS-7 level on other
bases as indicated.

For Librarian (appropriate specialization) positions all candidates
must also meet requirements which are directly related to the subject-
matter or language of the specialization. These requirements are in addition
to the basic professional library science requirements which apply to all
positions. However, these requirements may be included within, or may be
supplemental to, those specified for all positions at GS-7 and GS-9. The
basic specialized subject-matter or language requirements for Librarian
(appropriate specialization) positions are defined below at the grade GS-7
level.

I. Requirements for Librarian positions, GS-7

To qualify for all Librarian GS-7 positions, the applicant must meet
the requirements specified in paragraphs A, B, or C below. (Note: Appli-
cants who qualify under provisions of paragraphs A or B will not be re-
quired to take a subject-matter test in library science.)

    A. Completion of 1 full academic year of graduate study in library
       science in an accredited college or university, in addition to
       completion of all work required for a bachelor's degree; or

    B. Completion of all requirements for a "5th-year" bachelor's degree
       in library science. In addition, the applicant must have had at
       least 1 year of library experience which included the performance
       of duties in one or more functional areas of librarianship at the
       GS-5 or higher grade level; or

    C. A total, on some combination, of not less than 5 years of college-
       level education, training, and/or experience. To qualify on this
       basis, the applicant must establish conclusively that the education,
       training, and/or experience has provided a knowledge and under-
       standing of the theories, principles, and techniques of professional
       librarianship; a knowledge of literature resources; and the know-
       ledges and abilities essential for providing effective library
       services. Under this provision:

       1) Applicants must pass a subject-matter test in library science
       2) If the applicant qualifies on the basis of a college level edu-
          cation, he must have had at least 1 year of library experience

comparable in difficulty and responsibility to that of a GS-5
or higher level library technician, technical information
specialist, or subject-matter specialist (e.g., a chemist)
performing library services.

3) If the applicant qualifies on the basis of experience alone,
with no college level education or training, he must have had
at least 2 years of library experience comparable in difficulty
and responsibility to that of a GS-5 or higher level library
technician.

4) The applicant may qualify under any time and quality equivalent
combinations of the requirements shown in paragraphs (2) and (3).

5) For the purpose of evaluating education, a full year of study
is defined as a minimum of 30 semester hours credit (or equivalent).
Specialized training, e.g., training at a school for library
technicians or through "in-house" courses, will be allowed ap-
propriate credit depending upon its applicability and extent.

To qualify for Librarian (appropriate specialization) positions GS-7,
the applicant must also possess specialized knowledges of a subject-matter
field and/or proficiency in one or more foreign languages which are directly
related to the positions being filled. When such knowledges are required
by the position, the applicant's education or experience must have included
or been supplemented by the requirements specified in one of the paragraphs
below:

a) A full 4-year course of study in an accredited college or university
which meets all academic requirements for a bachelor's degree, and
also (1) has included at least 24 semester hour credits in the
specialized field for which the applicant is being considered, e.g.,
physical science, biological science, social science; or (2) has
included any combination of subjects with at least 15 semester hour
credits in a major subject (such as physics or chemistry) which is
especially applicable to the position for which the applicant is
being considered; or

b) Completion of at least 24 semester hours of legal study in an accred-
ited law school for positions primarily concerned with providing
library services in law or legislative reference; or

c) Four years of successful and pertinent experience of such nature
and level to provide a knowledge of the basic principles, theories,
practices, techniques, terminology and expressions of the appropriate
discipline or subject-matter field; an understanding of the standard
methods, procedures, and techniques of research and analysis in the
subject-matter field; ability to acquire additional information about
the field and related fields; and some knowledge of literature re-
sources in the field. Such experience should be equivalent to that
which would have been acquired through successful completion of a full
4-year curriculum in an accredited college or university with major
study in appropriate subjects, or combination of subjects, as specified
in item "(a)" above; or legal training as specified in item "(b)"
above, or

d) Any time equivalent combination of experience as described in item "(c)"
with education as described in item "(a)" or "(b)" above.

e) Demonstrated ability as shown by education or experience to read or translate information from one or more foreign languages into English.

II. Requirements for Librarian positions, GS-9

A. Completion of all requirements for a master's degree or 2 full academic years of graduate study in library science, in an accredited college or university, meets all requirements for Librarian positions, GS-9.

B. In addition to meeting one of the requirements for GS-7 (A, B, or C above) must have had professional or advanced experience or graduate study as follows:

1) One year of professional experience in librarianship which included the performance, supervision, or administration of one or more major functional areas of librarianship (i.e., selection, acquisition, cataloging and classification of materials, bibliographic and readers' advisory services, reference and literature searching services, library management, systems planning, or development and strengthening of library services).
   Some positions are highly specialized in one functional area, and may require that the advanced experience be in the appropriate function to qualify at these higher grade levels.

2) One year of professional or advanced experience in the subject matter or language which has provided the applicant with the professional, technical, language, or other specialized knowledges and abilities required by the particular position for which he is being considered. Such experience may have been gained, e.g., as a specialized librarian; or as a subject specialist, professor or teacher, translator, technical writer or editor, literature searcher, indexer, or abstracter, etc., in the particular subject-matter and/or language area.
   Graduate education in a subject-matter field which is especially applicable to the position, and provides knowledges required to perform the duties of the position, as follows:
   a) Completion of all requirements for a master's degree; or
   b) Two full academic years of graduate education.

III. Requirements for Librarian positions, GS-11 and above

A. In addition to meeting the requirements for GS-9 (either A or B) candidates must have had either:
   1) One year of professional experience in librarianship; or
   2) One year of professional or advanced experience in a subject-matter or language area appropriate to the position.

B. Completion of all the requirements for a doctoral degree (or equivalent) or 3 full academic years of graduate education in library science.

C. In addition to possessing professional education in library science (or equivalent experience) as required for entrance at grades GS-7

or GS-9, candidates must have completed graduate study in a subject-matter or language area appropriate to the position as follows:
1) All requirements for a doctoral degree (Ph.D. or equivalent); or
2) Three full academic years of graduate education.

IV. Combinations of professional experience and graduate education

Equivalent combinations of professional experience and graduate education of the types described above are acceptable at each grade. (Thirty semester hours, or the equivalent, of part-time graduate education may be considered to be equal to 1 year of full-time graduate education.)

Quality of Experience

For grades GS-11 and below, at least 6 months of the required experience must have been at the level of difficulty comparable to that of the next lower grade, or 1 year comparable to the second lower grade, in the Federal service. For grades GS-12 and above, at least 1 year of the required experience must have been at a level of difficulty comparable to that of the next lower grade in the Federal service.

Supervisory and Administrative Positions

For supervisory positions, see the qualification standard for "Supervisory Positions in General Schedule Occupations," in part III of this handbook.
For positions concerned with administration, management, or direction of library programs candidates must meet all other requirements for the particular grade and also show that they possess the required administrative and/or managerial ability to perform successfully the duties of such positions. Education, training, or experience of the candidate should demonstrate, e.g., ability to manage or direct a library, group of libraries, or library system; ability to plan, organize, and direct the development and execution of library programs, policies, and procedures; ability to plan or conduct management studies, public relations and educational activities; ability to plan, develop and carry out administrative activities of the library or library system concerned with budget and finance, personnel, plant and equipment, etc.

Basis of Rating

All competitors who meet the education and experience requirements for GS-7 and above, who pass the written test in library science when required, will be rated based upon an evaluation of their experience and training in library work. The library science written test, when required, will be used for qualification purposes only.

Evaluating Experience and Training

In evaluating experience and training, consideration will be given to the type, level, and scope of experience relating directly to the particular position or positions under consideration, as indicated in the application, and to any additional pertinent information obtained from references, employees, associates and colleagues.
In evaluating experience for Librarians GS-13 through GS-15, specifically,

primary consideration will be given to the extent to which applicants possess the following knowledges and abilities:

1. Understanding of the techniques and methods of library science.
2. Knowledge of a specific subject-matter field.
3. Ability to plan a library program to meet the needs of the agency.
4. Ability to carry out broad library programs.
5. Ability to plan and coordinate the work of assistants.
6. Ability to train and develop a staff.
7. Ability to maintain good working relationships with the staff and other associates.
8. Leadership in the field of library science.

Nonqualifying Experience and Training

No credit will be given toward meeting the experience requirements for positions in this series for work in the following situations:

1. Work with collections of fiction, recreational or other reading material where no formal cataloging or classification of material is performed.
2. Experience in wholesale or retail bookstores, circulating fiction and club libraries, or hospital record departments.
3. Experience as a library page, as a library attendant or as a clerical worker, even though the duties included such work as charging and discharging books or typing catalog cards or orders for books and materials.
4. Nonprofessional work in a library on a part-time basis (e.g., military duty) or on a volunteer basis.
5. No credit will be given for training in the particular use of libraries and library facilities such as is given in orientation courses to college freshment

Written tests

Applicants for all grades who (1) have a master's degree or the required education in library science, or (2) have a 5th-year bachelor's degree in library science, will not be required to take a written test.

Applicants for all grades who qualify on the basis of experience alone or a combination of experience and education must pass a subject-matter test in library science. This written test is designed to measure the candidate's knowledge of the fundamentals underlying professional library science and his understanding of its methods and techniques and their applications to effective library science. Questions will be asked on facts, principles, applications, tools, practices, and theory of professional librarianship as found in a variety of libraries (e.g., book selection; cataloging and classification; reference and bibliography; circulation and related services).

When the subject-matter test is required it may not be waived in in-service placement actions except when (1) the employee was properly appointed as a qualified librarian and is currently serving in a GS-1410 librarian position, or (2) has previously served at least 6 months in a GS-1410 librarian position as a result of eligibility gained as a qualified librarian under an appropriate examination and is being reassigned to a librarian position. (Note: Individuals appointed as Librarian (Trainee) will be required to take the subject test for promotion to GS-7 when they do not possess or acquire the educational requirements specified in paragraphs A or B for ade GS-7.)

Special Provisions

A. For all librarian positions -

At GS-9 and above, Librarian positions concerned with acquisition,
cataloging, or reference work are sometimes highly specialized. In filling
these positions, consideration may be limited to those eligibles who have
had experience in the appropriate specialization at a qualifying level of
difficulty.

B. For librarian positions requiring specialized subject or language know-
     ledges -

In filling positions at any grade level which call for a knowledge of
foreign languages or special subjects such as law, medicine, physical sciences,
etc., selection must be made from among eligibles who are qualified in these
special areas.

Special Provision for Filling Positions or Librarian (Trainee), GS-5

There is a special provision which may be used when there is a shortage
of candidates who are fully qualified for GS-7 level librarian or librarian
(appropriate specialization) positions. This provision is included because
of the reported dearth of fully-qualified librarians. It is intended for
use in those situations where the Librarian (Trainee) can be expected to
complete his/her education or training in library science within a reason-
able period of time, and thus meet requirements for librarian positions at
the GS-7 level.
Under this provision, applicants for positions of Librarian (Trainee),
GS-5 must meet the following requirements: completion of a full 4-year
course of study in an accredited college or university which meets all
academic requirements for a bachelor's degree, or equivalent experience.

- Qualification of candidates under this provision is demonstrated by
eligibility on a civil service register, or an appropriate subject-matter
register (e.g., the Chemist register for Librarian (Trainee) positions re-
quiring some knowledge of chemistry). Appointing officers may request certi-
fication of eligible candidates with major study in a subject-matter field
which is considered appropriate for the position being filled.

Individuals hired as Librarian (Trainee), GS-5, may not be employed or
promoted to a position of Librarian GS-7 until they fully meet the require-
ment specified for GS-7 librarian positions.

Physical Requirements

See part II, Physical Requirements, paragraph 2; in addition, applicants
must possess emotional and mental stability.

APPENDIX C - DATA COLLECTION INSTRUMENTS

UNIVERSITY OF MARYLAND
COLLEGE PARK 20742

SCHOOL OF LIBRARY AND INFORMATION SERVICES   PHONE: (301) 454.3016

December 14, 1972

Dear SOLIT Member:

The School of Library and Information Services is participating
in a survey of the education, training and employment of Library
Technicians. The goal of this study is to investigate alternative
educational patterns for improving career mobility of library
employees.

The information requested on the enclosed questionnaire will
provide valuable insights to the present situations of library
technicians in this area. Ms. Evelyn Brownlee, President of
SOLIT, has kindly suggested the membership of SOLIT as one good
source for this information. The questionnaire will only take about
15-20 minutes of your time, but the information you provide will be
of great benefit in this study.

Would you please help by completing the questions and
returning them in the enclosed stamped, self-addressed envelope
by January 4, 1973. A summary of results will be made available
through SOLIT.

Sincerely,

Charles R. Anderson

INSTRUCTIONS

1. Please use pencil so that you can easily change any answer.

2. Unless there is a specific "SKIP" instruction, please answer every
    question by placing a (X) or a statement when called for in the
    appropriate place.

3. Do NOT include your name on this questionnaire. There will be no
    connection between completed questionnaire and the person filling
    it out, thus you may be assured of complete confidentiality.

4. If more space is needed to answer any question, please use question 21.

---

1. Sex: Female_____   2. Age:_____(years)
         Male_____

3. Marital Status: Single_____   4. Are you presently employed in
                    Married_____   a library? Yes_____
                    Divorced_____   No_____
                    Widowed_____

5. Are you employed: Full-time_____   6. What is your present annual
                       Part-time_____   salary?_____

7. What is the title of your present position?_____

8. If in government service, what is your GS rating?_____

9. How long have you worked in this position? Years_____ Months_____

10. What other positions have you had in libraries?

         <u>Title</u>   <u>Length of service</u>

    _____   _____

    _____   _____

    _____   _____

    _____   _____

11. What type of library do you work in? Academic_____; School_____;
    Public_____; Special_____; Federal_____.

    (If Federal, check one: National_____; Departmental_____; Other_____.

12. Circle the highest grade of school completed.

    1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17+

    12a. If more than 12, what was your major?_____

    12b. Have you attended any other schools?

          Trade_____; Vocational_____; Business_____.

          Other (specify)_____ _____.

13. Do you have a degree in any of the following:

    a. Associate of Arts (or Science) in Library Technology_____
    b. Bachelor of Arts (or Science) in Library Science_____
    c. Master of Arts (or Science) in Library Science_____
    d. Other (specify)_____

14. Have you had any of the following:

    a. In-service training courses_____
        If so, please list course titles: _____

                                           _____

                                           _____

    b. Job-related courses at educational institutions_____
        If so, please list courses and credits:

        Course Title   Credits (Semester hours)

        _____ ____   _____

        _____   _____

        _____   _____

        _____   _____

16. Do you think the in-service training courses have been, or will be, beneficial in:

    a. job advancement within your library? Yes_____ No_____
    b. job advancement elsewhere?   Yes_____ No_____

17. Do you think the job-related courses at educational institutions have been, or will be, beneficial in:

    a. job advancement within your library? Yes_____ No_____

18. Do you think more in-service training courses in your library are needed?

                                    Yes_____ No_____

    18a. If yes, do you have any suggestions for specific courses?

    _____

    _____

    _____

19. In your present job does your employer encourage you to take:

    a. in-service training courses? Yes_____ No_____
    b. job-related courses at educational institutions? Yes_____ No_____

20. Would you take job-related courses at a college or university -

    a. if you were allowed time off the job to attend classes but had to pay your own tuition?   Yes_____ No_____
    b. if you were allowed time off and your employer paid your tuition?   Yes_____ No_____
    c. if you had to attend classes on your own time but employer paid tuition?   Yes_____ No_____
    d. if you had to attend classes on your own time and had to pay your own tuition?   Yes_____ No_____

21. Please use the following space for any additions or comments.

_____

_____

_____

_____

SCHOOL OF LIBRARY AND INFORMATION SERVICES
UNIVERSITY OF MARYLAND
COLLEGE PARK, MARYLAND 20742

Interview Guide

This interview was conducted at _____,
(organization or institution)

_____, _____, _____,
(address)   (city)   (state and zip code)

with_____. Date:_____.
(officials name and title)

Phone:_____

Interviewer's name:

_____

A. Introduction

This interview is being conducted by the School of Library and
Information Services in connection with a study of "Alternative Educa-
tional Patterns for Career Opportunities." This study is being made
under a joint research agreement between the University of Maryland and
the National Agriculturel Library. The information provided through
this interview will furnish valuable information about job functions and
educational requirements for personnel in Federal libraries. All infor-
mation furnished will be held in strict confidence.

B. Type of library

1. Subject specialty (check one)

_____medical/health sciences

_____law

_____physical sciences, engineering

_____business

_____other (specify)

2. Nature of parent organization (specify)

_____

C. Staffing (Reference period: end of fiscal year closest to June 30,
1972 and June 30, 1967 or end of calendar year 1972 and 1967).

PLEASE COMPLETE QUESTION C1 BEFORE THE INTERVIEW

1a. How many persons are employed in this library?

b. How many were employed in 1967?

Do NOT count maintenance personnel, volunteers, or student assistants
in any of the totals or subtotals. All other staff members should
be classified in the most appropriate occupational category:
Librarian, Specialist, Technical Assistant, Clerk, Other (specify).
Descriptions for each occupational category appear on enclosed staff
position list; personnel who fit none of the library occupation
descriptions should be classed as "Other." Data should be presented,
if possible, for full-time and part-time personnel and for full-time
equivalent (FTE) positions. Please indicate the source of the 1967
data by checking the appropriate box.

_____personnel records   _____estimate

	No. of employees in 1972				No. of employees in 1967			
Staff position	Total	Full-time	Part-time	FTE	Total	Full-time	Part-time	FTE
Total								
Librarians								
Specialists								
Technical assistants								
Clerks								
Other (specify)								

PLEASE COMPLETE QUESTION C2 BEFORE THE INTERVIEW

2. Estimate the percentage distribution of library personnel in each
   of the 4 staff positions:

   a. By sex
   b. By race

Sex	Librarians	Specialists	Technical assistants	Clerks
Male				
Female				
Race				
White				
Negro and other races				

3. What changes have taken place over the last 5 years in the
   distribution of library staff by sex, race, and age?

4. What factors influenced these changes?
   a. Internal factors - e.g., recruitment, personnel policy, salary level

   b. External fact rs - e.g., supply of qualified applicants, economic
      conditions

5. Minority groups

   a. Does your library have a recruitment program aimed at increasing the number of minority group members on your staff?

   b. If yes:

      (1) Discuss recruitment methods.

      (2) What staff positions are you recruiting for?

      (3) Discuss difficulties encountered in minority group recruiting program.

D. 'Job Functions

   1. Discuss the changes, if any, which have taken place during the past 5 years in the duties performed by:

      a. Librarians

      b. Specialists

      c. Technical Assistants

      d. Clerks

2. Describe shift of duties from one staff position to another over the past 5 years.

3. Describe any changes in duties expected to take place over the next 10 years.

4. Do you anticipate any shift of duties from one staff position to another over the next 10 years?

5. Describe any new or emerging occupations in terms of the duties performed.

PLEASE COMPLETE QUESTION E1 BEFORE THE INTERVIEW

E. Education and Training (Reference period: end of fiscal year closest
    to June 30, 1972, or end of calendar year 1972).

    1. What is the educational level attained by your present staff? (Enter
        number of employees by staff position and highest level of education
        attained. Do NOT include maintenance personnel; personnel classified
        as "Other" in question C1; student assistants; or volunteers.)

STAFF POSITION

	Librarian	Specialist	Technical assistant	Clerk
Total				
Less than high school graduate				
High school graduate				
Some college - no earned degree				

Associate degree
  Area of concentration
 	
    Library Science
    Other				

Bachelor's degree
  Area of concentration
 	
    Library Science
    Other				

Graduate degree(s)
  Area(s) of concentration
 	
    Library Science
    Other
    Double degree - Library
      and other curriculum				

2. Are your basic minimum requirements at the entry level for persons in each of the following staff positions the same as U.S. Civil Service requirements as outlined in the Qualification Standards? If not, please indicate:

	Education	Experience

Librarian

Specialist

Technical assistant

Clerk

3. Beyond the minimal entry requirements, as specified in civil service descriptions, what qualifications do you seek? e.g., additional education, experience, personal characteristics, etc.

4. Regarding the educational background of your staff, are there any areas:

    a. In which they lack necessary preparation for the work they do? If so, which areas?
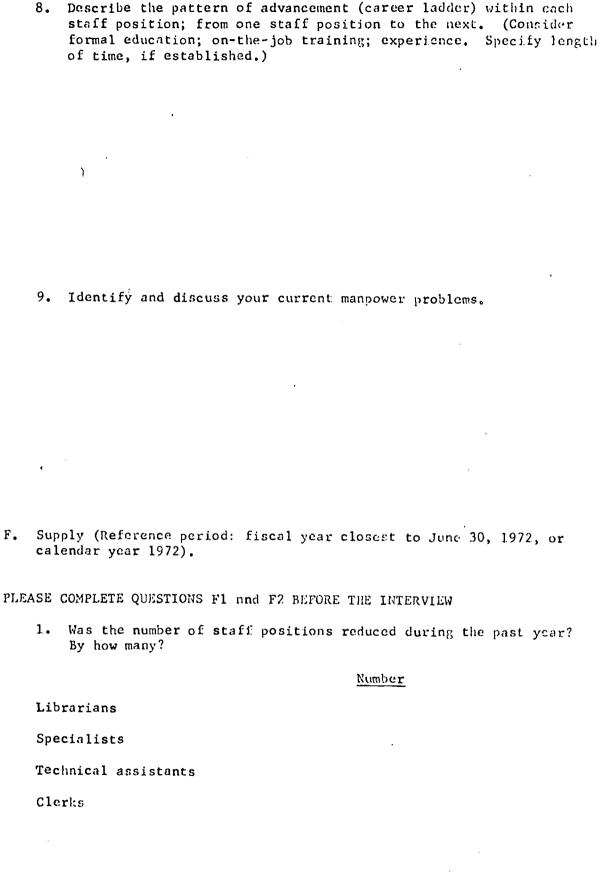
    b. In which their preparation overqualifies them for the work they do? If so, which areas?

5. How well do library education and training programs prepare graduates for work in your library? Are there any areas in which the library feels current training is inadequate or irrelevant? If so, what areas?

6. Looking ahead, do you expect the library personnel you hire over the next 10 years to have about the same educational qualifications as your present staff? If not, what changes in educational preparation of your staff do you anticipate? (Specify by staff positions.)

7. Describe any new or emerging occupations in terms of the qualifications (educational and otherwise) necessary.

8. Describe the pattern of advancement (career ladder) within each staff position; from one staff position to the next. (Consider formal education; on-the-job training; experience. Specify length of time, if established.)

9. Identify and discuss your current manpower problems.

F. Supply (Reference period: fiscal year closest to June 30, 1972, or calendar year 1972).

PLEASE COMPLETE QUESTIONS F1 nnd F2 BEFORE THE INTERVIEW

1. Was the number of staff positions reduced during the past year? By how many?

                                    Number

Librarians

Specialists

Technical assistants

Clerks

2a. How many positions were filled during the past year?

Number

Librarians

Specialists.

Technical assistants

Clerks

b. Indicate the sources of personnel placed during the past year. Please enter each new hire (or promotion or transfer) only once; if more than one source applies, mark the one which appears first on the list.

Source	Librarians	Specialists	Technical assistants	Clerks

New Graduates
  library programs
  non-library programs				

Promotions within the library				
Transfers within this employment setting				

Transfers from other libraries
  School
  Academic
  Public
  Special				

Transfers from non-library occupations				
Re-entrants to the labor force				
Other (specify)				

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3. Discuss how this hiring pattern differs from that 5 years ago.

4. In the last 5 years, how have your actual hiring experiences related to the qualifications you were seeking?

5. In what occupations do you currently experience difficulty obtaining qualified personnel?

   What are the reasons?

   a. general shortage of trained personnel
   b. salary structure
   c. recruitment problems (e.g., location)
   d. constraints imposed by civil service or personnel department regulations
   e. other (specify)

6. What do you do if you cannot get a qualified individual for a position?

   a. Hire persons with less than the desired qualifications and train on-the-job?
   b. Help existing staff to obtain additional formal education
   c. Leave the position vacant until a qualified person becomes available
   d. other (specify)

7. In what positions do you currently experience no difficulty in obtaining qualified personnel?

G. Requirements

1. Have you developed projections of library employment needs for the future? If so, what are your anticipated needs? On what criteria are these needs based?

I. Interviewer's Comments

NAME OF INSTITUTION:

ADDRESS:

Name of person filling out this form _____

Telephone Number _____

ENROLLMENT AND GRADUATION

	1971/1972	1972/1973	1973/1974 (est.)
a. Number of full-time students			
b. Number of part-time students			
c. Total number of students (a+b)			
d. Full-time equivalent of part-time students			
e. Total full-time equivalent students (a+d)			
f. Graduates			
1. Certificates			
2. Degrees			

PLACEMENT   1971/1972

a. Number employed as a direct result of enrollment _____

b. Beginning salaries paid LTAs as of Fall, 1972 (number for each range)

1. Below $3000 _____   6. $7100 to $8000 _____

2. $3100 to $4000 _____   7. $8100 to $9000 _____

3. $4100 to $5000 _____   8. $9100 to $10,000 _____

4. $5100 to $6000 _____   9. over $10,000 _____

5. $6100 to $7000 _____

BIBLIOGRAPHICAL NOTE

There is no dearth of literature on the subject of education and
training of library workers at pre-professional levels. The following
bibliography contains less than half the total number of citations on
this subject listed in available indexes. Many citations, however, would
be of value only to a historian. Therefore, this bibliography excludes
most of the one-paragraph "news notes" and other items of peripheral interest.
In addition to a literature search of <u>Library Literature</u>, <u>Library and Infor-
mation Science Abstracts</u>, <u>Education Index</u>, <u>Dissertation Abstracts</u>, and
research in progress listed in <u>The Journal of Education for Librarianship</u>,
an on-line computer search of the ERIC data base was performed.

The bibliography is classified in a scheme which was intended to
provide a facile approach to further research on the project "Alternative
Educational Patterns for Career Opportunities." The outline of this
classification follows:

```
1.0  Bibliographies
2.0  Library/Media Technical Assistants
     2.1  Historical Development
     2.2  General Background
     2.3  Education
          2.31  Guidelines, Curriculum, and Evaluation
          2.32  Individual Programs
     2.4  The LMTA in Canada
3.0  Types of Libraries
     3.1  School Libraries
     3.2  Public Libraries
     3.3  College and University Libraries
     3.4  Special Libraries
4.0  Supplement
```

Arrangement within section 2.1, "Historical Development," is chronological; in all other sections items are arranged alphabetically by author and/or title.

Items unavailable for examination are indicated by an asterisk. Information on availability of materials from the ERIC Document Reproduction Service is given when possible, including accession number and price for micro-fiche (MF) and hard copy (HC). Doctoral dissertations included which could not be identified as completed and accepted for the Ph.D. degree are listed with dates as given in the issues of Journal of Education for Librarianship. Given the classified nature of the bibliography, an author index is provided.

1.0 Bibliographies

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       Minneapolis: University of Minnesota, 1968. 9 pp. (ERIC/CLIS
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2.0 Library/Media Technical Assistants

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11. Hyatt, Ruth. "Three levels of training." Library Journal, 84
     (March 1, 1959), 660-663.
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     for technician.

12. Harlow, Neal. "News of the new founde worlde -- whats new in the
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     group of technical and middle level assistants.

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     planned programs for training including standards and certification.

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     1965), 1597-99.
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     types of library work, and specific jobs with goal of better
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     and levels of duties performed by non-professional staff members,
     and, (2) establishment of sound programs for training non-
     professional library personnel.

18. Shores, Louis. "Statement on junior college library technician programs."
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          Prepared in response to request for advice from four
     Florida junior colleges contemplating or now offering LTA programs.

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> (2) J.E. Person (letter), <u>Library Journal</u>, 92 (October 15, 1967), 3571.

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Library Association Bulletin, 30 (Summer, 1967), 641.
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(1) _ALA Bulletin_, 62 (1968), 1330.
(2) _____, 63 (1969), 23-26, 153-54, 552-53, 705-07.
(3) _Southeastern Librarian_, 19 (Summer, 1969), 64-81.
(4) _American Libraries_, 2 (June, 1971), 597-99.
(5) _Tennessee Librarian_, 24 (Winter, 1972), 7-12.
(6) _ALA Bulletin_, 62 (December, 1968), 1330 (correction)

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    ject, and discusses articulation between junior colleges, NCATE
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    (2) J. Longland (letter), Special Libraries, 59 (September, 1968).

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    erence service since a high level of general education is basic
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2.2 General Background

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2.3 Education

2.31 Guidelines, Curriculum, and Evaluation

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   These two reports evaluate a program initiated to relieve librarians of some non-professional activities. Reports indicate there is no significant difference in professional activities of librarians with or without aides.

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C. Petru, with the assistance of M.W. West. New York: Special
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Libraries, 53 (December, 1962), 603-04.
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City College, 1969. 9 pp.
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2.32 Individual Programs

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College." Missouri Library Association Quarterly, No. 3 (1)
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2.4   The LMTA in Canada

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109.   Campbell, Allan and Dawson, Irene.   The library technician at work:
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           Ontario, May 8-9, 1970.   Canadian Library Association, 1970.
           232 pp.
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           existing educational programs, and (3) recommendations for
           standards for courses.   Also includes numerous job descriptions
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*110.   Canadian Library Association.   Summary of recommendations on library
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           Training for Library Technicians Subcommittee.   "Recommendations,
           June, 1968."   Feliciter, 14 (September-November, 1968), 9-13.

113.   Education for school librarianship in Canada, Proceedings of a workshop,
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           loging, reference tools, and financial reporting.

*115.   Institute of Professional Librarians of Ontario.   "Library Technicians."
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